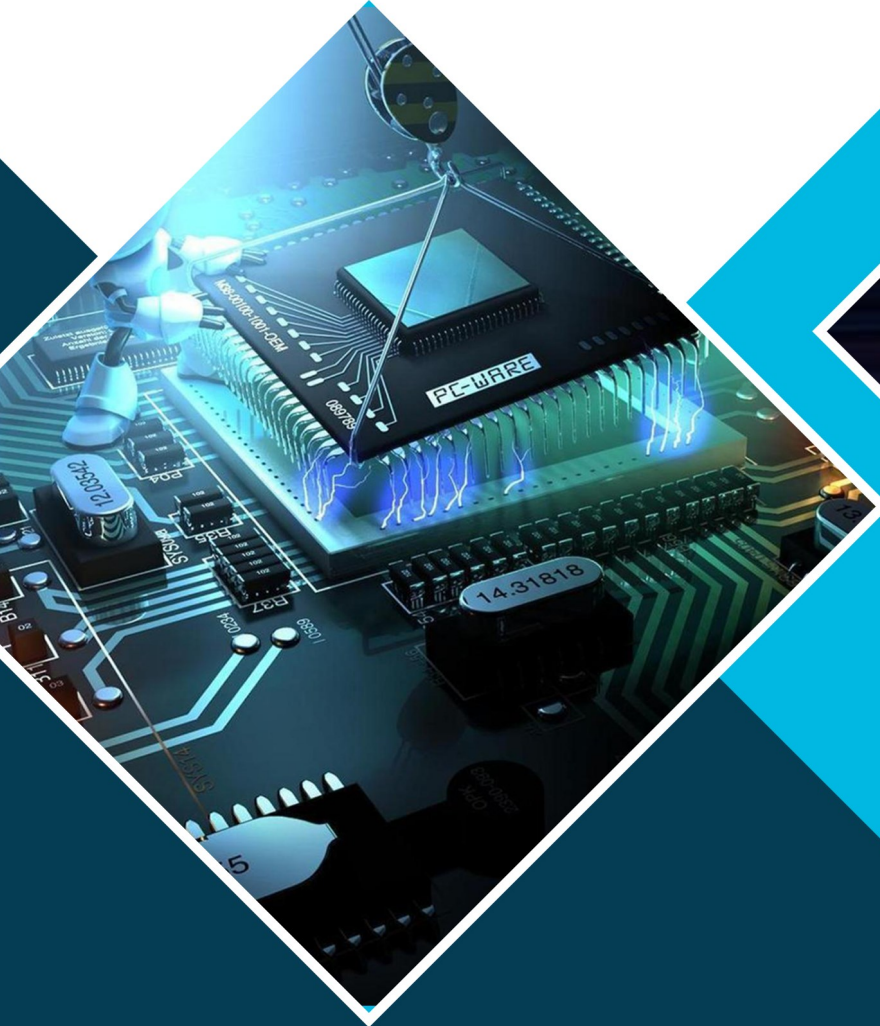




# प्रज्ञान 2023

Volume - 07

विनयफलं शुश्रूषा गुरुशुश्रूषाफलं श्रुतं ज्ञानम् ।  
ज्ञानस्य फलं विरतिः विरतिफलं चाश्रवनिरोधः ॥



College of Agricultural Information Technology  
Anand Agricultural University, Anand - 388110





The Executive Committee of the **Knowledge Consortium of Gujarat,**  
**Department of Education, Government of Gujarat** on the  
recommendation of the duly appointed agency, the Indian Centre for Academic  
Rankings and Excellence (**ICARE**) has rated

## *College of Agricultural Information Technology*



as a **4 Star** Institution in the category of  
'**Colleges**' on the basis of comprehensive performance metrics as set out in the  
**Gujarat State Institutional Ratings Framework (GSIRF)**  
on the 28<sup>th</sup> February 2023.



### BY ORDER

**SJ Haider IAS**  
Principal Secretary  
Higher & Technical Education  
Government of Gujarat

**M Nagarajan IAS**  
Commissioner  
Higher Education  
Government of Gujarat

**Prof AU Patel**  
Advisor  
Knowledge Consortium of Gujarat  
Government of Gujarat

**Dr Karthick Sridhar**  
Vice Chairman  
Indian Centre for Academic  
Rankings and Excellence

VALID UPTO 31st May 2023



# प्रज्ञान

A College Magazine

(2022-23)

Volume 7



Published by

**COLLEGE OF AGRICULTURAL INFORMATION TECHNOLOGY**

**ANAND AGRICULTURAL UNIVERSITY**

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## Editorial's Desk

**Dear Readers,**

Writing is an act of responding to your selective group. An intelligent mind's primary urge is to express itself, and writing is one such medium. Writing comes to life when it meets its reader. Students are the most passionate aspiring artists who need a platform to express their thoughts and feelings. Even though social media and mobile apps like WhatsApp, Facebook, or Instagram have become extremely popular worldwide and throughout all age groups for expressing, the college magazine is a good source for discerning readers. A college magazine, प्रज्ञान् is one of the events that students, faculty, and everyone connected to the AIT family looks forward to the most. The college magazine highlights literary expressions, social awareness, and acknowledges all achievers in academic and extracurricular activities and bonds the AITIAN(s) as a family.

प्रज्ञान् means wisdom, knowledge, or distinctive mark. As College of Agricultural Information Technology is first and one of its kind in India, प्रज्ञान् reflects. प्रज्ञान् is quick flashback of all events and programs associated with our college. प्रज्ञान् also contains experience shared by students having industry exposure to motivate the young and newly enrolled students to make their vision and motive as clear as possible. SRC activities were also cherished during the entire year, which include technical, sports and as well as literary events. प्रज्ञान् showcase various activities like workshops, expert lectures, training, and campus placement of college's placement cell. It highlights various achievements of the college and students during the year. There are a few snapshots on "College Round-up" dealing with extra and co-curricular activities and eminent flashbacks of important events.

We are pleased to share with you the 7<sup>th</sup> volume of the College Magazine. We would like to thank our Dean and Principal Dr. D.R. Kathiriya for his unconditional support and guidance. We express our considerable appreciation to all the authors for their efforts and sparing their generous amount of time. We sincerely hope that the readers will find the cases interesting, relevant, and intellectually stimulating leading to building up diverse outlook about contemporary issues. Lastly, let us all remember that we are meant for great things.

Keep the faith.

**Dr. Mayur P. Raj & Team**

# Our Creative Team



**Dr. Mayur P. Raj**



**Meet Gangwani**



**Himanshu Solanki**



**Rudra Tank**



**Ranjit Chavda**



**Pooja Gamit**



**Rhutu Shah**



**Mukund Vyas**



## From the Desk of Principal & Dean

**“A desire can change nothing, a decision can change something but a determination can change everything”**

“Agriculturally prosperous Gujarat and India” is the prime vision of this University. Education is a process which contributes to building socio-economic infrastructure of the Nation. AAU have always fondly cherished motto – “Empowerment of Students for their overall development through education”.

We are proud that this college has consistently maintained its tradition of excellence in the field of Agricultural Information Technology till date. This institute was granted full autonomy by Government of Gujarat in 2009-10. The executive committee of Knowledge Consortium of Gujarat, Department of education, Government of Gujarat on the recommendation of duly appointed agency, The Indian centre for Academic Rankings and Excellence (ICARE) has rated 4 stars ranking as stated out in Gujarat State Institutional Ranking Framework (GSIRF). Since last three years college has achieved 100% placement. Thus, college's commitment to providing a world-class education and preparing its students for a successful career and fulfilling life.

The institute has modernized its entire infrastructure -thus scaling new heights in field of agricultural information technology through the dedicated efforts of its faculty and staff. The faculty and students are encouraged to create a multi-disciplinary work environment, work with a professional and scientific approach, and have a healthy competition amongst peer groups to achieve excellence. The main motto of the college is to provide skilled manpower to Agriculture and IT industry, and other allied sector of research that shall best serve the nation.

The inspiring environment of College of Agricultural Information Technology for knowledge aggregation, production, and dispersion along with the sense of social responsibility, human values and concern for social commitment has sculpted for itself in midst of best institutes. A systematic development in soft skills and overall confidence building, we believe in an all-round development of our students so that they may become better human beings and responsible citizens.

As the principal and Dean of the College, I am pleased to release the 7<sup>th</sup> edition of the College magazine, प्रज्ञान. I appreciate the untiring efforts put in by the editorial board to bring out the college magazine. I wish all students to be good human beings and excellent at their professional career.

क्षणशः कणशश्चैव विद्यामर्थं च साधयेत् ।  
क्षणे नष्टे कुतो विद्या कणे नष्टे कुतो धनम् ॥  
( एक एक क्षण गवाये बिना विद्या ग्रहण करनी चाहिए और एक एक कण बचा करके धन ईकुट्टा करना चाहिए। क्षण गवाने वाले को विद्या कहाँ और कण को छोटा समझने वाले को धन कहाँ ? )

Dr. Dhaval R. Kathiriya



# Index

1) Introduction.....	8
2) Faculties and Supporting Staff .....	9
3) Training & Placement Cell .....	9
4) Student Representative Council .....	12
5) The SRC for the year 2022-23 .....	12
6) Student Representatives .....	13
7) વિદ્યાર્થીઓને માર્ગદર્શન .....	14
8) A DAY IN THE LIFE .....	18
9) વાંચવા જેવું પુસ્તક .....	20
10) Crop Yield Estimation Using Open Source Data Mining Tool - A Novel Approach.....	22
11) Visual Positioning System.....	24
12) Swarm Intelligence Unleashed: Unravelling the Power of Ant Colony Optimization .....	26
13) મહિલા સશક્તિકરણ .....	27
14) ICT - A Tool For Women's Empowerment .....	29
15) Remote Sensing based Crop Yield Estimation .....	32
16) Technology .....	33
17) Inspiration.....	49
18) Movie Reviews .....	62
19) Book Reviews .....	68
20) Achievement .....	72
21) Share Experience .....	76
22) Photo Gallery .....	83
23) Creative Corner.....	88



## 1. Introduction

**Anand Agricultural University**, a premiere institute in the field of agriculture in Gujarat has been providing support to the farming community for more than seventy years. It is a prestigious institute of higher learning producing meritorious student with excellent career growth and universal recognition. The students get the best of opportunities in the form of highly advanced courses, eminent faculty members, well-equipped laboratories, library, hostel and other facilities to excel in education and research.

**College of Agricultural Information Technology** was established in the year 2009 under the aegis of Anand Agricultural University. The CAIT offers **4-yr. B. Tech (AIT)** program. The postgraduate master degree program is not offered anywhere else which generates young workforce skilled with knowhow of future ready Information and Communication Technology and imparting the same in Agricultural sector. The college has trained teaching faculty with a balanced blend of well-experienced seniors and energetic youth focused towards teaching and research. The College building is surrounded by lush green natural environment with enough resources such as well-ventilated lecture halls with audio visual facility, computer labs, scientific equipment, Wi-Fi Internet access, library, NCC/NSS, sports, project and placement cell etc.

The curriculum of B.Tech. (AIT) is a blend of Agricultural Science and Information and Communication Technology (ICT) to harvest the potential of both the sectors. We care looking forward to introduce innovative practices of automation and information by means of ICT in the sparsely charted agriculture and allied sectors to bridge the gap between the skills of the technocrat and the farmer.

### **Mandates :**

- ⇒ To conduct four year undergraduate degree program B.Tech. (AIT), two years postgraduate master program M. Tech. (AIT) in Agricultural Information Technology and Post Graduate Diploma in Data Science.
- ⇒ To conduct various training programs related to Agricultural Information Technology for developing competence.
- ⇒ To help scientists and academicians of the University in AGRESCO. To bring out various programming and networking projects of Agricultural Information Technology.

### **Departments in the College :**

**To oversee the academic and other activities of the college, the faculty is divided into two following departments:**

- Department of Agricultural Information Technology
- Department of Agricultural Sciences

⇒ Well-equipped computer ,networking , multimedia, agricultural ,basic instrumentation laboratories are available for students to perform practices and projects development.

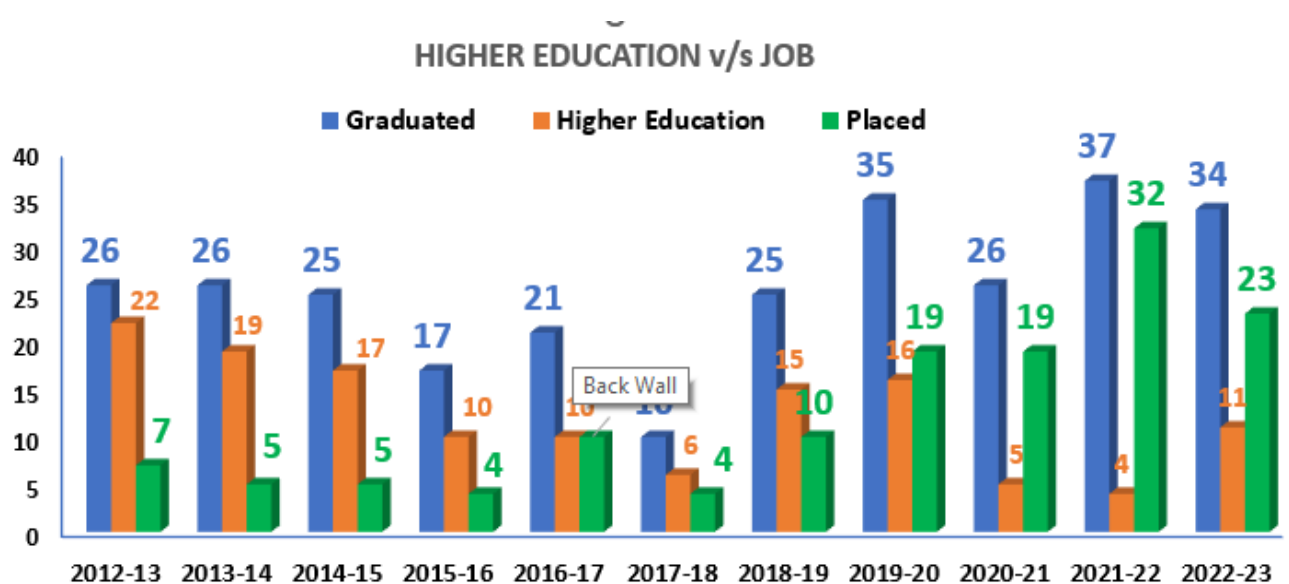


- ⇒ College elevates library facility with English and Gujarati daily newspaper, within college premises gymnasia and sports facility is also available.
- ⇒ Smart classrooms with online video lecture attending facilities has also strengthen college.

## 2. Faculties and Supporting Staff

#	Name	Designation	Qualification
1	Dr. D. R. Kathiriya	Principal & Dean	Ph.D. (Computer Science)
2	Dr. Y. R. Ghodasara	Professor (P)	Ph.D. (Computer Science)
3	Dr. R. S. Parmar	Professor (P)	Ph.D. (Agri. Stat)
4	Dr. M. P. Raj	Assistant Professor	Ph.D. (Computer Science)
5	Mr. K. P. Patel	Assistant Professor	M.C.A.
6	Dr. D. K. Parmar	Assistant Professor	Ph.D. (Computer Eng.)
7	Dr. J. V. Suthar	Assistant Professor	Ph.D. (Agri. Agron.)
8	Dr. G. B. Chaudhari	Assistant Professor	Ph.D. (Agri. Met.)
9	Prof. V. I. Mehra	Assistant Professor	M.Tech (Process Control)
10.	Dr. K. U. Chandravadia	Assistant Professor	Ph.D. (Agri. Extension)

## 3. Training & Placement Cell :





## Industrial training :

Enrolment No.	Name of Students	Company
3060819001	BERANI JAYESHBHAI ABHALBHAI	Aspire Softserv Pvt.Ltd.
3060819002	BHADAJA ANERI JAYESHBHAI	Radixweb
3060819003	BHALIA UNNATI JITENDRABHAI	ISRO
3060819004	CHAUHAN BHAVESHKUMAR PRAVINBHAI	ScrumBees Technologies,
3060819005	DALSANIYA KAPILKUMAR RATILAL	Tatvasoft
3060819007	DONGA VAIBHAV DILIPBHAI	IIRS
3060819008	HITESH BALEJA	TechAbbot Technology Services Pvt. Ltd
3060819009	JANI MANDAKINI MANISHKUMAR	ISRO
3060819010	KACHHADIYA SANKET RAJESHBHAI	ITC, AAU
3060819012	KAMBARIYA DIPAK DILIPBHAI	Vite-Box
3060819013	KANOTARA MEHULKUMAR PRAVINBHAI	Sarjen System Pvt.Ltd. Ahmedabad
3060819014	KHANT NIRAJKUMAR PRAVINBHAI	ScrumBees Technologies,
3060819015	LADANI MIHIR PRAKASHBHAI	Aspire Softserv Pvt.Ltd.
3060819016	LANGNECHA MAYABEN VIJAYBHAI	Sarjen System Pvt.Ltd.
3060819019	MADKIYA FARID SULTANBHAI	Sadbhavna
3060819020	MORI CHAUHAN ANAND PRAVINBHAI	Sadbhavna
3060819021	PARMAR BHAVNABEN BHUPENDRABHAI	Sarjen System Pvt.Ltd.
3060819022	PARMAR SAURAV MUKESHKUMAR	Sarjen System Pvt.Ltd.
3060819023	PATEL DEV RAKESHKUMAR	The One Technology
3060819024	PATEL KHUSHALIBEN RAJUBHAI	3 <sup>rd</sup> Eye Developer



<b>Enrolment No.</b>	<b>Name of Students</b>	<b>Company</b>
3060819025	PATEL MAITRIBEN MANOJBHAI	The One Technology
3060819026	PATEL NIKHIL BIPINBHAI	The One Technology
3060819027	PATEL PINKALBEN ANILBHAI	TechAbbot Technology Services Pvt. Ltd
3060819028	PATEL RITIKAKUMARI ANISHBHAI	Yudiz Solutions
3060819030	RANA VIDHI MAHESHBHAI	Social Pilot
3060819032	SAGAR SHRADDHABEN HARSHADKUMAR	IT Services India Inc
3060819033	SAIYAD MAHAMMADAKIL MUSTAKALI	Social Pilot
3060819034	SAVALIYA MUKUND KIRITBHAI	ISRO
3060819036	THAKARE JYOTIBEN RAJIRAMBHAI	Career futurestack Solution
3060819038	VADHER SUSHIL JAGADISHBHAI	Sadbhavna
3060819039	VANSH PRATIKKUMAR BALUBHAI	Social Pilot
3060819040	VARMORA PARTH HITESHBHAI	Tatvasoft
3060819041	VYAS SAURABH PRADIPKUMAR	ISRO
3060819042	ZEZARIYA SARTHAK SURESHBHAI	Sadbhavna



## 4. Student Representative Council

Student Representative Council (SRC) is basically a student-operated college committee designed to promote college spirit and leadership among students. Students participate in all levels of the council to maintain a high standard of personal conduct. Council members skillfully demonstrate the leadership qualities by serving as good examples of behavior through their deeds and actions.

The Student Representative Council (SRC) is formed :

- ⇒ To develop positive attitude and to practice good citizenship
- ⇒ To promote harmonious relation throughout the college
- ⇒ To improve student/faculty relationship
- ⇒ To improve college moral and general welfare
- ⇒ To provide a forum for student expression
- ⇒ To plan special events or projects

Benefits of being involved in Student Representative Council include :

Opportunity to improve reading and writing skills, gain experience in public speaking, and hone other skills like team building and cooperation. Students learn how to make a positive impact on college and community environment. In addition, Student Representative Council gives a platform to meet new friends and work with a wide variety of people.

## 5. The SRC for the year 2022-23 :

Partron	Dr. D. R. Kathiriya, Principal and Dean		
Chairman	Dr. G. B. Chaudhari, Assistant Professor		
General Secretary	Mr. Mukund Savaliya, General Secretary		
#.	Name	Designation	Activities
1.	Dr. D. R. Kathiriya	Principal & Dean	<b>President</b> , Overall Supervision, NCC, Social Gathering
2.	Dr. G. B. Chaudhari	Assistant Professor	<b>Chairman</b> , Indoor and Outdoor games
3.	Mr. Kalpesh P. Patel	Assistant Professor	<b>Co-Chairman</b> , Outdoor games, Athletics
4.	Dr. Y. R. Ghodasara	Professor (P)	Adventure
5.	Dr. R. S. Parmar	Professor (P)	College Events
6.	Dr. Mayur Raj	Assistant Professor	College Magazine, National & State Events, Training
7.	Dr. D. K. Parmar	Assistant Professor	Personality Development, Cultural Activities, NSS
8.	Dr. J. V. Suthar	Assistant Professor	Cultural Activities, Social Gathering
9.	Mr. Vishal Mahera	Assistant Professor	Indoor Games
10.	Dr. K. U. Chandravadia	Assistant Professor	Fine Arts, Literal Activity



## 6. Student Representatives

Sr. No.	Name	Semester	Activities
1.	Mr. Mukund K. Savaliya	7 <sup>th</sup>	General Secretary, College Event
2.	Ms. Dhruvi A. Patel	5 <sup>th</sup>	Ladies Representative, College Event, Social Gathering
3.	Mr. Vaibhav D. Donga	7 <sup>th</sup>	Class Representative, Social Gathering
4.	Ms. Ritika A. Patel	7 <sup>th</sup>	Class Representative, College Event
5.	Mr. Indra V. Patel	7 <sup>th</sup>	Class Representative, Outdoor games, Athletics, Cultural
6.	Ms. Monali P. Lad	5 <sup>th</sup>	Class Representative, College Magazine, Cultural, NCC
7.	Mr. Himanshu J. Solanki	3 <sup>rd</sup>	Class Representative, Outdoor games
8.	Ms. Pooja K. Gamit	3 <sup>rd</sup>	Class Representative, Literacy Activity, Fine Arts
9.	Mr. Vatsal H. Savaliya	1 <sup>st</sup>	Class Representative, NSS , Adventure
10.	Ms. Riddhi J. Raolji	1 <sup>st</sup>	Class Representative, NSS , College Event



## 7.વિદ્યાર્થીઓને માર્ગદર્શન :

[શ્રી બબાભાઈ પટેલ દ્વારા સંપાદિત 'વિદ્યાર્થી ઉપનિષદ'માંથી સાભાર.]

### [1] સંસ્કાર ગ્રહણ કરવાનો સમય:

આખા જીવનમાં વિદ્યાર્થીજીવનનો કાળ ખૂબ આનંદનો અને સુખનો માનવામાં આવે છે. માણસ મોટો થયા પછી દુનિયાદારીની અનેક આપત્તિઓ અને મુશ્કેલીઓથી ત્રાસે છે, ત્યારે તેને પોતાની વિદ્યાર્થી દશા યાદ આવે છે.... આ અવસ્થા અત્યંત મહત્વની છે. આ જ કાળમાં જે સંસ્કાર અને જે ટેવો પડે છે તે આખી જિંદગી માણસમાં ટકી રહે છે. તેથી આ કાળ મને કેવળ આનંદ અને બેફિકરપણાનો ન લાગતાં જીવનમાં જરૂરી એવાં ઉચ્ચ શિક્ષણ તથા સંસ્કાર મેળવવાની અને સારી ટેવો પાડવાની દષ્ટિથી ઘણો મહત્વનો લાગે છે. આ જ કાળમાં તમે એ જીવનનું મહત્વ સમજો તો આજની તમારી ચાલુ વિદ્યાર્થી દશામાં જ તમે પોતાના ભવિષ્યના જીવનનો પાયો નાખી શકશો.

### [2] શ્રેષ્ઠ પુરુષોનાં ચરિત્રોમાંથી બોધ:

સારા સંસ્કાર મળવાની સગવડ તમને આજે ક્યાંય ન દેખાતી હોય તો તમે મહાન પુરુષોનાં ચરિત્રો તથા સારા ગ્રંથો વાંચો, તેનું મનન કરો. અને તે પરથી યોગ્ય બોધ ગ્રહણ કરો. આપણને સારું શિક્ષણ અને સંસ્કાર આપનારું કોઈ નથી એમ માની નિરાશ થઈને બેસી ન રહો. સારા થવાની તમને ઈચ્છા હોય તો તમે પોતે જ ઉત્સાહપૂર્વક સારા સંસ્કારો પ્રાપ્ત કરવા મંડી પડો. તમારા અંતરમાં જો સદિચ્છા પ્રગટે તો ચાલુ સ્થિતિમાંથી પણ તમને રસ્તો મળશે. તમારી ઈચ્છા પ્રબળ હશે, તમારો સંકલ્પ દઢ હશે, તો પરમાત્મા પોતે તમારો માર્ગદર્શક બનશે. તમારા માર્ગમાં નડતા અંતરાયો દૂર કરવાનું સામર્થ્ય તે તમને આપશે.... તમારે બાબતમાં કદી પણ આળસ કે કંટાળો ન કરતાં હંમેશાં ઉત્સાહી અને પ્રયત્નશીલ રહેવું જોઈએ.

### [3] સારાનરસા સંસ્કારોનાં પરિણામ:

સારામાં સારા સંસ્કારો પ્રાપ્ત કરવાનો તમારે માટે આ જ કાળ છે અને ખરાબ ટેવો પાડીને જીવનને કુમાર્ગે ચઢાવવાનોય આ જ કાળ છે. કઈ વાતનું શું પરિણામ આવશે એ સમજવાની શક્તિ આજે તમારામાં નથી; તેમ જ કોઈ પણ બાબતના પરિણામનો દીર્ઘદષ્ટિથી વિચાર કરવા જેટલી સૂક્ષ્મતા અને પ્રગલ્ભતા આજે તમારી બુદ્ધિમાં આવેલી નથી. તમે પોતે આજે સારાનરસાનો વિચાર કરી શકો તેમ નથી, તેથી જે વસ્તુઓ મહાપુરુષોએ માન્ય કરેલી છે, સંત સજ્જનોએ જે વસ્તુઓને મહત્વની ગણી છે તેને જ તમે અપનાવો. સજ્જનોને તમે તમારા જીવનના માર્ગદર્શક બનાવો; તેથી તમારામાં સંયમ અને પુરુષાર્થ બંને આવશે.



વખત જતાં તમારી ઉંમર અને અનુભવ વધશે એટલે તમારામાં વિવેકની વૃદ્ધિ થશે અને તે વિવેક જ આગળ જતાં તમને સારાનરસાના નિર્ણયમાં સહાયભૂત થશે. તમારો આત્મવિશ્વાસ વધશે. પછી પોતાના માર્ગમાં તમારે કોઈને પૂછવાપણું નહીં રહે. સજ્જનોને તમે તમારા જીવનના માર્ગદર્શક બનાવો; તેથી તમારામાં સંયમ અને પુરુષાર્થ બંને આવશે. વખત જતાં તમારી ઉંમર અને અનુભવ વધશે એટલે તમારામાં વિવેકની વૃદ્ધિ થશે અને તે વિવેક જ આગળ જતાં તમને સારાનરસાના નિર્ણયમાં સહાયભૂત થશે. તમારો આત્મવિશ્વાસ વધશે. પછી પોતાના માર્ગમાં તમારે કોઈને પૂછવાપણું નહીં રહે.

#### [4] નિશ્ચય, નિર્દોષતા અને સૌંદર્ય:

કાયા, વાયા અને મનથી નિર્દોષ રહેવાનો તમારે આજથી જ નિર્ણય કરવો જોઈએ; કારણ આજની તમારી નિર્દોષ અવસ્થામાં જ તમે પવિત્ર નિશ્ચય કરી શકો છો. એક વાર તમે નિશ્ચય કરો એટલે પછી કોઈ પણ સ્થિતિમાં તે પાર પાડવાની શક્તિ તમારામાં જાગૃત થયા વગર નહીં રહે. પણ નિશ્ચયને અંગે ત્રણ મહત્વની બાબતો તમારે ધ્યાનમાં રાખવી જોઈએ. નિશ્ચયની બાબતમાં તમારે હંમેશ પ્રામાણિક, પ્રયત્નશીલ અને સાવધ રહેવું જોઈએ. આ ત્રણમાંથી એક પણ બાબત તરફ તમે દુર્લક્ષ કરશો તો તમારો નિશ્ચય પાર નહીં પડે. દરરોજ પરિશ્રમ કે વ્યાયામ કર્યા વગર આપણને જમવાનો અધિકાર નથી એમ તમારે સમજવું જોઈએ. કોઈ પણ વ્યસનનો જરા સરખો ચેપ તમારે પોતાને કદી ન લાગવા દેવો જોઈએ. આખી જિંદગી વ્યસનથી મુક્ત રહેવું હોય તો તે વિશે તમારા ચિત્તમાં તીવ્ર નિષેધની ભાવના સતત જાગૃત રહેવા દો.... શરીર નીરોગી, મજબૂત, પ્રમાણસરનું, ચંચળ અને સ્ફૂર્તિલું રાખો એટલે તેમાં જ બધું શારીરિક સૌંદર્ય આવી જશે. તમારા શરીરમાં શુદ્ધ લોહી ફરવા દો એટલે તે કાન્તિવાળું દેખાશે. આમાં જ ખરું સૌંદર્ય અને પૌરુષ છે.

#### [5] વાયા શુદ્ધિ અને ક્રિયા શુદ્ધિ અંગે સાવધપણું:

નિંદા, કપટ, દ્વેષ, અસત્ય, અપ્રામાણિકતા, છેતરપિંડી એ બધા દોષો તમારી વાણીમાં કદી ન આવવા જોઈએ. તેમાં મૃદુતા, મધુરતા અને સત્યતા સહેજે હોવી જોઈએ. તમારા શબ્દોમાંથી નિરાધારને આધાર, વિચારહીનોને વિચાર અને અજ્ઞાનીને જ્ઞાન મળવું જોઈએ. અને ઉદ્દામ, ઘાતકી અને દુરાચારી લોકોને જેથી ડર લાગે અને તેઓ પસ્તાવો કરવા પ્રેરાય એવું સામર્થ્ય તમારા શબ્દોમાં હોવું જોઈએ.... ગુણોનો પ્રયત્નપૂર્વક અભ્યાસ કરવો પડે છે, જ્યારે દોષો કેવળ દુર્લક્ષ કરવાથી વધે છે.... તમારા બોલવામાં, ચાલવામાં, હસવામાં કોઈ પણ રીતે અતિશયતા કે બીજો કોઈ દોષ ન આવવો જોઈએ. તમારા વિનોદમાં હૃદયનું માધુર્ય, પ્રેમ અને જ્ઞાનનો સુંદર મેળ હોવો જોઈએ. જેનો તમે વિનોદ કરો તેને પણ તેથી આનંદ થવો જોઈએ, અને દુઃખ તો કદી ન થવું જોઈએ... તમને સંગીત ન આવડે તોય ચાલે; કારણ સંગીત તેટલા વખત પૂરતું મધુર લાગે છે. પરંતુ તમારા હંમેશના બોલવામાં જ તમે માધુર્ય રેડી શકો તો તેમાંથી જ તમારી વાયાશુદ્ધિ અને મન:શુદ્ધિ હંમેશ પ્રગટ થતી રહેશે.... પોતાના વિચારો યોગ્ય રીતે બીજા આગળ રજૂ કરવાની



અને તેમને ગળે ઉતારવાની કળા તમારે અત્યારથી જ કેળવવી જોઈએ. મુખદુર્બલતા કે શરમાળપણું, બીકણપણું કે સંકોચશીલતા તમારામાં ન હોવી જોઈએ. તમારામાં સભાક્ષોભ ન હોવો જોઈએ, સ્પષ્ટ બોલવાની હિંમત હોવી જોઈએ પણ ઉદ્ગતાઈ કે અવિવેક ન હોવો જોઈએ. તમારા બોલવાનો કોઈને કંટાળો કે તિરસ્કાર ન આવવો જોઈએ. તેથી પરિમિત, વ્યવસ્થિત અને પ્રસંગોચિત બોલવાની તમારે ટેવ પાડવી જોઈએ. બીજાઓને કંટાળો આવે તે પહેલાં તમારે પોતાની વાણીને રોકવી જોઈએ... તમે પોતે સદગુણી થાઓ તોય બીજાને કદી પણ હીન ગણશો નહીં. પ્રેમથી બધાને પોતાના કરવાની વૃત્તિ તમારામાં હોવી જોઈએ.

#### [6] રસનેન્દ્રિયની શુદ્ધિ:

આરોગ્યની દૃષ્ટિથી ખોરાકમાં સારો સ્વાદ લાગવો બહુ જ જરૂરી છે, અને તે સ્વાદ લઈ શકાય તે માટે આપણી રસનેન્દ્રિય ઘણી નીરોગી અને તીક્ષ્ણ હોવી જોઈએ. પણ આપણે તેમ ન કરતાં ઊલટું ખાવાના પદાર્થોમાં અનેક તીવ્ર દ્રવ્યો નાખીને તેને સ્વાદિષ્ટ બનાવવાનો પ્રયત્ન કરીએ છીએ. આ પ્રયત્ન અનેક દૃષ્ટિથી અનિષ્ટકારક હોવા છતાં આપણે તે જ ચાલુ રાખીને આપણી રસનેન્દ્રિયની શક્તિને ક્ષીણ કરીએ છીએ. આવી ખરાબ ટેવોમાં તમે ન પડતાં યોગ્ય પરિશ્રમ અને વ્યાયામ વડે પોતાની હોજરી સારી રાખજો. તેની પાચનશક્તિ સતેજ રાખજો.

#### [7] પહેરવેશની બાબતમાં વિવેક:

કપડાંની સુંદરતા કરતાં તેમના કીમતીપણા કરતાં, સાદાઈ અને સ્વચ્છતાને તમારે મહત્વ આપવું જોઈએ. કપડાંનો વિચાર કરતી વખતે પોતાના દરરોજના ધંધાની સગવડની તેમ જ આરોગ્ય, સાદાઈ ને આર્થિક સ્થિતિ વગેરેની દૃષ્ટિથી તમે વિચાર કરજો. કપડાંથી પોતાની જાત શણગારી શોભા લાવવાનો અને મોટાઈ મેળવવાનો પ્રયત્ન બુદ્ધિહીન અને મૂર્ખ માણસ પણ કરી શકે. એટલું જ નહિ, પણ એ જ એવો પ્રયત્ન કરે. પણ તમારા જેવાઓએ પોતાના નીરોગી, મજબૂત અને સુડોળ શરીરથી, તેમ જ બૌદ્ધિક અને માનસિક સદગુણો વડે સુશોભિત થવાની મહત્વાકાંક્ષા રાખવી જોઈએ. કપડાંની તેમ જ તમારા ઘરમાંની અને બહારની રહેણી પણ સાદી અને વ્યવસ્થિત હોવી જોઈએ. તમારું આખું જીવન વ્યવસ્થિત હોવું જોઈએ. પોતાની બધી વસ્તુઓ વ્યવસ્થિત રાખવાની તેમ જ તે સારી રીતે વાપરવાની તમને ટેવ હોવી જોઈએ. દરેક બાબતમાં શિસ્તથી વર્તવાનો તમારો સ્વભાવ બનવો જોઈએ. કામ કરવામાં નિયમિતપણું સાચવજો. બોલેલું વચન અને માથે લીધેલું કામ વખતસર પૂરું કરવાની બાબતમાં હંમેશ દક્ષ રહેજો.





### [8] અન્યાય-પ્રસંગે કર્તવ્ય જાગૃતિ:

તમે કદી પણ કોઈને અન્યાય કરશો નહીં; તેમ જ કોઈનો અન્યાય સહન પણ ન કરતા. તે જ પ્રમાણે બીજા પ્રત્યે કોઈ અન્યાય કરતો હોય તો તેપણ તમારાથી સહન ન થવો જોઈએ, અને શક્ય તેટલા પ્રયત્નથી તમારે તે અન્યાયનો પ્રતિકાર કરવો જોઈએ.

### [9] પરિશ્રમનું મહત્વ:

શારીરિક પરિશ્રમનો તમને કદી કંટાળો ન હોવો જોઈએ. તેમાં તમને નાનમ ન લાગવી જોઈએ. પરિશ્રમ ન કરવો એ દુર્બળતાનું અને ખોટા અહંકારનું લક્ષણ છે એમ તમે માનજો. આયતું ખાનારા અને બીજાની મહેનત પર સુખ અને સ્વાસ્થ્યની ઈચ્છા કરનારા લોકો દીઠે જોરાવર લાગે, તોપણ મનથી તેઓ દુર્બળ છે એમ ચોક્કસ માનજો..... તમે પોતાનું શરીર, બુદ્ધિ, મન અને વાણી પવિત્ર રાખજો. તમને તમે યોગ્ય ટેવો પાડો અને કોઈ પણ બાજુથી દોષ સાથે સંબંધ ન આવવા દો તો તમારા જેવા નસીબદાર બીજા કોઈ નથી એમ માનજો.

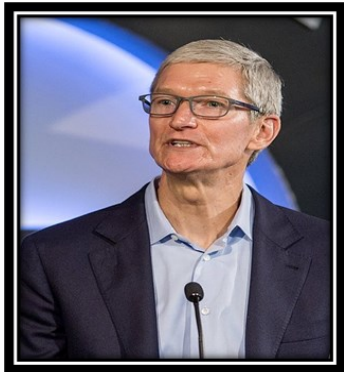
પરમાત્મા તમારા શુભ હેતુમાં તમને સદૈવ સહાય થાઓ...

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## 8. A DAY IN THE LIFE

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**Tim Cook – CEO – Apple**

We're very simple people at Apple. We focus on making the world's best products and enriching people's lives.

- Tim Cook

When most people think of Apple's CEO, they recall the late Steve Jobs. In the wake of Jobs's departure from the earthly realm, Tim Cook took up the reigns and delivered year after year of growth, culminating in Apple becoming the world's first trillion-dollar company.

Cook is one of the world's most elusive CEOs. The man doesn't have the same charisma and love of the limelight as other tech CEOs, such as Elon Musk.

However, Tim Cook is a brilliant mind, and under his stewardship, Apple has become the market leader in wearables and positioned itself as a services company earning billions from Apple Music, Apple TV+, Apple Arcade, Apple Fitness+, and, of course, the App Store.

### **Mornings :**

Cook doesn't like engaging with the media unless it's on official Apple business. As a result, there's not much information on his daily routine. However, after digging around, we managed to find some interesting facts about Tim's daily schedule.

He is an early riser, and claims to get out of bed at 3:45 am each morning. After waking, he likes to get into it straight away. He'll sit down and start going through the 700+ emails in his inbox before hitting the gym at 5 am.

While Apple Park has a fully equipped gym, Tim doesn't train at work. Instead, he prefers to work out at a private gym, out of the eyes of reporters and employees.

Cook takes his fitness and health seriously. He exercises for 30 to 45 minutes. After his exercise, he'll shower, dress, and head to his local Starbucks for a cup of coffee before driving to Apple Park around 8 am to 9 am.

There's no information on what Tim likes to eat for breakfast. However, in a breakfast interview, he enjoyed a sugar-free cereal with almond milk and a plate of scrambled egg whites and bacon (apparently, he prefers turkey bacon).

### **Afternoons**

During the day, he spends most of his time in his office at Apple Park. The CEO leads by example, and he's often one of the first through the doors in the morning and the last to leave at night.



As CEO of the world's largest tech company, Cook has several responsibilities during the day, including managing all aspects of Apple's international business.

While most Apple employees remember Steve Jobs as a hot-tempered man, Cook is the opposite. His management style may lack the flair — and the volatility — of his predecessor, but his employees respect his no-nonsense approach to business.

Apparently, he will work around the clock when there's a big project going on at the company. He is a fan of asking his employees questions to figure out if they have the mental fortitude and intelligence he's looking for in his employees.

While he may be a hard boss, he's fair. In fact, he's often seen having lunch in the Apple Park food court with his employees.

When he does have free time in the afternoon and on weekends, he'll go biking or hiking to get some exercise and relaxation into his week.

Despite his personal fortune, he lives a remarkably frugal life. He often doesn't carry a wallet with him, and he doesn't spend money like some of the other tech CEOs in Silicon Valley.

## **Evenings**

Cook is a tremendously private person outside of the office. If you try to find his home on Google Street View, you'll see the image is blurred.

Little is known about the specifics of his evening routine, but he likes to relax in the evening and is usually in bed by 8:45 pm in order to get 7 hours of sleep before doing it all again.

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## 9. વાંચવા જેવું પુસ્તક

<p>પુસ્તક નું નામ : એકલો જાને રે  લેખક : ડો. શરદ ઠાકર  ભાષા : ગુજરાતી  વિષય : ડો. એચ એલ ત્રિવેદી સાથે બનેલ સત્ય ઘટનાઓ  પ્રકાશક : નવભારત સાહિત્ય મંદિર</p>	
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ગુજરાતમાં વસતો ભાગ્યેજ કોઈ નાગરીક પદ્મશ્રી ડો. એચ એલ ત્રિવેદી ના નામથી અજાણ હશે. પદ્મશ્રી ડો. એચ એલ ત્રિવેદીનું પૂરું નામ ડો. હરગોવિંદ લક્ષ્મીશંકર ત્રિવેદી. મૂળ વતન ચરાડવા, હળવદ, ગુજરાત. તેઓ અમદાવાદ ખાતે કાર્યરત ઇન્સ્ટિટ્યૂટ ઓફ કિડની ડિસીઝ એન્ડ રીસર્ચ સેન્ટરના આદ્યસ્થાપક ડાયરેક્ટર હતાં. ડો. શરદ ઠાકર લિખિત ગુજરાતી પુસ્તક "એકલો જાને રે" ડો. એચ એલ ત્રિવેદી સાહેબ સાથે બનેલ સત્ય ઘટનાઓ ની એક સુંદર રજૂઆત છે. આ પુસ્તક કુલ 44 પાઠ(ચેપ્ટર્સ) માં વહેંચાયેલું છે.

પુસ્તકમાં ડો. એચ એલ ત્રિવેદીનાં જીવનનાં શરૂઆતના વર્ષો થી લઈ અમદાવાદ ખાતે કાર્યરત ઇન્સ્ટિટ્યૂટ ઓફ કિડની ડિસીઝ એન્ડ રીસર્ચ સેન્ટરની સ્થાપના અને વિકાસ એમ કુલ આઠ દાયકાની સફરનું રસપ્રદ વર્ણન છે. એક ગરીબ શિક્ષક કુટુંબમાં જન્મ, ગામડાંની શાળામાં પ્રાથમિક તથા માધ્યમિક શિક્ષણ, બી જે મેડિકલ માં અભ્યાસ, ત્યારબાદ અમેરિકા અને કેનેડામાં તબીબી વિષયનું ઉચ્ચ શિક્ષણ, આ તમામ મેળવવા માટે તેમને કરેલો અથાગ પરિશ્રમ અને સંઘર્ષ, કુટુંબ દ્વારા મળેલ સહકાર, કેનેડામાં તેમને મેળવેલ પ્રસિદ્ધિ અને સંપત્તિ, દેશમાં ગરીબોની સેવા માટે કેનેડાની દોમ દોમ સાહેબી વાળા જીવનનો ત્યાગ, સ્વદેશ આવ્યા બાદ એમના સપનાંની કિડની ઇન્સ્ટિટ્યૂટ બનાવવા માટે દેશની વહીવટી અને સરકારી સિસ્ટમ સાથે શારીરિક, માનસિક અને આર્થિક રીતે થકવી દેનાર સંઘર્ષો, સંઘર્ષ દરમિયાન મળી આવેલ કેટલાક પુણ્યશાળી વ્યક્તિઓનો સહકાર, કિડની ઇન્સ્ટિટ્યૂટની સ્થાપના અને વિકાસ વગેરે બાબતોને વણી લેવામાં આવેલ છે.

ડો. વર્ગીઝ કુરિયનને ત્રિભુવન કાકા મળે છે અને દેશને અમુલ ડેરી. તેવી જ રીતે ડો. એચ એલ ત્રિવેદી ને ત્રયંબક કાકા મળે છે અને દેશને એક અતિ આધુનિક કિડની ઇન્સ્ટિટ્યૂટ જે ગરીબ દર્દીઓને કિડનીના રોગોને લગતી તમામ સારવાર નજીવી કિંમતે ઉપલબ્ધ કરાવે છે.

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## 10. Crop Yield Estimation Using Open Source Data Mining Tool - A Novel Approach

Agriculture is playing a significant role in the Indian Economy. Agriculture is the most important occupation for most Indian families and a significant percentage of the population in India is dependent on agriculture for livelihood. Crop yield estimation is difficult in the agriculture sector. Preliminary each crop season, farming planners require estimating the crop yield for all the concerned crops. Crop yield prediction is complex because it depends on many interconnected aspects. Crop yield is also affected by controllable and uncontrollable factors. So, crop yield estimation traditionally has relied on farmers' experience with agriculture fields, crops, and climate conditions, which can be imprecise. Weather is a major factor affecting the crop production in agricultural systems. Weather is a primary determinant of agricultural production. There are many weather variables like temperature, relative humidity, wind speed, rainfall, and sunshine hours that constitute the major climatic influence contributing to the growth and development of the crop directly or indirectly. Data mining is the process of analyzing data from different perspectives and summarizing it into useful information. In estimative data mining, there are values to estimate the future whereas in descriptive mining tasks describe the characteristics of the data in a target data set. But estimative analysis has a greater application than Descriptive analysis. Methods in data mining are Clustering, Classification, Association Rule mining, and Regression. The main idea of this article is to show the relationship between weather parameters and crop yield using the open-source data mining tool WEKA.

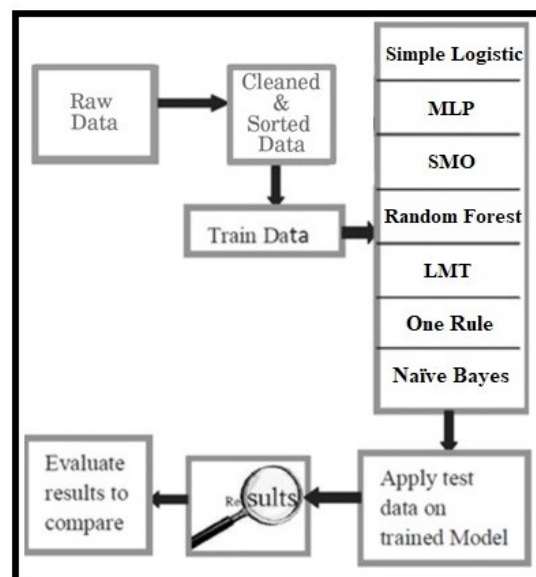


Figure 1. Architecture of the crop yield estimation system



◆ **Steps followed while estimating crop yield using open source data mining tool:**

1. Initially, rice yield is categorized as L - Low, N - Normal, and H – High. A dataset is prepared in an Excel sheet with CSV extension for analysis by open source Data mining tool WEKA.
2. The Min-Max Normalization technique is used to normalize the experimental dataset which reduces the large variation of prediction.
3. Feature Selection algorithm is also used as it improves the quality of the data and increases the accuracy of data mining algorithms. It also focuses on eliminating redundant and irrelevant data.
4. The raw data is cleaned and sorted.
5. The different classification algorithms are then employed over the trained data.
6. The results of each algorithm are noted from WEKA and compared with each other.
7. Correctly Classified Instances, Incorrectly Classified Instances, Receiver Operating Characteristic (ROC) Area, Precision-Recall Curve (PRC) Area, Kappa Statistic, Mean Absolute Error, Root Mean Squared Error, Relative Absolute Error, and Root Relative Squared Error, True Positive Rate, False Positive Rate, Precision, Recall, F-Measure, and MCC values are taken into consideration for each case.
8. Thereafter performance is measured using three factors namely Sensitivity, Specificity, & Accuracy.
9. General Definitions :
  - ◆ TP (True Positive) = Number of cases where the classification model detects a condition when it is present.
  - ◆ TN (True Negative) = Number of cases where the classification model does not detect a condition when it is not present.
  - ◆ FN (False Negative) = Number of cases where the classification model does not detect a condition when it is present.
  - ◆ FP (False Positive) = Number of cases where the classification model detects a condition when it is not present.



10. Performance evaluation factors used for performance measurement are as follows:

- ◆ Confusion Matrix: It summarizes the performance of a classification model (Fig.2)
- ◆ RMSE: This measures the difference between the predicted values and the actual values
- ◆ MAE: Which measures the difference between two continuous variables
- ◆ RAE: This gives the total absolute error between the variables
- ◆ Sensitivity: It is defined as the percentage of correctly classified cases. It is a True Positive Rate (TPR)
- ◆ Specificity: It is defined as the percentage of incorrectly classified cases. It is a True Negative Rate (TNR)
- ◆ Accuracy: It is defined as the overall success rate of the classifier.
- ◆ F1 score: it is a measure of the test's accuracy. It reaches its best value at 1 and worst at 0
- ◆ MCC: Mathews Correlation Coefficient is a measure of the quality of classification.
- ◆ Kappa Statistics: It is frequently used to test interrater reliability.
- ◆ ROC Area: It is a performance measurement for classification problems at various threshold settings.

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## 11. Visual Positioning System

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VPS is a technology that enables a device, such as a smartphone or a drone, to determine its location and orientation in the physical world using visual cues. VPS systems use computer vision algorithms to analyze images from a camera or other optical sensor and match them against a database of known locations or features.

### How does VPS work?

VPS determines a device's location based on imagery rather than GPS signals. VPS first creates a map by taking a series of images that have a known location and analyzing them for key visual features, such as the outline of buildings or bridges, to create a large-scale and fast searchable index of those visual features. To localize the device, VPS compares the features in imagery from the phone to those in the VPS index. However, the accuracy of localization through VPS is greatly affected by the quality of both the imagery and the location associated with it.

When the user's device requests the Geospatial API, a neural network processes the pixels to find recognizable parts of the user's environment and matches them to the VPS localization model. Computer vision algorithms then compute the position and orientation of the device, offering a location that is much more accurate than what was previously possible with GPS alone.

### What are the advantages?

The new visual system is aimed at offering ample support to fix navigation concerns. Here are a few advantages of Google VPS that make it stand out in this technology-driven era:

- VPS can help you get better business insights and assist clients on foot.
- Provides the user with the advantages of local marketing.
- It can be made available for all transportation modes. It is an icon in the transportation sector.
- Very handy in urban areas where GPS services are often distracted or blocked by skyscrapers.
- Usability in indoor and outdoor areas and GPS-denied environments with assured accuracy despite the size of the area.
- VPS can be a great aid to the visually impaired, as the close-up visual assistance can help them navigate.

### Current Challenges of VPS

Measuring position has been a dramatic success for outdoor navigation system, and there is a strong push to repeat that indoors. Being able to locate a person inside a building can help in many different ways. From finding the right office in a tower block to locating a required department or even a specific product in a shop or providing highly targeted deals as you walk around the supermarket.

Unfortunately, the technology of satellite positioning through the GPS, Glonass, or the forthcoming Galileo system cannot meet the requirements of indoor positioning even with the nominal enhanced measurement accuracy down to 1 meter as receivers struggle with multi path signals and the inability to use the satellite tested.





## Coming Attractions: Future Trends

Google's "world positioning" approach is to incorporate another sensor to make you feel more focused. Existing objects, such as vehicles and systems that can calculate magnetic and gravitational fields are quickly distorted, "resulting in errors up to 180 degrees unreliable."

VPS provides an imagery-based unit positioning instead of GPS. Next, VPS generates maps using an image set, which has a defined location and analyses them to create a detailed and easily searchable database of the visual features with key visual features like a contour of structures or bridges. VPS compares picture processing in the phone to the VPS index to find a device. However, both the images and the position associated with it have a great impact on the accuracy of the location through VPS.

Google views VPS as a Street View index data in 93 countries worldwide, with "trillions of solid metrics to implement triangulation," which first "filters out transient sections of the scene and focuses on permanent structures which are static over time." Machine learning is applied to eliminate trees that, depending on the season, are different in complex light movement and construction.

For complete details refer below links :

- [1] "The Complete Guide on Visual Positioning System," Tech Funnel Contributors, 02 02 2023. [Online]. Available: [techfunnel.com/information-technology/visual-positioning-system/](http://techfunnel.com/information-technology/visual-positioning-system/). [Accessed 02 05 2023].
- [2] M. Dhande , "Getting lost with GPS? Don't worry, Google Maps VPS is here," Geospatial World, 12 01 2023. [Online]. Available: <https://www.geospatialworld.net/prime/business-and-industry-trends/what-is-visual-positioning-system-vps/>. [Accessed 02 05 2023].

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## 12. Swarm Intelligence Unleashed: Unravelling the Power of Ant Colony Optimization

Ants are fascinating creatures that work together to solve complex problems like finding the shortest path to food or the best route to their nest. They achieve this through the use of pheromones, chemical trails that they leave behind. The more ants that travel along a particular path, the stronger the pheromone trail becomes. This pheromone trail then attracts more ants, leading to an even stronger trail.

This is precisely what the Ant Colony Algorithm does. It's a metaheuristic optimization algorithm inspired by the foraging behaviour of ants. The algorithm is used to solve complex problems by simulating the behaviour of ants as they search for the best solution.

Here's how the algorithm works:

- Define the problem to be solved and identify the parameters that need to be optimized.
- Create a set of ants, each representing a potential solution to the problem.
- Randomly distribute the ants across the problem space.
- Each ant evaluates its position and chooses its next move based on a set of rules.
- The rules are based on the strength of the pheromone trail left behind by previous ants and a heuristic function that takes into account the distance between the ant's current position and the goal.
- After all ants have made their moves, the pheromone trail is updated to reflect the quality of the solutions found.
- The process is repeated until a satisfactory solution is found or a set number of iterations is reached.



The Ant Colony Algorithm is an effective optimization technique that has been used to solve a wide range of problems, including the traveling salesman problem, job scheduling, and network routing. It's an excellent example of how we can learn from nature and apply those lessons to solve complex real-world problems.

In nutshell, the Ant Colony Algorithm is a fascinating optimization algorithm that simulates the foraging behaviour of ants to find the best solution to a problem. It's a simple yet powerful technique that has been used to solve a wide range of problems, and it's an excellent example of how we can learn from nature to solve complex problems.

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### 13.મહિલા સશક્તિકરણ

સંસ્કૃતમાં એક શ્લોક છે. "યસ્ત પૂજ્યંતે નાર્યસ્તુ તત્ર રમંતે દેવતાઃ" એટલે કે જ્યાં નારીની પૂજા હોય છે. ત્યાં દેવતા નિવાસ કરે છે. ભારતીય સંસ્કૃતિમાં નારીના સમ્માનમાં ખૂબ મહત્વ આપ્યું છે અને નારીઓને દેવીનો દરજ્જો આપવામાં આવ્યો છે. તેમ છતાં આજે પણ ભારતના અમુક સમુદાયોમાં મહિલાઓને સંપૂર્ણ સંવતંત્રતા આપવામાં આવતી નથી. એટલે જ ભારત સરકારે પણ મહિલા સશક્તિકરણ જેવા વિષયો પર વિચારવાની ફરજ પડે છે. કોઈપણ રાષ્ટ્રની પ્રગતિનો આધાર તે રાષ્ટ્રની મહિલાઓની સ્થિતિ ઉપર હોય છે. દેશ, સમાજ અને પરિવારના ઉજ્જવળ ભવિષ્ય માટે મહિલા સશક્તિકરણ ખૂબ જ મહત્વપૂર્ણ છે.

ભારત સરકારે ને મહિલા સશક્તિકરણ વર્ષ તરીકે જાહેર કર્યું છે. મહિલા સશક્તિકરણની રાષ્ટ્રીય નીતિ 2001માં પસાર કરવામાં આવી. ભારત સરકાર દ્વારા 8 માર્ચ, 2010માં "નેશનલ મિશન ફોર એમ્પાવરમેન્ટ ઓફ વુમન" ના પાયા નખાયા, જેનો હેતુ મહિલાઓ માટે સંકલિત વિકાસની પ્રક્રિયાને વેગ આપવાનો છે.

#### મહિલા સશક્તિકરણ શું છે?

મહિલાઓની સ્વ-મૂલ્યની ભાવનાને પ્રોત્સાહન આપવું. અને તેમની નબળાઈઓને ઓળખવાની અને તેમને દૂર કરવાની તેમની ક્ષમતા નક્કી કરવામાં તેમને પ્રોત્સાહન આપવું અને મદદ કરવી. મહિલાઓનું સશક્તિકરણ તેમને સમાજમાં પોતાના માટે એક પગલું ભરવા તરફ દોરી જાય છે. મહિલા સશક્તિકરણ ખાસ કરીને આ છ ભાગમાં વહેંચી શકાય.

#### વ્યક્તિગત સશક્તિકરણ

સ્ત્રીઓ વિવિધ ક્ષેત્રો ઉપરાંત વ્યક્તિગત રીતે સ્વનિર્ભર, આત્મવિશ્વાસી, હકારાત્મક, સ્વનિર્ણયી અને સ્વમાની બને તથા પ્રશ્નો અને પડકારોનો સામનો કરી સામાજિક વિકાસમાં યોગદાન આપી શકે તે થયું વ્યક્તિગત સશક્તિકરણ.

#### સામાજિક સશક્તિકરણ

સામાજિક સશક્તિકરણ આપવા માટે સૌ પ્રથમ દહેજ પ્રથા, નિરક્ષરતા, અસમાનતા, ભૂણ હત્યા, ઘરેલું હિંસા, બળાત્કાર જેવા સમાજમાં તેમના હક અને મૂલ્યોની હત્યા કરનારા તમામ રાક્ષસી વિચારોને જડ મૂળમાંથી કાઢી નાખવા જરૂરી છે. અવારનવાર આપણે આવા વાક્યો સાંભળીએ છીએ કે, "તું છોકરી છે, છોકરાની જેમ શું કામ વર્તન કરે છે", "આને ભણાવીને શું કામ છે, કાલે ઉઠી ને એને તો સાસરે જઈને રસોડું જ સંભાળવાનું છે ને".



## શૈક્ષણિક સશક્તિકરણ

જો તમે એક આદમીને ભણાવશો તો માત્ર એક જ વ્યક્તિ શિક્ષિત થશે. જો તમે એક સ્ત્રીને શિક્ષિત કરશો તો આખું કુટુંબ શિક્ષિત થશે. – મહાત્મા ગાંધી. દરેક સ્ત્રી શિક્ષિણ થકી પોતાના મનપસંદ ક્ષેત્રોમાં આગળ વધી ધ્યેય, સિદ્ધિ અને સફળતા પ્રાપ્ત કરી, આત્મવિશ્વાસ કેળવી સ્વાવલંબી બને તે શૈક્ષણિક સશક્તિકરણ

## આર્થિક સશક્તિકરણ

કોઈ પણ રાષ્ટ્રમાં વિકાસ માટે આર્થિક સશક્તિકરણ જરૂર છે. જે સ્ત્રીઓ ખેતી, પશુપાલન, ગૃહઉદ્યોગ કે સ્વરોજગારમાં રોકાયેલ છે તેઓને પોતાના કાર્યનું યોગ્ય વળતર મળે, તેના આર્થિક યોગદાનની ગણતરી થાય અને પોતાના કમાયેલા પૈસા પોતાના નિર્ણયથી વાપરી શકે તે માટે આર્થિક સશક્તિકરણ અતિ આવશ્યક છે.

## રાજકીય સશક્તિકરણ

રાજકીય ક્ષેત્રે મહિલા આરક્ષણની જોગવાઈને લીધે સ્ત્રીઓને રાજકીય સશક્તિકરણની તક આપવામાં આવી છે. મત આપવો, ઉમેદવારી નોંધવવી, વિજેતા બનતા સત્તામાં ભાગીદાર બનવું વગેરે માટે રાજકીય સશક્તિકરણ આવશ્યક છે.

## આરોગ્ય સશક્તિકરણ

મોટા ભાગની મહિલાઓ આરોગ્ય પ્રત્યે સભાન હોતી નથી. સ્ત્રીઓ પોતાના કરતા પણ તેમના ઘરના સભ્યોની વધારે સંભાળ રાખતી હોય છે. આરોગ્ય પ્રત્યે સ્ત્રીઓ જાગરુક થાય અને સાચી સમજ કેળવાય તે માટે આરોગ્ય સશક્તિકરણ ખૂબ જ મહત્વનું છે.

આજે મહિલાઓ દરેક ક્ષેત્રમાં પુરુષો સાથે ખભે ખભો મિલાવીને કામ કરી રહી છે. સરકાર પણ મહિલાઓને પ્રોત્સાહિત કરવા સતત પ્રયત્નશીલ છે. સ્ત્રીઓ બધા ક્ષેત્રોમાં સક્ષત બની સમાજમાં પોતાનું, પરિવારનું તેમજ દેશનું નામ રોશન કરે તેને જ સાચા અર્થમાં મહિલા સશક્તિકરણ થયું તેમ કહેવાય.

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## 14. ICT - A Tool For Women's Empowerment

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The development of the nation depends upon the development of human resources and ICT plays a very crucial role in the development of human resources. Human resources mean not only men but women also. As we know that India is still man dominant country and women have fewer resources as compared to men but ICT destroying all the gaps and provides a great opportunity for the development of women. Empowering women through ICT means providing economic power to reduce poverty, develop new opportunities for distance learning and education, bring improvement in the health of women, and finally increase the literacy rate among women.

ICT is a broader term that includes all communicational devices, cell phones, radio, television, and computer along with satellite systems. Various services and appliances such as video conferencing and distance learning programs are also included in ICT with analogue technology.

### Need for ICT

Women need technology for the same reason as men :

- To develop their marketable skill
- To enhance their economic opportunities
- To participate in informed decision making
- To promote themselves as an individual
- To participate in the modern world
- To use technology related to their economic development
- To change the attitude and behavior perspective of society toward women
- To create a psychological comfort level for women at their workplace by providing them with knowledge and skill
- To increase access to jobs, market and improve entrepreneurship
- To Increase of average household income in villages

### The following are some of the advantages offered by ICT to women:

- ICT has given women the opportunity to work from home. It has given the freedom to people to operate from the comfort of their own houses.
- It is helping in knowledge dissemination and enables women to know about the day-to-day happenings of the country as well as in other countries.
- The quality of education has increased. Literacy levels, awareness, and confidence levels among women have improved significantly. Learning has become hassle-free and enables women to learn in their comfort after finishing household chores. E-governance initiatives have made the life of women easy. It is now easy to get services like birth certificates, income certificates, and all necessary certificates online. Loss of wages and bribes and the requirement to travel long distances to get certificates are all eliminated.
- Emails, chat, and Voice over Internet Protocol (VoIP) have connected people in rural areas to connect with their kith and kin abroad and in faraway places. Some people use these services to get job opportunities abroad.



- Timely information through facilities like video conferencing for getting information from experts in different fields like agriculture, eye care, astrology, nutritional information, and prenatal care is available to women especially

### **Challenges**

- Women fall into the category of less informed who have poor access to information and information on many matters is restricted for cultural, social, economic, and geographic reasons. The main hurdle that prevents women from accessing information is illiteracy.
- Civil society and government have not still utilized the full potential of ICT in women's empowerment. Hence, they are not very much in creating enabling frameworks and spaces for the growth of ICT infrastructure.
- ICTs come at a financial cost. This is the major hurdle for the penetration of ICT at the community as well as at the individual level. This is compounded by the fact women in India have an average meager income and do not have decision-making power in the household to invest in these technologies.
- Penetration of ICTs also depends upon the physical infrastructure requirements like electricity, telephone lines, internet gateways etc.
- Linguistic barriers prevent knowledge available on the internet to get disseminated to the poorest and illiterate sections of society.
- Lack of trained human resources to handle technology and networking issues.
- Realizing the challenges allows us to address the barriers better and devise strategies that consider the complex dimension of women's lives.

### **Some of the strategies suggested for women's empowerment through ICTs.**

- Improving access to women entrepreneurs' relevant ICTs and the climate remaining socio-cultural constraint that may act as barriers to their use of ICTs.
- Creating an environment where women feel welcome and comfortable learning with others getting trained on using ICT and participating in community development activities, including community advocacy efforts.
- Establishing an ICT education center for women where women can receive basic courses: Internet use, MS-Excel, MS-PowerPoint, and computer basic.
- Content in the local language is extremely important if ICTs are to make a difference in women's lives. It is therefore important to develop content that addresses local/regional/national needs, to provide information relevant to local/regional/national issues and disseminate that information in appropriate language.
- Increasing opportunities for women in supervisory and management-level leadership positions in ICTs companies.
- Developing ICT-based programs that address women's specific needs and that are run by women e.g. literacy programs, business planning courses, ICT training, access to health information and services, access to market and trading information services and e-commerce initiatives.
- Enabling women's participation in e-governance and building gender awareness among women and men participants.



## Conclusion

Information and Communication Technology is also playing an important role. Through ICT women are getting security, awareness, knowledge, employment, confidence, popularity, *etc.* ICT provides resources, information, and opportunities for development. Women need access to the educational and training opportunities necessary to equip them for the rapidly changing skill requirements. Women need access to the educational and training opportunities necessary to equip them for the rapidly changing skill requirements. Civil society actors, administrator including NGOs need to develop advocacy strategies to address the role of ICTs in the promotion of their equality in decision-making and accountability. To make women independent, powerful, and strong in all fields with the help of ICT necessary actions are to be taken at regional, national, and international levels.

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## 15. Remote Sensing based Crop Yield Estimation

Remote sensing has become a widely used tool for agricultural monitoring and crop yield estimation and its applications have been playing a significant role in agriculture sector for evaluating plant health, yield and crop loss (%) estimation, irrigation management, identification of crop stress, weed and pest detection, weather forecasting, gathering crop phenological information's etc. Forecast of crop yields by using remote sensing inputs in conjunction with crop simulation models is getting popular day by day for its potential benefits. Remote sensing reduces the amount of field data collection and improves the precision of the estimates. Crop stress caused by biotic and abiotic factors can be monitored and quantified with remote sensing. In traditional agriculture, yield estimation is done by visual inspection and manual counting of crops in the field. This method can be time-consuming, labour intensive, and prone to errors. Remote sensing-based yield estimation, on the other hand, provides a quicker, more accurate, and cost-effective way of estimating crop yield.

RS based crop yield estimation is based on the principle that plants absorb and reflect different wavelengths of light depending on their physiological characteristics, such as chlorophyll content, biomass, temperature stress and water content. Remote sensing sensors can detect these variations in reflected light and use them to estimate crop yield. The most commonly used sensors for remote sensing-based crop yield estimation are multispectral and hyperspectral sensors. Multispectral sensors capture data in a few predetermined spectral bands, while hyperspectral sensors capture data in many narrow and contiguous spectral bands. The spectral data captured by these sensors can be used to derive vegetation indices, such as the NDVI or the LSWI, and input parameters like (Water Scalar, Temperature Scalar, Photosynthetically Active Radiation, and fraction of Photosynthetically Active Radiation). The use of RS based crop yield estimation has several advantages over traditional methods. Firstly, it can cover a large area in a short amount of time, providing a more comprehensive picture of crop growth and yield potential. Secondly, it can be used to detect crop stress and disease, which can help farmers take early action to prevent yield losses. Thirdly, it can be used to monitor crop growth and yield potential throughout the growing season, allowing for better planning and management of harvest operations. RS based crop yield estimation provides a quick, accurate, and cost-effective way of estimating crop yield, enabling farmers and policymakers to make informed decisions about crop management and food security. With advances in remote sensing technology and data processing, the use of remote sensing for crop yield estimation is likely to become even more widespread in the coming years.

Mukund Savaliya  
General Secretary  
Semester: 8<sup>th</sup>



## 16. Technology

### 16.1 How AI can be used in agriculture

AI can be used in agriculture in a variety of ways, including:



**Precision Agriculture:** AI can be used to collect and analyze data from sensors, drones, and other sources to provide farmers with insights into their crops' health, water and nutrient requirements, and other important factors. This can help farmers make better decisions about when to plant, irrigate, fertilize, and harvest their crops, which can lead to higher yields and more efficient resource use.

**Crop Monitoring and Disease Detection:** AI can analyze images of crops to detect diseases, pests, and other problems that may affect crop yield. This can help farmers take action to prevent or mitigate crop damage before it spreads.

**Weather Forecasting:** AI can be used to analyze weather patterns and provide farmers with accurate forecasts, which can help them make better decisions about planting and harvesting times, irrigation schedules, and other factors that can affect crop yields.



**Livestock Management:** AI can be used to monitor the health and well-being of livestock, track their movements, and provide insights into their behavior. This can help farmers make better decisions about feed, medication, and other aspects of animal husbandry.

**Autonomous Farming:** AI can be used to power autonomous tractors, drones, and other farming equipment, which can help farmers reduce labor costs and improve efficiency.

Overall, AI has the potential to revolutionize the way agriculture is practiced, making farming more efficient, sustainable, and profitable for farmers.

Lad Dhruvi  
Semester: 2<sup>th</sup>



## 16.2 The role of AI in computer vision

- You're unlocking your smartphone. No need to provide the secret code, look at the screen, and your smartphone unlocks. It can recognize visuals or images around it based on its learnings from the data it consumes. It's not that it can recognize human beings or other objects as we do, and it never will, but it can recognize patterns and shapes of the images based on the data. AI has been playing the central role in powering computer vision

### What is computer vision?

- Computer vision is a technology that enables computers to recognize or identify objects visually. The technology runs on a massive amount of data from which it learns. It is enabled to consume and analyze data, its types, patterns, and characteristics. It's an extremely complex and layered technology. For example, your smartphone doesn't know that it's you, but it stores your facial data and its analysis and patterns that are distinct from anyone else. So, when you look at the screen, it matches the visuals with the data it has stored, and upon a match, it unlocks the screen.

### Role of AI in powering computer vision

- AI and machine learning technologies play a crucial role in powering computer vision technology. AI enables computer vision to understand, recognize, and analyze all types of visual data.
- Machine learning, which is part of a type of AI, has been at the forefront of enabling computer vision. Machine learning uses datasets from which it can learn about patterns. The algorithms or logic in machine learning can detect the features, characteristics, or objects within the most complex images. For example, it can identify the nose in a human face and identify it as one. Not only that, it can distinguish between various parts of an image. It will not confuse the nose and the eyes. Machine learning can perform image segmentation on the most complex of images and detect anomalies. Image segmentation enables computers to categorize an image into its logical parts. For example, it can divide a car into its characteristics, such as windows, windscreen, wheels, and steering.

### Use cases

There are multiple use cases of AI-powered computer vision

#### 1) Medical imaging

AI algorithms can help medical professionals analyze various imaging documents such as X-rays and Magnetic Resonance Images and detect anomalies and problems and help with better diagnoses. Ex. computer visions are trained with large datasets to identify problems in mammograms that can detect breast cancer.



## 2) Agriculture

AI-powered computer vision is being utilized to assess the quality of the crops, assess the conditions of the soil, and detect the various diseases that can afflict the plants. This technology can be of great help to the farmers that can use it to optimize the yields of the crop and reduce the wastage of resources.

## 3) Surveillance

Authorities have been using AI-powered computer vision to monitor public spaces, such as railway stations, museums, stadiums, and airports to fast identify suspicious behavior or movements of shady people or flag possible threats. As technology evolves, it can prove more potent in preventing crime.

## 4) Autonomous vehicles

Computer vision in autonomous vehicles enables them to interpret their surroundings as they move. Autonomous vehicles are not controlled by human drivers. Hence, accurate identification of objects and surroundings is critical, else, it can result in a disaster .

- It's obvious that computer vision has a fantastic future and it has been rapidly evolving. But there are concerns around it that are being voiced. First, as in the case of AI, there is a concern about the privacy and confidentiality of individuals. Computer vision is a data and people are questioning how the data is being used. Second, with the emergence of deep fake technology, hackers or people with malicious intentions can create deep fakes and confuse computer vision into flagging them. For example, deep fake technology can be used to create panic in public spaces.
- Computer vision technology will be evolving continuously and helping our society to grow. So, it is our responsibility to use computer vision in a proper way and protect our data.

Pushti Bhalara  
Semester: 2<sup>th</sup>

## 16.3 Esports

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- India is a country where sports like cricket, football, and hockey are deeply embedded in the culture. However, in recent years, there has been a rapid rise in the popularity of esports in India, with the industry growing at a remarkable pace.
- Esports, or competitive video gaming, has been steadily gaining traction in India since the early 2000s. With the advent of online gaming platforms, the industry has exploded in recent years, with esports tournaments attracting millions of viewers and offering large prize pools.
- According to a report by KPMG, the esports industry in India is expected to grow to INR 11,900 crore (approximately \$1.6 billion) by 2025, driven by increasing smartphone and internet penetration and the growth of esports infrastructure in the country.
- Several esports organizations have emerged in India, with professional esports teams representing the country at international tournaments. One such organization, Entity Gaming, has a roster of top esports players in India and has competed in tournaments around the world.



- Esports tournaments in India have also gained significant traction, with the Indian esports league (ESL) being one of the largest esports tournaments in the country. The tournament attracts top esports players from India and offers a prize pool of INR 1 crore (approximately \$136,000).
- The esports industry in India has also attracted the attention of major corporations, with companies like Tencent and Nazara Technologies investing in the industry. In 2019, Tencent launched the India chapter of its global esports league, PUBG Mobile Club Open, which saw over 400,000 participants from across the country.
- However, the growth of esports in India has not been without its challenges. The lack of government recognition and regulation has hindered the growth of the industry, with players and organizations facing issues such as tax implications, visa issues for international tournaments, and lack of funding.
- Despite these challenges, the future of esports in India looks promising, with the industry poised for significant growth in the coming years. With increasing investments and infrastructure development, esports is set to become a major player in India's sporting landscape .

Chaudhari Pal  
Semester: 4<sup>th</sup>

## 16.4 The Relevance of ICT in Modern Agricultural Technology

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Information and communication technology in agriculture (ICT in agriculture), also known as e-agriculture .ICT focuses on the enhancement of agricultural and rural development through improved information and communication processes. ICT in agriculture or e-agriculture interventions have been developed and tested around the world to help agriculturists improve their livelihoods through increased agricultural productivity and income, or by reducing risks.

Information and communication technologies (ICTs) in agriculture technology comprise those networks, mobiles, devices, services, and applications that aid the processing, management, and exchange of data, information, or knowledge with a target audience.

ICT opens significant prospects for the agriculture industry, which employs over 40% of the global workforce and accounts for a sizable share of exports from developing nations. To solve the problem of food security, rural communities must increase their productivity, and incomes. Close to 60% of the global population has access to the internet, and mobile internet is now the most widely-used channel for internet access worldwide. The tremendous adoption of ICTs has made it possible to facilitate better communication and ensure the delivery of services and information to people who previously lacked access.

The data enables farmers and agribusinesses to closely monitor crop cultivation, optimize the use of agrochemicals and natural resources, and adapt quickly to changing environmental conditions.



It can launch new agricultural and rural businesses including e-commerce, satellite office real estate, rural tourism, and virtual small-scale farm corporations. Utilizing techniques like geographic information systems can support policy-making and evaluation for the management of agro-environmental resources, disaster management, and optimal farm output. Agriculturists can now link with the worldwide network of farmers, agronomists, businesses, and other service providers to stay current on the latest crop cultivation techniques thanks to the usage of the most recent technology in agriculture.

Pooja Gamit  
Semester: 4<sup>th</sup>

## 16.5 How the Internet is Beneficial to Students?

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The internet is regarded as one of humanity's greatest gifts, and in the last 10 to 15 years, it has spread rapidly throughout the globe. Things like transfer of information and conversation between two or more people sitting far from each other have gotten a lot quicker. It is a place where concepts from all parts of the world are found easily. There are several benefits of the internet for students because it allows them to easily obtain the information they require. It has made a significant contribution to the education of students by improving their ability to study and gain knowledge, right from their homes. They use the internet for a variety of purposes, including online lectures, research, latest information, and more.

Below are the advantages of internet for students –

1 – Relevant information present on the internet Students can easily search for the relevant information they require on the internet. Before the spread of the internet, students had to go through many books to find the information they needed, which was a time taking process. Things are now faster and easier because there are numerous websites that provide important information that can help students with their academic work and assignments. This also helps students remain up to date with the latest information.

2 – Online education through internet Almost every student is now aware of the terms online education and distance learning, both of which have been the most significant benefits of the internet during the pandemic. They can learn a wide variety of things from the internet while at home, in a comfortable atmosphere. Students can easily access lectures or classes on various academic subjects to clear all of their doubts. Different institutions, such as colleges, universities, and schools, have started to offer online programmes and courses to anyone in any part of the world.

3 – Career planning Choosing the right path and developing a good career plan is critical for the future, and it can be difficult for students to do so without proper guidance. The internet has lots of resources for the students to seek proper career guidance and achieve future goals.



4 - Developing communication and connectivity Having good communication and connectivity with others has proven to be beneficial. The internet has made it easy for students to connect with their classmates and teachers using different mediums from any part of the world. They can easily discuss study material and clear doubts with the teacher in order to fully understand any topic. This can also help students in coming up with new ideas and enhancing their knowledge.

5 – Getting up to date information The internet has been the best source to get up to date information in the quickest possible way. Different websites and social media platforms play an important role in bringing the most recent news or information to people’s attention. Students can gather the latest information related to their academics that can help them in their studies. There are also media websites where students can share their thoughts and the most recent facts.

6 – Self study The internet has established itself as a vital tool for self-study. Google, Bing and Yahoo helps in learning and discovering various sources to get the latest information. Students can carry out research on any topic to improve their knowledge and get necessary study materials, which can be crucial for their academics. YouTube and other platforms also provide free classes and courses for students.

### **Conclusion**

- ◆ The internet is one of the most powerful information tools present in the world today. There are numerous benefits to using the internet for students, and it has proven to be one of the best places to learn. It has changed the lives of students and made several things easier for them. Many students are now enrolled in online education, which is changing the face of academic education. Nowadays, most assignments are completed on computers with the use of the internet. The internet has many benefits, but it also has some drawbacks, so it is essential to teach students how to use it responsibly.

Gaurav Solanki  
Semester: 6<sup>th</sup>

## **16.6 Virtual Reality: The Future of Gaming and Beyond**

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Virtual Reality (VR) has been a buzzword for quite some time, and with the advancements in technology, it is rapidly becoming a reality. VR is a computer-generated environment that mimics real-world surroundings, enabling users to interact and experience the virtual world. The gaming industry was one of the first to adopt VR, but its uses go beyond gaming. VR is transforming various industries, including healthcare, education, and military training, among others.

In the gaming industry, VR is taking the immersive experience to a new level. VR headsets and controllers enable players to be part of the game, and the gaming experience is no longer limited to a screen. Players can explore and interact with virtual environments, and the game becomes more than just pressing buttons on a controller. VR is revolutionizing the way games are designed and played, and it is



opening up new possibilities for game developers.

Beyond gaming, VR is being used in various industries. In healthcare, VR is being used to train medical professionals and students. Medical procedures and surgeries can be simulated, enabling medical personnel to learn and practice without the risk of harming a patient. In education, VR is being used to provide immersive learning experiences, enabling students to learn by exploring and interacting with virtual environments. In military training, VR is being used to simulate battlefield scenarios, enabling soldiers to train for combat without the risks involved.

In conclusion, VR is the future of gaming and beyond. With its ability to create immersive experiences, VR is transforming various industries, including healthcare, education, and military training, among others. The possibilities of VR are endless, and it is exciting to see how it will continue to shape the future.

Akshar Prajapati  
Semester: 6<sup>th</sup>

## 16.7 Blockchain in Agriculture

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Blockchain technology has been making waves in various industries, and agriculture is no exception. With the world population expected to reach 9.7 billion by 2050, the agriculture sector is facing significant challenges to meet the growing demand for food, while also ensuring sustainability and transparency in the supply chain. Blockchain technology has the potential to address some of these challenges and transform the agriculture industry.

So, what exactly is blockchain technology? In simple terms, it is a decentralized digital ledger that records transactions and stores data across a network of computers. Each block in the chain contains a cryptographic hash of the previous block, ensuring that the data cannot be altered retroactively. This makes it a secure and transparent way to store data and track transactions.

One of the key benefits of blockchain technology in agriculture is its ability to enhance supply chain transparency. In the current food supply chain, there are often multiple intermediaries involved, making it difficult to trace the origin of a particular food item. This lack of transparency can lead to food fraud and safety issues. With blockchain technology, every transaction in the supply chain can be recorded and tracked in real-time, from farm to table. This means that consumers can have confidence in the safety and authenticity of the food they are consuming.

Blockchain technology can also enable farmers to receive fair compensation for their produce. In the current system, farmers often receive only a fraction of the retail price of their produce, with the rest going to intermediaries such as wholesalers and retailers. With blockchain technology, farmers can sell their produce directly to consumers or buyers, without the need for intermediaries. Smart contracts can be used to automate the process of payment, ensuring that farmers receive fair compensation for their produce.



Another potential application of blockchain technology in agriculture is in the area of data management. Farmers can use blockchain technology to store and manage data such as crop yields, weather patterns, and soil conditions. This data can then be used to optimize crop production, reduce waste, and improve overall efficiency.

In addition to these benefits, blockchain technology can also help to reduce the environmental impact of agriculture. By enabling farmers to track and reduce waste in the supply chain, and by optimizing crop production, blockchain technology can help to reduce greenhouse gas emissions and conserve natural resources.

However, there are also some challenges to the adoption of blockchain technology in agriculture. One of the main challenges is the lack of infrastructure and technological literacy in some parts of the world. Blockchain technology requires a reliable internet connection and access to specialized hardware, which may not be available in some rural areas. Additionally, there may be concerns around data privacy and security, as sensitive information such as crop yields and financial transactions are recorded on the blockchain.

In conclusion, blockchain technology has the potential to revolutionize the agriculture industry by improving supply chain transparency, enabling fair compensation for farmers, optimizing crop production, and reducing the environmental impact of agriculture. While there are challenges to the adoption of blockchain technology, it is clear that this technology has the potential to transform the way we produce and consume food, ensuring a more sustainable and equitable future for all.

Mukund Vyas  
Semester: 6<sup>th</sup>

## 16.8 AutoML : The Future of Machine Learning

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Machine learning has become an integral part of many industries, including healthcare, finance, and technology. As the amount of data generated by businesses continues to grow, companies are seeking more efficient and accurate ways to analyse that data. This is where AutoML comes in.

AutoML or automated machine learning, is the process of automating the end-to-end process of applying machine learning to real-world problems. It uses advanced algorithms to analyze data and generate models that can be used to make predictions or classifications. AutoML is designed to make the process of building machine learning models faster, more accurate & more accessible to businesses of all sizes .

- The traditional approach to machine learning involves a team of data scientists and machine learning engineers working together to manually build and fine-tune models. This process can be time consuming and expensive, as it requires a high level of expertise and specialized software. AutoML eliminates the need for manual model-building by automating the process of selecting and tuning machine learning algorithms.





- There are two main types of AutoML: supervised and unsupervised. Supervised AutoML is used for tasks such as classification and regression, where the machine learning model is trained on labeled data. Unsupervised AutoML is used for tasks such as clustering, where the machine learning model is trained on unlabelled data.
- One of the biggest advantages of AutoML is that it makes machine learning accessible to businesses that do not have the resources to hire a team of data scientists. With AutoML, businesses can build and deploy machine learning models quickly and easily, without needing extensive knowledge of the underlying algorithms.
- AutoML is also ideal for businesses that have limited data science expertise. The automated process means that businesses can build accurate models without needing to hire a team of data scientists. This can lead to faster decision-making and improved outcomes .
- There are several popular AutoML platforms available today, including Google Cloud AutoML, H2O.ai, and Data Robot. These platforms offer a range of features, including automated data pre-processing, model selection, and hyperparameter tuning.
- Despite its many advantages, AutoML is not without its challenges. One of the biggest challenges is the potential for bias in the models that are generated. This is because the automated process can sometimes lead to models that are biased against certain groups or individuals. To mitigate this risk, businesses must ensure that their AutoML models are regularly audited and tested for bias .

Unnati Bhalia  
Semester: 8<sup>th</sup>

## 16.9 Neuromorphic computing – The upcoming new era of AI

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“Create a new type of computer that can proactively interpret and learn from data, solve unfamiliar problems using what it has learned, and operate with the energy efficiency of the human brain.”

Neuromorphic computing is the use of very large scale integration (VLSI) systems containing electronic analog circuits to mimic neuro-biological architectures present in the nervous system. A neuromorphic chip is any device that uses physical artificial neurons (made from silicon) to do computations.

the term neuromorphic has been used to describe analog, digital, mixed-mode analog/digital VLSI, and software systems that implement models of neural systems .

### Why neuromorphic computing is required ?

1. Co-located memory and computation, as well as simple communication between components, can provide a reduction in communication costs.
2. Neuromorphic architectures often result in lower power consumption (which can be a result of analog or mixed analog-digital devices or due to the event-driven nature of the systems).



3. By building the architecture using brain-inspired components, there is potential that a type of intelligent behaviour will emerge.

One of the most popular technologies associated with building neuromorphic systems is the memristor (also known as ReRAM).

Therefore, with neuromorphic chips the system learns along the way, much like how humans learn. This is unlike the brute force deep-learning procedure which focuses on interpreting large and varied sets of data in order to train a conventional computer to make predictions.

Neuromorphic systems offer two major promises. First, because they are pulse-driven, potentially asynchronous, and highly parallel, they could be a gateway to an entirely new way of computing at high performance and very low energy.

Second, they could be the best vehicle to support unsupervised learning—a goal that may prove necessary for key applications such as autonomous vehicle navigation in uncharted areas or natural-language comprehension. What neuromorphic chips can do is to provide self-learning without requiring large datasets as in convolutional artificial networks.

A new generation of personal assistants might emerge, augmenting humans in learning tasks, a development with far-reaching consequences for our economic and social environment.

Vaibhav Donga  
Semester: 8<sup>th</sup>

## 16.10 5G Services

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Bringing a new era in technology, Prime Minister Narendra Modi launched the 5G telecom services in India today. The technology seeks to provide seamless coverage, high data rate, low latency and highly reliable communications system . 5G Services are also expected to play a major role to achieve the economic goal of making India a \$5-trillion economy by 2024-25. According to experts, 5G will have a cumulative economic impact of \$1 trillion by 2035 and can deliver an additional GDP of \$150 billion for the country, between 2025-40. At the launch event, PM Modi also spent time understanding the indigenous development of end-to-end 5G technology and different use cases of the service .

For consumers, 5G promises higher data speeds over 4G. At its peak, internet speeds on 5G could touch 10 Gbps, compared to the 100 Mbps peak of 4G. 5G technology offers latency as low as 1ms. For the unversed, latency is the time taken by the device to send packets of data and get a response. Shorter the latency, quicker the response.

Agrawal Yash  
Semester : 4<sup>th</sup>



## 16.11 Google Earth Engine: Big Data Crop Mapping Insights

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### Introduction:

Agricultural monitoring and food security require reliable crop maps at a national or global scale. However, large scale crop mapping poses a challenge due to the processing and management of heterogeneous satellite imagery acquired by various sensors, leading to a "Big Data" problem. This article explores the efficiency of the Google Earth Engine (GEE) platform in classifying multi-temporal satellite imagery, with the potential to apply the platform on a larger scale.

### Importance of Crop Mapping:

Information on land cover/land use (LCLU) geographical distribution over large areas is critical for environmental and monitoring tasks, including climate change, ecosystem dynamics analysis, food security, and others. Reliable crop maps can be used for more accurate agriculture statistics estimation, better crop yield prediction, and drought risk assessment.

### Satellite Imagery for Crop Mapping:

Satellite imagery has become the most promising data source for LCLU mapping in the past decades. However, there are no globally available satellite-derived crop specific maps at high-spatial resolution. Only coarse-resolution imagery (>250 m spatial resolution) has been utilized to derive global cropland extent (e.g., Glob Cover, MODIS).

### Challenges in Crop Mapping:

Generation of high-resolution crop maps for large areas (>10,000 sq. km) using Earth observation data from space requires processing a large amount of satellite images acquired by various sensors. Images acquired at different dates during the crop growth period are usually required to discriminate certain crop types. Providing classification of multi-temporal satellite images for large areas poses challenges such as non-uniformity of coverage of ground truth data and satellite scenes, seasonal differentiation of crop groups, and the need to store, manage and seamlessly process large amounts of data (big data issues).

### Google Earth Engine:

Google Earth Engine (GEE) provides a cloud platform to access and seamlessly process large amounts of freely available satellite imagery of many satellites like Sentinel 1 for SAR analysis, for Optical analysis Sentinel 2, Landsat series, MODIS, etc. The Google Earth Engine (GEE) offers a comprehensive collection of advanced classifiers for performing pixel-based classification tasks, which can be utilized to create crop maps. These classifiers are integrated within the GEE platform, and include well-known algorithms such as Decision Tree (DT), Random forest (RF), Classification and Decision Tree (CART), Support Vector Machine (SVM), among others. With these classifiers, users can analyze satellite imagery data and extract valuable information, such as land cover classification, vegetation index values, and other geospatial data, to support decision-making processes in various fields, including agriculture, environmental monitoring, and land-use planning, among others. These methods are well-documented in the literature. The GEE platform offers powerful capabilities in handling large volumes of remote sensing imagery that can be used, for example, for classification purposes such as crop mapping for large territories.



## Results:

The best results in the GEE can be obtained for decision tree-based classifiers, namely CART and RF compared to SVM classifier. The GEE also has the ability to auto-correct training data for classification and overcome the missing data problem in temporal datasets. In general, GEE provided very good performance in enabling access to remote sensing products through the cloud platform, and allowing seamless execution of complex workflows for satellite data processing. The user at once gets access to many satellite scenes or composites that are ready for processing.

## Conclusion:

In conclusion, the Google Earth Engine platform provides an efficient solution for big data processing in agriculture, specifically for crop mapping. The platform's capabilities in handling large volumes of remote sensing imagery, including multi-temporal datasets, provide opportunities for more accurate and reliable crop maps for large areas. These maps can aid in various agricultural and environmental monitoring tasks, providing a significant contribution towards food security and sustainability.

Saurabh Vyas  
Semester: 8<sup>th</sup>

## 16.12 Honeypot

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Global communication is getting more important every day. At the same time, computer crimes are increasing. Countermeasures are developed to detect or prevent attacks most of these measures are based on known facts, known attack patterns. It is important to know, what kind of strategy an attacker uses, what tools he utilizes and his intention. By knowing attack strategies, countermeasures can be improved and vulnerabilities can be fixed. To gather such information is one main goal of a honeypot.

A honeypot is primarily an instrument for information gathering and learning. Its purpose is not to be an ambush for the Blackhat community to catch them in action. The focus lies on a silent collection of information about their attack patterns, used programs, purpose of attack and the Blackhat community itself. All this information is used to learn more about the Blackhat proceedings and motives, as well as their technical knowledge and abilities. There are a lot of other possibilities for a honeypot divert hackers from productive systems or catch a hacker while conducting an attack are few examples.

A honeypot is a security mechanism used to detect, deflect, or counteract unauthorized access to information systems. It involves creating a system, network or application that appears to be part of a network or system, but is actually isolated and monitored to gather information on the activities of attackers.

honeypot is designed to attract attackers and provide an early warning of potential security breaches or attacks, allowing security professionals to analyse and learn from the attackers' tactics, techniques, allowing security professionals to analyze and learn from the attackers' tactics, techniques, and procedures (TTPs). This information can then be used to improve the security of the actual system.

There are several types of honeypots, including low-interaction honeypots, which simulate a limited set of services and protocols to detect basic attacks, and high-interaction honeypots, which simulate a full system to detect more complex attacks. Honeypots can also be classified as production or research honeypots, depending on their purpose and usage.



Honeypots are a new field in the sector of network security. Currently, there is a lot of ongoing research and discussions all around the world. No other mechanism is comparable in the efficiency of a honeypot if gathering information is a primary goal, especially if the tools an attacker uses are of interest. As honeypots are getting more advanced, hackers will also develop methods to detect such systems. A regular arms race could start between the good people and the blackhat community .

Sanket Kachhadiya  
Semester: 8<sup>th</sup>

### 16.13 When will AI be fully integrated into cyber security?

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*Cyber Security Hub's* Advisory Board is a group of experts in IT security and technology that meets every two months to discuss the most important issues and developments in cyber security. How AI enhances cyber security strategy.

With research by Capgemini finding that the majority (69 percent) of enterprise executives said that artificial intelligence (AI) was necessary to respond to cyber security threats three years ago, the complete integration AI within cyber security strategy seems inevitable.

When discussing whether they use AI in their cyber security strategy, however, one member was quick to point out that common misconceptions about what AI is can muddy the waters when discussing its use.

“AI is a huge buzzword at the moment but what people are talking about is not true AI as such,” they explained, “We use a lot of ML as we need to understand all user behavior analytics from ingress points through to instruction. AI is instruction-based and ML is behavior-based.”

Another member agreed that they do not use as much AI as the technology is still in its infancy, however they do use machine learning as it can use data to make predictions in a fraction of the time it would take a human to. They also noted, however, that true AI may open up more risks to a company's network. This potential risk has led to the member “following trends more on the conservative side, leveraging people and using technology as a blend to get the best results”.

Anand Mori Chauhan  
Semester : 8<sup>th</sup>

### 16.14 Automation And The Future Of Work

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- **Technical industries throughout the world are making amazing progress on “automation related fields”** such as robotics and artificial intelligence. The amazing progress has also brought with it some amazing challenges. Advancements in these fields are creating a new class of automation technologies which human workers must now or will in the very near future have to compete with. It is generally understood that automation technologies will bring many new benefits into the world, but what about the downsides? Could income inequality be enhanced? Could millions of workers become redundant and unnecessary? Could society experience social, economic and political unrest? These are just a few of the many kinds of questions that remain unanswered. Since robotics and artificial intelligence bring with them the possibility that many different occupational categories of the future will become automated, then this is an existential issue which everyone should be aware of and which everyone should prepare for.



- **Whether a worker is located in a developing or in an advanced economy, the worker will be impacted by developments in automation.** Automation will impact workers throughout the world, but will affect the different economies differently. For example, in the developing world, where straightforward manufacturing and agricultural work dominate, automation is a serious threat as the technologies already exist to replace production workers. However, in the advanced economies, technological development is further along in the automation cycle, and this is reflected in the job market, which often features opportunities for high skill occupations while middle skill and lower skill occupations are in decline.

Kanotra Mehul  
Semester: 8<sup>th</sup>

## 16.15 Machine Learning In Data Science

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To make the computers smarter, more intelligent. The more direct objective in this aspect is to develop systems (programs) for specific practical learning tasks in application domains. To develop computational models of human learning process and perform computer simulations.

### Machine learning

Machine learning (ML) is a type of artificial intelligence (AI) that allows software applications to become more accurate at predicting outcomes without being explicitly programmed to do so. Machine learning algorithms use historical data as input to predict new output values. Recommendation engines are a common use case for machine learning. Other popular uses include fraud detection, spam filtering, malware threat detection, business process automation (BPA) and Predictive maintenance.

### What are the different types of machine learning?

Classical machine learning is often categorized by how an algorithm learns to become more accurate in its predictions. The type of algorithm data scientists choose to use depends on what type of data they want to predict.

**There are four basic approaches** supervised learning, unsupervised learning, semi-supervised learning and reinforcement learning.

**Advantages of Machine learning** Easily identifies trends and patterns, No human intervention needed, Continuous Improvement, Handling multi-dimensional and multi-variety data, Wide Applications.

### What is the Role of Machine Learning in Data Science?

You are investing in ML like never before and hiring more data scientists and machine learning engineers. However, there is a lack of clarity on the role of machine learning and its place in the life cycle of a data science project. Here's an attempt to resolve this uncertainty. Nowadays, many organizations and industries stress using data to improve their products and services. If we talk about just data science, then it is only data analysis using ML Ops machine learning. Both machine learning and data science have to go hand in hand. Engineers have to use ML and data science prominently to make better and more appropriate decisions. So, this article will introduce you to machine learning and data science, the role of ML in data science, and how they are different from each other yet work together.



## The Exciting Future of Machine Learning Machine

Learning is not only offering tremendous growth opportunities but also disrupting long-standing industries. Machine Learning is easily one of humanity's best allies by enabling businesses to make more informed decisions, helping developers look at problems in innovative ways, and offering insights round the clock with inhuman speeds and accuracy. In a survey conducted by PWC in 2021, 86% of individuals said that Machine Learning and Artificial Intelligence are now a mainstream part of their company. Over 50% of them reported acceleration of adoption plans for this technology after the impact of the COVID-19 pandemic on businesses worldwide .

Monali Lad  
Semester: 6<sup>th</sup>

## 16.16 Data Structure and Algorithm

# DATA STRUCTURE



Data structures are the fundamental constructs used to organize and store data in a computer. They are designed to efficiently store and retrieve data in various formats. Algorithms, on the other hand, are a set of instructions or procedures used to perform a specific task or solve a problem.

The study of data structures and algorithms is essential for computer science and software engineering. Understanding data structures and algorithms is important to design and develop efficient and scalable software systems.

Data structures include arrays, linked lists, stacks, queues, trees, graphs, and hash tables. Each data structure has its own strengths and weaknesses in terms of storage efficiency, speed, and ease of manipulation.

Algorithms include sorting, searching, and graph traversal. They can be analyzed in terms of their time and space complexity to determine their efficiency. The best algorithm for a particular problem depends on the size of the data set and the specific requirements of the task.



A data structure and an algorithm work together to solve a problem. For example, a search algorithm may require a data structure such as a binary tree to efficiently find a specific item in a large data set.

The choice of data structure and algorithm is critical to the performance of a software system. A poorly designed data structure or algorithm can lead to slow execution times and inefficient use of system resources.

Data structures and algorithms are often taught together in computer science courses. They are also used extensively in interviews for software engineering positions.

In summary, data structures and algorithms are the foundation of computer science and software engineering. They provide the tools and techniques necessary to develop efficient and scalable software systems. Understanding their principles and best practices is essential for any software developer.

Patel Indra  
Semester: 6<sup>th</sup>

### **16.17 The Future of Self-Driving Cars: Advancements in Technology and Safety**

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For many years, self-driving automobiles have been a source of fascination and invention. Recent technological developments have moved us one step closer to a time when self-driving vehicles are a common sight on our roadways. These developments include the application of artificial intelligence, machine learning, and computer vision to improve the effectiveness, safety, and dependability of self-driving cars.

Self-driving cars have the potential to reduce accidents brought on by human mistake, which is one of their key advantages. The National Highway Traffic Safety Administration estimates that human error is at blame for 94% of all automobile accidents. By removing driver error from the equation, self-driving cars have the potential to significantly decrease this figure. This is accomplished by employing sensors, cameras, and other technology to navigate highways and understand obstructions more quickly than people.

The possibility to increase mobility for those who are unable to drive due to physical or mental impairments is another advantage of self-driving cars. Self-driving vehicles would make it possible for those who are unable to drive to travel without the assistance of others.

The ecology will continue to be significantly impacted by self-driving cars. Self-driving cars have the potential for reducing air pollution and traffic congestion by lowering the number of vehicles on the road. Furthermore, self-driving automobiles might be developed to use less energy, lessening their environmental impact.

In summary, self-driving cars have the potential to completely change the way we travel and increase road safety. While there are still issues to be resolved, technological advances and safety measures are moving us closer to a time when self-driving cars are usual.

Dhara Mistri  
Semester: 6<sup>th</sup>





## 17. Inspiration

### 17.1 A Historical Win at Lord's

It is said that you cannot win a Test match in one hour but that you can certainly lose one in the same period. If that is true, England proved that you cannot win a Test match with aggression alone but you can certainly lose one through mindless aggro in a red-mist session.

The most remarkable thing about India's Win at Lord's earlier 2021 was that it was not one freakish innings or spell that turned a losing position into a winning one. Barring the 89-run stand between Jasprit Bumrah and Mohammed Shami, aided and abetted by England's tactics, the game was won by stunning Indian performances underpinned by sheer belief and the refusal to concede that the game was gone.

**FOR A LONG WHILE NOW INDIA'S FAST-BOWLING STOCKS HAVE BEEN ON THE RISE BUT NEVER BEFORE HAVE THEY PUT TOGETHER A FOUR-PRONGED PACE ATTACK THAT COULD GIVE THE OPPOSITION 60 OVERS OF PURE HELL, AS VIRAT KOHLI DEMANDED, AND GOT, ON THE FINAL DAY OF THE SECOND TEST. ALL THIS WITH THE BEST SPINNER IN THE WORLD CARRYING DRINKS.**

It is clear that England underestimated India, although that is a mistake they are unlikely to make again. It was as though England turned up expecting to binge-watch Downton Abbey only to find themselves in the middle of a particularly violent episode of Game of Thrones.

But there was a difference in the types of aggression on display from the home team and the visitors. While England acted out of what Chris Silverwood admitted was the baser motive to simply dish out payback, India's behaviour was tactical.

Bumrah is the least likely of any bowler in the Indian set-up to use the ball to cause bodily harm or indeed to lose his rag and make things personal. Chances are his bouncer barrage came on Kohli's say-so. Kohli has history with Jimmy Anderson, not that he needs that to turn to aggression over subtlety. Shami is unafraid to use the short ball. But he uses the bouncer for shock and awe, usually with a view to pushing the batsman on to the back foot for the full ball that inevitably follows, rather than knocking heads off.

It is fair to say India's behaviour on the final day would have been ugly to some. But this is far from new. There were people who believed the West Indian pace quartet of years gone by did not do the game any favours with their constant bumpers and slow over rates. There are people who found the mental disintegration approach of the champion Australian team a generation later to bring the game into disrepute, giving rise to the Ugly Australians moniker.

And, there are those who find Kohli a bit much today. There is a longing for a time when cricket was more of a gentleman's game, all tea and scones, but in many ways this is nostalgia for something that never did exist. Scratch the surface and ugliness has always existed in cricket. What is more, there is no need to legislate – and nor is this feasible – for good behaviour.



There are rules in place today under which the umpires can step in at any time, whether in response to intimidating bowling or what is being said on the field. At Lord's Michael Gough and Richard Illingworth were the stewards on the field of play. Between them they have enough experience, as players and umpires, to direct traffic, and they did step in when they felt the need. A failsafe exists in the form of the match referee, in this case the poacher turned gamekeeper Chris Broad.

The truth is, India did not win because of ugly tactics. They won because they had 11 potential match winners in their ranks while England had two: Joe Root and Jimmy Anderson. While Root did his job with the bat, he was the first to admit he let his team down as a captain, especially in failing to deploy the Anderson scalpel, choosing instead to go for the butcher's knife short-ball offensive, using Mark Wood in the role of enforcer.

In an ideal world we should all be able to be successful without speaking a word in anger, but in modern sport that seems unlikely. If anything is worth lamenting it is this: that the world we live in has changed so much that the young grow up believing, even being actively taught, that it is impossible to be simultaneously nice and a winner. India's cricketers do not play their game in a vacuum. They are cut from the same cloth as the rest of modern society. To hold them to higher standards than politicians, actors, journalists or anyone else in public life is to have false expectations, which is setting yourself up for disappointment.

For India, all that mattered was victory and, until those running the game say otherwise, they should be seen only as having done their job, as sportsmen, if not ambassadors. The man of the match, KL Rahul, summed this up soon after the game was over: "If you go after one of our guys, you are going after the whole team. All XI of us will come right back .

Chavda Ranjit  
Semester : 4<sup>th</sup>

## 17.2 Lesson to learn from Virat Kohli's Life

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The life of Virat Kohli, the Indian cricketer and former captain of the Indian national team offer several valuable lessons that can be applied to various aspects of life. Some of the key lessons to learn from his life include:

### **Dedication and hard work**

Virat Kohli is a true professional who is dedicated to his craft. He has a rigorous training schedule and is always looking to improve. He teaches us that to succeed in any field, you must be willing to put in the hard work and dedication.



## Leadership

Virat Kohli is an excellent leader who leads by example. He is a captain who is respected by his teammates and is able to inspire them to play their best. He shows us that a good leader is someone who can inspire others to be their best selves.

## Failure as motivation

Virat Kohli has had his fair share of failures but he never gives up. He uses those failures as motivation to work harder and come back stronger. He teaches us that failure is not a setback but a stepping stone to success.

Tank Rudra  
Semester: 4<sup>th</sup>

## 17.3 founder of ISRO : Vikram Sarabhai

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Dr. Sarabhai is considered as the Father of the Indian space program; He was a great institution builder and established or helped to establish a large number of institutions in diverse fields. He was instrumental in establishing the Physical Research Laboratory (PRL) in Ahmedabad : after returning from Cambridge to an independent India in 1947, he persuaded charitable trusts controlled by his family and friends to endow a research institution near home in Ahmedabad. Thus, Vikram Sarabhai founded the Physical Research Laboratory (PRL) in Ahmedabad on November 11, 1947. He was only 28 at that time. Sarabhai was a creator and cultivator of institutions and PRL was the first step in that direction. Vikram Sarabhai served of PRL from 1966-1971.

He was also Chairman of the Atomic Energy Commission. He along with other Ahmedabad-based industrialists played a major role in the creation of the Indian Institute of Management, Ahmedabad .

Lakum Chirag  
Semester: 4<sup>th</sup>

## 17.4 Narayan Murthy

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Narayana Murthy is a prominent Indian businessman and entrepreneur who co-founded Infosys, one of India's largest IT companies. He is widely regarded as a pioneer of the Indian IT industry and has been recognized for his contributions to business and society.



### Early Life and Education

Narayana Murthy was born on August 20, 1946, in Mysore, Karnataka, India. His father was a high school teacher, and his mother was a homemaker. Murthy was interested in science and technology from a young age and pursued an undergraduate degree in electrical engineering from the National Institute of Engineering in Mysore. After completing his degree, he went to Paris to pursue a master's degree in computer science from the Ecole National Supérieure des Telecommunications.



## **Career**

After completing his master's degree, Murthy returned to India and worked at the Indian Institute of Management in Ahmedabad as a chief systems programmer. He then went on to work at Patni Computer Systems in Pune, where he gained valuable experience in the software industry. In 1981, Murthy co-founded Infosys with six other engineers, including Nandan Nilekani, S. Gopalakrishnan, and S. D. Shibulal. The company started as a small software development firm and has since grown into one of India's largest IT companies.

Under Murthy's leadership, Infosys became known for its innovative business practices and corporate social responsibility initiatives. The company was one of the first in India to offer employee stock options and was also a pioneer in corporate governance. Infosys also established the Infosys Foundation, which has been involved in various philanthropic activities in the areas of healthcare, education, and rural development.

In 2002, Murthy stepped down as CEO of Infosys but continued to serve as chairman of the board until 2011. During his tenure, he was recognized for his leadership and business acumen, receiving numerous awards and accolades. In 2000, he was awarded the Padma Shri, one of India's highest civilian honors, and in 2008, he received the Padma Vibhushan, the country's second-highest civilian honor.

## **Philanthropy and Social Initiatives**

Murthy is also known for his philanthropic work and social initiatives. In addition to establishing the Infosys Foundation, he has been involved in various other charitable organizations. He is a member of the board of trustees of the University of Mysore and has also served on the boards of several other organizations, including the Indian School of Business and the Rhodes Trust.

Murthy has been a vocal advocate for corporate social responsibility and has been involved in various initiatives aimed at improving the quality of life for underprivileged communities. He has also been a proponent of education reform in India and has been involved in various efforts to promote literacy and access to education.

## **Legacy**

Narayana Murthy's contributions to the Indian IT industry and society have been significant. He played a key role in transforming India into a global hub for IT services and helped establish Infosys as a leading player in the industry. His leadership and business acumen have been widely recognized, and his philanthropic work and social initiatives have had a positive impact on countless lives.

Godham Pankaj  
Semester: 4<sup>th</sup>



## 17.5 Homi Jehangir Bhabha

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Homi Jehangir Bhabha (1909-1966) was an Indian physicist who is often considered the father of the Indian nuclear program.

Bhabha was born to a wealthy family in Mumbai. In 1927, he went to England at Cambridge University. Although he began studying engineering per the wishes of his family, Bhabha was quickly drawn to physics. "I seriously say to you that business or job as an engineer is not the thing for me," wrote Bhabha in 1932. "It is totally foreign to my nature and radically opposed to my temperament, and opinions. Physics is my line. I know I shall do great things here." Bhabha earned a Ph.D. in nuclear physics in 1934.

Bhabha returned to India before World War II to join the Indian Institute of Science, where he founded the Cosmic Ray Research Institute. In 1945, he founded the Tata Institute of Fundamental Research, where initial research for India's nuclear program began. Shortly after India's independence in 1947, Bhabha wrote to Prime Minister Jawaharlal Nehru, arguing that "within the next couple of decades, atomic energy would play an important part in the economy and the industry of countries and that, if India did not wish to fall even further behind industrially advanced countries of the world, it would be necessary to develop this branch of science."

In 1954, Bhabha founded a nuclear research centre at Trombay which was later renamed the Bhabha Atomic Research Centre (BARC). A strong proponent of nuclear energy, Bhabha organized the first UN Conference on the Peaceful Uses of Atomic Energy in 1955. He was the head of India's nuclear program until his death.

Homi Bhabha died in a plane crash on the way to Geneva on January 24, 1966.

Rangadiya Avnit  
Semester: 4<sup>th</sup>

## 17.6 Vishesh Bhriguvanshi

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Vishesh Bhriguvanshi (born 13 November 1991) is an Indian professional basketball player who is the captain of the Indian National Basketball Team, and most recently, a player with the Adelaide 36ers of the National Basketball League (NBL). Bhriguvanshi was awarded the Arjuna Award by Govt. of India for the year 2020 .

Bhriguvanshi was born and brought up in Uttar Pradesh. His father was a lecturer and mother a principal in a Govt. College. As a 12-year-old, Vishesh would follow his brother, Vibhor, to the basketball courts of Udai Pratap College in Varanasi. His career began with participation in the Varanasi U-13 district meet. Bhriguvanshi has represented his district and state and at the age of 17, he was recruited to the Senior Indian men's team.



Bhriguvanshi began playing competitive basketball in 2009 at the Asian Club Championships. In 2017, Bhrguvanshi averaged 30.8 points, 9.5 rebounds and 8.2 assists in 11 games for Bengaluru Beast in the United Basketball Alliance of India Pro Basketball League. In one match against rival Hyderabad, he poured in 57 points and registered 11 assists.

Bhrguvanshi made his debut for the India national basketball team in 2009 at the FIBA Asia Championship. He has since competed at the 2011 FIBA Asia Championship, 2013 FIBA Asia Championship, 2014 FIBA Asia Cup, 2015 FIBA Asia Championship, and 2016 FIBA Asia Challenge. At the 2016 FIBA Asia Challenge in Iran, Bhrguvanshi averaged a career-best 17.9 points per game, to go with 4.4 rebounds, 3.8 assists and 2.5 steals in eight games.

Bhrguvanshi has helped India to win a 3x3 basketball gold medal at the Asian Beach Games in 2008 and has since been playing in every major FIBA Asia Championship and representing India. He has won three national champions domestically with Indian Railways and, in 2011.

Yug Barot  
Semester: 4<sup>th</sup>

## 17.7 “Success Story From a Chaiwala to The Prime Minister of India”

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The rise of Shri Narendra Modi is not your usual rags to riches journey. At every juncture, he has proved his mettle as an able manager, extraordinary leader, swift learner, and humble human being. Time and again, he has had rendezvous with failure and defiance, but every time he has resurrected himself and continued to progress in life. Here are some crucial lessons a management student can learn by looking back at his life.

Narendra Modi was born on 17<sup>th</sup> September 1950 to a poor yet humble family of grocers. His childhood was just as tough as lakhs of those children who were born in the post-independence era when India as a nation was still struggling with demons like poverty and unemployment. Despite dismal conditions, Narendra Modi helped his father raise his family. He performed meager jobs such as selling tea on railway platforms yet continued going to school. At a very young age, he understood the importance of learning, education, and being independent.

**“We should remain students for lifetime. You should be ready and yearn to learn from every moment of life.”**

**- Narendra Modi.**

Solanki Jiya  
Semester: 4<sup>th</sup>



## 17.8 Arunima Sinha

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Arunima Sinha is a name that has become synonymous with grit, determination, and resilience. She is an Indian mountaineer and former national-level volleyball player who made history by becoming the first female amputee to climb Mount Everest, the highest peak in the world.

### Early Life and Tragic Accident

Arunima was born on July 20, 1988, in the Ambedkar Nagar district of Uttar Pradesh, India. She grew up in a middle-class family and was an excellent student and athlete. Arunima had a keen interest in volleyball and had dreams of playing for the Indian national team.

However, her life took an unexpected turn when she became the victim of a tragic incident in 2011. While traveling from Lucknow to Delhi by train, a group of robbers attacked her and pushed her out of the moving train. The fall caused severe injuries to her leg, which had to be amputated below the knee.

### Road to Recovery and Mount Everest

After the accident, Arunima was devastated and struggled to come to terms with her new reality. However, she did not let her disability hold her back and decided to take up mountaineering as a challenge. Arunima saw a newspaper article about Bachendri Pal, the first Indian woman to climb Mount Everest, and was inspired to pursue mountaineering.

She began training under the guidance of Bachendri Pal, which was not an easy task, considering her disability. Arunima had to undergo rigorous physical and mental training to prepare for the climb. She also had to arrange for funds for the expedition, which was a daunting task.

Despite all the odds, Arunima remained determined and finally set out on her journey to conquer Mount Everest in April 2013. She was part of a 10-member team that included four women and six men, led by experienced mountaineer Dr. R. K. Gupta.

The climb was challenging, with the team facing harsh weather conditions, treacherous terrain, and low temperatures. However, Arunima pushed herself to the limit, using her prosthetic leg to climb and navigate through the difficult terrain. Her determination and courage inspired her fellow climbers, who supported and encouraged her throughout the expedition.

Finally, after weeks of hard work and perseverance, Arunima and her team reached the summit of Mount Everest on May 21, 2013. It was a historic moment, not only for Arunima but for the entire nation, as she became the first female amputee to climb the highest peak in the world.

### Legacy and Achievements

Arunima's climb to Mount Everest has inspired millions of people around the world, especially those with disabilities. Her story is a testament to the power of determination, courage, and resilience. After her successful climb, Arunima has continued to inspire and motivate others through her talks, books, and social work.



In recognition of her outstanding achievement, Arunima has received several awards, including the Padma Shri, the fourth highest civilian award in India, and the Tenzing Norgay National Adventure Award, the highest award for adventure sports in India.

Krishna Bhoi  
Semester: 4<sup>th</sup>

### 17.9 formula to become an ideal student, by Swami Vivekananda

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- Respect: Respect your parents, teachers and elders.
- Love: Love your country, culture and your ancestors.
- Service: serve the poor, the illiterate and the diseased.
- Self-Discipline: Discipline your body, your senses and your mind.
- Self-control: Control your thoughts and your actions.
- Faith: Have faith in yourself, others and in God.
- Discrimination: Discriminate between good and bad, real and unreal and vice and virtue.
- Concentration: Concentrate whole-heartedly while studying, working, playing and praying.
- Truthfulness: Be truthful in words, thoughts and actions.
- Hard work : Work hard o acquire knowledge, skills and wisdom.
- Strength: Be strong physically, mentally, intellectually, morally and spiritually.
- Conviction: Have conviction in the power of goodness, purely and honesty.
- Devotion : Have devotion for duty, scriptures, holy people and God.
- Habits: Cultivate regular habits of prayer, meditation and reading, inspiring and strengthening literature
- Same sightedness: Feel the presence of the divine in all beings and treat them with the same standard as you treat yourself
- Firm determination: Have firm determination and strong will power to cultivate good habits in order to achieve permanent happiness, peace, success and fulfillment in life.

Ninama Krunal  
Semester : 2<sup>nd</sup>

### 17.10 Elon Musk

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#### **Good ideas are always crazy until they're not. - Elon Musk**

As for the good ideas that every good entrepreneur have from time to time, they would sound crazy because others have not done them yet, and might sound absurd even. Once executed, you realize that not only they are possible but also they make sense.

Shyam R Gojiya  
Semester : 4<sup>th</sup>





## 17.11 Road To Success

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**"The way of success is the way of continuous pursuit of knowledge."**

The first billboard starts by understanding the definition of success and desire. Many of us desire success defined by the typical society of having a good pay check, a big house, cars, and family. But to achieve that success, most people don't know the why and how behind that success. In our life, if we want the success that we desire ideally then it's essential to have a definite aim and purpose in life.

Towards the 2nd billboard, the book mentions the gap between our expectations and reality. Many people often have an aim in their life to be successful but lack the self-confidence it takes to conquer that gap. The author talks about having the self-confidence to achieve success.

The author asks to take initiative to get things started. Having an image in your brain is important to know success and is an important ingredient of your foundation. Just like Thomas Edison invented the light bulb, he had imagined the bulb in his mind before the invention happened. The author then emphasizes giving an example of being enthusiastic in your work and having excitement about the journey.

**"If you cannot do great things, do small things in a great way."**

As we move forward to another billboard more qualities are explained in detail like taking daily action in your work and routine life and having self control that guides you through the ups and downs of the success ladder. Another quality described is to attract success by having an attractive personality, accurate thoughts, and most important is concentration in your work.

One of the good things is that as I read the book, it feels like going through the journey and having improved on each quality, if implemented, adds the structure towards achieving the successful process. Each billboard or chapter coming afterward then talks about having persistence even if you fail and learning from failures gets you closer to success.

At the end of the book, Napoleon Hill mentions the most important quality of being a leader by the example of a boy who jumps in action to save the people and successfully saves everyone stranded in building fire when others were just waiting to get a firefighter helpline. Lastly, Napoleon Hill talks about having the vision and being optimistic to achieve the goal.

**"Whatever your mind can conceive and believe, it can achieve."**

Gohel Puja  
Semester: 6<sup>th</sup>

## 17.12 The Braveheart Of Gujarat: Rani Naiki Devi



One of the toughest women in the history of India, The Chalukya dynasty Queen Naiki Devi's unflagging courage & indomitable spirit brought havoc upon invader Mohammad Ghori at the battle of Kasahrada.

Naiki Devi was princess of Kadamba kingdom. She possessed a wide range of abilities, including horse riding, archery, combat skills, and weapon-wielding. She was married to the Chalukya ruler of Patan named Ajay Pal. Their son Mularaja II who later became king after his father's death. As Mularaja II was a child, Naiki Devi as the queen took the reign of the kingdom in her hand.

After capturing Multan and Uch, Mohammad Ghori turned southwards towards the southern Rajputana and Gujarat. His target was the prosperous fortified town of Anhilwara Patan. Interestingly, it was this very fact that had made Ghori confident about capturing Anhilwara Patan. He assumed that a woman and a child would not provide much resistance. The Chalukyan army was too small to counter. That's Naiki Devi chose the rugged terrain of Gadaraghatta an area at the foot of Mount Abu near the village of Kayadara. The narrow mountain passages made it hard for invaders to attack. Naiki Devi through her strong will power & combat skills, herself cut down every single invading soldier. Ghori escaped to save his life, and never attempted to conquer Gujarat again.

Women warriors like Naiki Devi are the manifestation of Shakti, who has protected Dharma and motherland for centuries. Women in Indian society have made immense contributions in upholding the civilizational values as warriors as well as intellectuals.

Patel Fensi  
Semester: 4<sup>th</sup>

## 17.13 CHHATRAPATI SHIVAJI MAHARAJ

Shivaji Maharaj, also known as Chhatrapati Shivaji Maharaj, was a legendary warrior and king who played a significant role in the Indian history of the 17th century. He is considered to be one of the greatest warriors of his time and is known for establishing the Maratha Empire in India.

Shivaji Maharaj was born on 19 February 1630 in Shivneri Fort, located near Pune, Maharashtra. He was born into a noble family, and his father, Shahaji Raje Bhosale, was a general in the court of the Bijapur Sultanate. Shivaji was raised by his mother, Jijabai, who was a devout Hindu and instilled in him a strong sense of patriotism and a love for his country.

At a young age, Shivaji was exposed to the harsh realities of life under the Mughal Empire's oppressive rule. This inspired him to rebel against the Mughal forces and fight for the liberation of his people. He began his military campaigns at the age of 16 and quickly gained a reputation for his bravery, tactical acumen, and military strategy.

He was able to establish a network of forts throughout Maharashtra, which provided him with strategic advantages and allowed him to expand his territory. He also created a navy and successfully defended the Konkan coast against Portuguese and British naval forces.

Shivaji Maharaj's legacy has had a profound impact on Indian history and culture. His vision and leadership inspired a generation of freedom fighters who fought against the British colonial rule.

In conclusion, Shivaji Maharaj was a great warrior, leader, and visionary who played a crucial role in the Indian history of the 17th century. His legacy continues to inspire generations, and his contributions to the cause of Indian independence will always be remembered .



Karangiya Vijay  
Semester: 2<sup>nd</sup>



## 17.14 Rani Lakshmi Bai

Rani Laxmibai also called the Rani of Jhansi was a pivotal figure in the Indian Revolt of 1857. She is also regarded as one of the greatest freedom fighters of India. Rani Lakshmi Bai was born on 19 November 1828 in the town of Varanasi. She was named Manikarnika Tambe and was nicknamed Manu. Her father was Moropant Tambe and her mother Bhagirathi Sapre (Bhagirathi Bai) who hailed from modern day Maharashtra. At four years old her mother passed away. Her father was the Commander of War under Peshwa Baji Rao II of Bithorr



District. She was educated at home, able to read and write, and was more independent in her childhood than others of her age; her studies included shooting, horsemanship, fencing which was in contrast to the cultural expectations for women in Indian society at the time. At the age of 14, she was married to the Maharaja of Jhansi, Gangadhar Rao in 1842. After her marriage, she was called Laxmibai. Her son Damodar Rao was born in 1851. But he died after four months. Gangadhar Rao died in 1853. Before he died, he had adopted his cousin's son Anand Rao, who was renamed, Damodar Rao.

### 10 Points about Rani Lakshmi Bai Role in the 1857 Revolt

- Lord Dalhousie (Born on April 22, 1812) sought to annex Jhansi when the Maharaja died applying the Doctrine of Lapse since the king did not have any natural heir.
- As per this, the Rani was granted an annual pension and asked to leave the fort of Jhansi.
- The Revolt of 1857 had broken out in Meerut and the Rani was ruling over Jhansi as regent for her minor son.
- British forces under the command of Sir Hugh Rose arrived at Jhansi fort with the intention of capturing it in 1858. He demanded that the city surrender to him or else it would be destroyed.
- Rani Laxmibai refused and proclaimed, "We fight for independence. In the words of Lord Krishna, we will if we are victorious, enjoy the fruits of victory, if defeated and killed on the field of battle, we shall surely earn eternal glory and salvation."
- For two weeks the battle went on where the Rani led her army of men and women valiantly against the British. Despite courageous fighting, Jhansi lost the battle.
- The Rani, tying her infant son on her back, escaped to Kalpi on horseback.
- Along with Tatya Tope and other rebel soldiers, the Rani captured the fort of Gwalior.
- Afterwards, she proceeded to Morar, Gwalior to fight the British.
- Rani Laxmibai died while fighting in Gwalior on 18th June 1858, aged 23. She was dressed as a soldier when she died.

Arati Parmar  
Semester : 2<sup>nd</sup>



## 17.15 Chandragupta Maurya The greatest king of India

Chandragupta Maurya(350-295 BCE) was the first emperor of the Mauryan Empire in Ancient India. Under Chanakya's instruction, Chandragupta formed a new empire founded on statecraft ideals a vast army and continued to expand the limits of his kingdom until, in his later years.

The life and achievements of Chandragupta are described in ancient Greek, Hindu, Buddhist, and Jain sources, but they differ greatly. The Maurya Empire was one of the world's largest empires. The historical sources which describe the life of Chandragupta Maurya vary considerably in detail.



In addition to his achievements as an empire builder, Chanakya is also praised for his economic and political reforms that were unprecedented and set a decisive path for other kinds of new experiments to follow. Chandragupta established a very strong central administration pattern. His empire featured a highly efficient and well organized bureaucratic structure. The civil service of his times was the largest ever known in India before and after him.

The Chandragupta maurya is real Gem of Indian history. Historians also argue that most of the art and architecture belonging to the Maurya Empire were that of ancient India.

Riya Parmar  
Semester : 2<sup>nd</sup>



## 18. Movies Review

### 18.1 3 Idiots

It is a story of young boys name Rancho, Farhan Qureshi, and Raju Rastogi; all three consider as idiots in the movie that is why the name of the movie is 3 idiots. This film based on the education system of India and show how colleges put pressure on the students to get good grades. Further, this is an inspirational movie because of its acting, story, and concept of the movie.

First of all, Rancho is the main character of the film and was a very good student of science, multi-talented, versatile, and sophisticated kind of person. He advises everyone to gain practical knowledge rather than theatrical knowledge which is generally given in all educational institutes in India.

I would like to bring forward my favorite quotes and lessons learned from it:

- Don't run behind the success: Don't run behind the success, achieve excellence first, the success will automatically come looking for you.
- Creativity: Be always creative in your answers, work & things you do which helps you become more capable of your own.
- Learning is everywhere: Learning isn't just about being inside a class room and listening to teachers but its there everywhere. You just need to grab and grow with it.
- Do it with a passion: Are you passionate about what you are doing? then its for you! You need to love what you do and that is when you can go get greater things at ease.
- Never Race: Don't ever race just because someone else doing it to achieve something on a timeline. Always try to gain some knowledge and expertise.
- Say "All is well": Probably most popular chant words of the year 2009 in India. Rancho's core mantra of chanting the words to help himself and friends to get rid of the fear. He says "This will not solve all problems but will surely give guts to face them".
- Ignore others: There are naysayers, jealous, stupid, hatred people around us. Ignore them and move on. Remember? "If you stop and throw a stone at every dog that barks, you will never reach your destination".
- Take a risk: Challenge yourself and take a risk to do something. The worst thing that will ever happen is "failure", if so, switch over .

Meru Bhatiya  
Semester: 4<sup>th</sup>



## 18.2 Tanhaji the Unsung warrior

### About Real character

Tanhaji Malusare was a legendary warrior who served in the army of the Maratha Empire in the 17th century. He is known for his bravery and leadership skills, and his story has been immortalized in the Bollywood movie "Tanhaji: The Unsung Warrior."

### About Story

The movie begins with an introduction to Tanhaji and his family, who are loyal supporters of the Maratha king, Chhatrapati Shivaji Maharaj. When the Mughal emperor, Aurangzeb, sends his army to capture Kondhana, Tanhaji is chosen to lead the Maratha charge to defend the fortress.

### About characters of movie

The battle scenes in the movie are intense and gripping, with expertly choreographed sword fights and stunning visual effects. The film also explores the personal relationships of the characters, particularly the bond between Tanhaji and his wife, Savitribai, played by Kajol.

Saif Ali Khan delivers a standout performance as Udaybhan Singh Rathod, the Mughal army chief who is determined to capture Kondhana. His portrayal of the villainous character is both menacing and nuanced, adding depth to the conflict between the two sides.

### Review of movie

In conclusion, "Tanhaji: The Unsung Warrior" is a gripping historical drama that celebrates the bravery and sacrifice of one of India's greatest warriors. With its strong performances, stunning visuals, and engaging storyline, it is a must-watch for anyone who loves epic tales of heroism and valor .

Harshvardhan Makwana  
Semester : 2<sup>nd</sup>



## 18.3 Taare Zameen Par

The movie is about an 8 year old boy Ishaan Awasthi (Darsheel Safary) who finds it difficult to match his world of colors, kites and animals to that of the others in his age group, who are more into studies and homework. When complaints start to pour in, Ishaan's parents decide to set him off to a boarding school. His life is no different at the boarding school, oppressed and insulted by his teachers, he remains the laugh stock of the class. Now that he is away from home, he feels even more dejected, inferior and finds it tough to cope up with his inabilities. Ram Shankar Nikumbh (Aamir Khan) gets appointed as a temporary art teacher of the boarding school. Unlike other teachers who follow definite norms in educating children, Ram makes them think out of books, outside the four walls of the classroom and paint their imaginations. Every child in class responds with immense enthusiasm except



Ishaan. Ram takes effort to understand Ishaan and his problems. He makes Ishaan's parents and other teachers realize that he is not abnormal but a very special child with talents of his own. With time, patience and care Ram succeeds in boosting the confidence level of Ishaan. He helps Ishaan in overcoming his inabilities and re-discover his lost confidence.

Parth Parmar  
Semester: 2<sup>nd</sup>

## 18.4 The Elephant Whisperers

Kartiki Gonsalves' documentary, which has been shortlisted for the 95<sup>th</sup> Oscars in the Documentary Short Film category, takes the audience on a mesmerizing visual safari.

Surrounded by the Nilgiris, and just beyond the Mayar river, Bomman, Bellie, and their child Raghu (an elephant) live in the heart of the Theppakadu Elephant camp, at the Mudumalai Tiger Reserve. In her short documentary, Kartiki Gonsalves follows this family of three, across changing seasons of the forest .

Gonsalves' documentary, which has been shortlisted for the 95<sup>th</sup> Oscars in the Documentary Short Film category, takes the audience on a mesmerizing visual safari as the trees change color, the river gets replenished, and later in the summer, the forest burns in the heat. That is when Bomman and Bellie were given the charge of Raghu, an injured baby elephant separated from its herd. While Gonsalves' focus remains on the bond that develops between Raghu and his caretakers, she makes quiet but effective points on the perennial human-animal conflict. The trio's tale is also a crucial insight into when forest officials fail to reunite an elephant calf with its herd.

Belonging to the Kattunayakan tribe, Bomman and Bellie's life revolve around this forest. This is where their ancestors had worked to protect, and it is what they hope to pass along to their grandchildren. "We live off the forest, but we also protect it," says Bellie, whose husband was killed by a tiger. This creates a chasm between her and the forest and she begins to fear the place that she grew up in. Raghu's early life followed a similar trajectory. He was separated from his herd after his mother died of electrocution. Bellie, who had never taken care of elephants and has recently lost her own child, and Raghu, who has not known a life around humans, are united in their effort to alleviate the sorrow they have suffered in the same forest. For Bomman, taking care of Raghu are the first baby steps he re-takes into continuing his grandfather's and father's legacy. Having been hurt by an adult tusker before, Bomman has been assigned by the Forest Department to take care of the younger elephants

### Storyline:

In Tamil Nadu's Mudumalai Tiger Reserve, a family of circumstance is formed when a young elephant calf is separated from its herd and placed into the care of two humans .

As their family expands, Raghu gets a new sibling in Ammu , a new calf that Bomman and Bellie are assigned to care for. With this, the documentary informs us that Bomman and Bellie become the







## 18.6 The Kerala Story

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The film by Vipul Amrutlal Shah aims to tell the tale of how women from the Indian state of Kerala were tricked and trafficked to the Islamic State of Iraq and Syria (ISIS) in the conflict zone of Syria.

The film especially showcases certain cases of how **'love jihad'** was used by ISIS to lure 32,000 women to Syria. The trailer shows how men were brainwashed to woo Hindu and Christian women of Kerala in the name of love, convert them to Islam and convince them to join ISIS and other Islamic war zones. The shocking incidents occurred between 2018-19, when a rising number of Kerala youths had come under the influence of ISIS.

The Observer Research Foundation in a 2019 report notes that about 60 to 70 individuals had joined ISIS from Kerala between 2014 and 2018. According to Indian government figures not more than a total of 100 – 200 Indians had joined the organization over the years, one of the smallest figures of any country with a substantial Muslim population. The US Department of State in its 2020 report on terrorism had documented that there was a total of 66 individuals from India who were affiliated with ISIS at that time.

Donga Vaibhav  
Semester: 8<sup>th</sup>

## 18.7 Ramanujan

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Ramanujan is a 2014 biographical film directed by Gnana Rajasekaran that tells the story of the Indian mathematician Srinivasa Ramanujan. The film explores Ramanujan's life, from his early struggles as a self-taught mathematical prodigy in India, to his later years as a recognized genius working alongside the likes of G.H. Hardy at Cambridge University.

The film follows Ramanujan's journey as he overcomes poverty, illness, and discrimination to pursue his passion for mathematics. Despite facing numerous obstacles along the way, Ramanujan never gives up on his dream of sharing his mathematical discoveries with the world.

The film also delves into the personal struggles of Ramanujan's life, including his difficult relationship with his wife, Janaki, who he left behind in India while he pursued his studies in England. It also touches on his struggle to reconcile his deeply-held religious beliefs with the secular world of academia.

One of the most impressive scenes in Ramanujan is when he first meets G.H. Hardy, a renowned mathematician at Cambridge University. Ramanujan presents Hardy with a notebook filled with his own mathematical discoveries, which Hardy immediately recognizes as groundbreaking. The two then begin a collaboration that would change the face of mathematics forever.

Another memorable scene in the film is when Ramanujan becomes seriously ill while in England. He is forced to return to India, where he receives a hero's welcome and is celebrated as a national treasure. Despite his illness, Ramanujan continues to work on his mathematics, producing some of his most important discoveries during this time.



The film also includes a touching scene in which Ramanujan's wife Janaki visits him in England. The two are reunited after years of separation, and their love for each other is palpable. However, the cultural differences between them are also evident, and the scene is a poignant reminder of the challenges faced by immigrants in adapting to new cultures.

Overall, Ramanujan is a beautifully crafted biopic that captures the spirit of one of the greatest mathematical minds of the 20th century. With its stunning visuals and powerful performances, the film is a must-see for anyone interested in the life and work of this remarkable man.

Parmar Vani  
Semester: 2nd



## 19. Book Review

### 19.1 The Psychology Of Money

One of the best books on personal finance is The Psychology of Money by award winning author Morgan Housel, which offers timeless lessons on greed, wealth, and happiness. This book is neatly and clearly written, and it contains a wealth of knowledge and excellent material.

This book contains 19 stories by Morgan Housel that examine the peculiar ways in which people think about money. It discusses insights about our relationship with money and explains how our financial outlook influences the important choices we make in life.

This book's central thesis is that, while intelligence does play a role in financial success, behaviour also plays a significant role. It motivates you to make wise decisions in order to live a prosperous life.

The book "The Psychology of Money" has many insightful concepts and insights that can be applied in real life. Here are a few of them :

- Risk and chance are difficult to quantify.
- The issue of social comparison exists.
- Always keep in mind that there is a bigger fish.
- Take advantage of long tails to increase your chances of winning.
- Only if you allow compounding time to develop will it be effective.
- The ultimate type of wealth is being able to do what you want, when you want.
- Don't let people who flaunt their wealth seduce you. Even if someone appears wealthy, it's impossible to tell at first glance.
- Drop the ego. Attend to the best openings. Saving is the only way for these to occur.
- Be sensible.
- Instead of being rational, be reasonable. Realistic is more reasonable.
- Finance is not a precise science.
- Not every investment will turn a profit.
- Learn to make appropriate plans.
- Prepare for market turbulence. Accept it and be with it.
- Defend your own turf

Anyone who wants to manage their money better should read The Psychology of Money. This book's fast-paced and compelling style will change the way you think about money. Unlike other novels that are too long, you can finish this one in a week.



## 19.2 The Power of Habit

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"The Power of Habit" by Charles Duhigg: This book explores how habits shape our lives and how we can use them to achieve success in all areas of our lives article .

"The Power of Habit" by Charles Duhigg is a ground breaking book that explores the science behind habits and how they shape our lives. Duhigg's research highlights the importance of habits in determining our success in all areas of life, from personal relationships to business success.

The book is divided into three parts, each of which focuses on a different aspect of habit formation. Part one explores the psychology of habits, highlighting how habits are formed and how they can be changed. Duhigg argues that habits are powerful tools that can be used to achieve success in any area of life, but that they must be understood and harnessed in order to be effective.

Part two of the book examines the role of habits in organizations, including how companies can use habits to boost productivity, improve employee engagement, and enhance customer satisfaction. Duhigg highlights several successful companies, including Starbucks and Target, that have harnessed the power of habits to achieve remarkable success.

The final section of the book focuses on how habits can be used to transform our lives on a personal level. Duhigg presents a range of strategies for developing positive habits and overcoming negative ones, from setting clear goals and tracking progress to using social support and willpower to stay on track.

One of the key insights of the book is that habits are automatic behaviours that are triggered by a cue, such as a certain time of day or a particular location. By understanding these triggers and modifying them, we can change our habits and create new patterns of behaviour.

For example, Duhigg tells the story of a woman named Lisa Allen who was able to quit smoking by identifying the cues that triggered her cravings and finding new routines to replace her smoking habit. By understanding her triggers and finding new ways to satisfy her cravings, Allen was able to break her addiction and improve her health.

Duhigg also highlights the importance of willpower in developing and maintaining good habits. He argues that willpower is like a muscle that can be strengthened over time through practice and repetition. By starting small and gradually increasing the difficulty of our challenges, we can build up our willpower and develop the self-discipline needed to achieve our goals.

Overall, "The Power of Habit" is a fascinating and practical book that offers valuable insights into the science of habit formation. Whether you're looking to improve your personal life, boost your career, or transform your organization, this book provides a wealth of strategies and tools for harnessing the power of habits to achieve success.

Kambariya Dipak  
Semester: 8<sup>th</sup>



### 19.3 You're Born to Blossom

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Books are a uniquely portable magic and good source of knowledge. And the book “You're Born to Blossom” by Dr. APJ Abdul Kalam an inspiration to many people around the world.

This book focuses on many aspects of life be it spirituality, be it education, and many more. It highlights the uniqueness of each individual and singular talents to become the best versions. This book tries to make us understand that each one of us is very special, and has some unique qualities because we are so different from each other. It also tells us, that, we should not set the goal by what people consider important, because we are the ones who know what is best for us. Author has explained that the foundation of success rests on three pillars: parents, teachers, and mentors. He has explained how they are important in our lives and how sometimes we become so disrespectful towards them. He conveys to the youth of this country to respect them, and at the same time, he has also added that it should not mean blind obedience. A dedicated teacher is like a candle, which burns itself but gives light to others. To stuff the child with lots of information, making him pass examinations, is the most unintelligent form of education. The purpose of education should be to bring a complete transformation to society.

The Author has explained that in the process of education, it is not only the student who gets the benefit of it, but the teacher also experiences different talents which could be in Science, Technology, or in Creativity. The brain can only become infinite if it's free from conditioning. Basically, he tries to explain the basic definition of education, how the education system should be and what are the basic things should be taken into consideration which we actually neglect.

He has also shared his experiences of meeting big legendary people, how they used to think, and how their thoughts were different. This book teaches us a lesson that we should ever go back and thank our teachers for their vital role in our life. It's a book that opens our minds and inspires us to think in a different direction. It explains the freedom, knowledge, meaning of education so beautifully.

Vidhi Parimal  
Semester: 4<sup>th</sup>

### 19.4 The Power of Your Subconscious Mind

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The remarkable book by Dr Joseph Morphy one of the pioneering voices of affirmative thinking will unlock for you the truly staggering powers of your subconscious mind. Combining time Honoured spiritual wisdom with cutting edge scientific research. Dr. murphy explain how the subconscious mind influences every single thing that you do and how by understanding it and learning to control its incredible force. You can improve the quality of your daily life. Everything from the promotion that you wanted and the raise you think you deserve to overcome interpersonal relationships.

The power of your subconscious mind will open a world of happiness, success, prosperity and peace for you. It will change your life and your world by changing your beliefs.



The things I learned from this book :

1. You receive answers to prayer because of mental acceptance about what you pray.
2. Your subconscious mind has answer to all your problems.
3. Faith is the only universal healing principle operating through everybody.
4. Prayers are answered scientifically.
5. Don't compel your subconscious mind to accept your ideas by willpower.
6. What goes in your mind determines your world.
7. Man punishes himself with his false concepts of God.

Vani Parmar  
Semester : 2<sup>nd</sup>

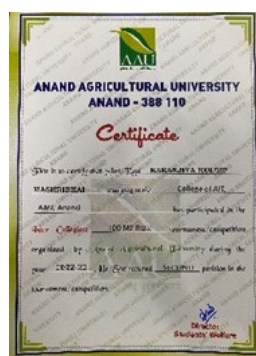
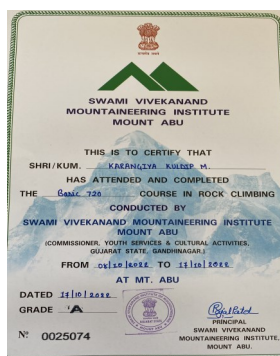
## 20. Achievement

### 20.1 Athlete

As a college student, you have likely worked hard to achieve success both academically and in other areas of your life. Whether you have excelled in sports, leadership roles, community service, or academics, your achievements are a reflection of your hard work and dedication.

During your time in college, you may have received awards, recognition, or other forms of accolades for your accomplishments. These achievements can serve as a testament to your skills, talent, and dedication, and can also help to pave the way for future opportunities.

One of the most significant achievements for college students is academic success. You may have maintained a high GPA, been on the Dean's list, or received academic awards for your hard work and dedication. These achievements show that you have a strong work ethic and a commitment to your studies, which can help you to achieve success in your future career.



Finally, college students can also achieve success in sports or other extracurricular activities. Whether you were a star athlete, a talented musician, or an award-winning artist, your achievements in these areas demonstrate your dedication, talent, and hard work. I am actively participate in sports and get good achievement like secure gold medal in 4\*100 relay(2023), secure silver medal in 100 meter run (2023), complete rock climbing Basic 720 course with A grade and secure second place in 4\*100 relay(2022) at inter college activities.

In summary, your achievements in college are a reflection of your hard work, dedication, and talent. Whether you excelled academically, in leadership roles, community service, or extracurricular activities, your achievements are something to be proud of. These achievements can help you stand out to future employers, make a positive impact in your community, and pave the way for future opportunities.

Karangiya Kuldip  
Semester: 6<sup>th</sup>





## 20.2 POSTER MAKING COMPETITION

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Taking part in a poster making competition can be a thrilling experience, and secured the 1<sup>st</sup> position during AGRI FEST 2K22 held on February 28, 2022 on occasion of National science Day as a part of Amrit Mahotsav. It was an incredible achievement. In this article, we'll explore what it takes to create a winning poster and some tips to help you succeed.

The first step is to carefully read the competition guidelines and understand the theme. Once you have a good grasp of what the competition is looking for, you can begin brainstorming ideas for your poster. Consider different perspectives and angles on the theme, and think about what message you want to convey.

Once you have a clear concept, it's time to start drawing. Make sure to use high-quality materials such as pencils, pens, and markers. Pay close attention to details and use contrasting colors to make your poster stand out. The poster should be visually appealing, but also easy to read and understand. Don't be afraid to use creative techniques like shading, cross-hatching, or texture to make your artwork more dynamic and engaging.

When you have finished your drawing, it's time to step back and evaluate your work. Check for any spelling or grammar errors, and make sure the artwork is consistent with the competition guidelines. If you have the time, consider showing your poster to friends or family members to get feedback.

Once you are confident in your artwork, it's time to submit your poster. Make sure to follow the submission guidelines carefully, including the format, size, and delivery method.

Now comes the waiting game. Competition results can take some time to come in, so be patient. If you don't win, don't give up. Look at it as an opportunity to learn and improve your skills. But if you do win, congratulations! Winning a drawing poster competition can be a tremendous accomplishment and a great boost to your confidence.

In conclusion, participating in a drawing poster competition can be a fun and rewarding experience. By taking the time to carefully read the guidelines, brainstorming ideas, using high-quality materials, paying attention to details, and submitting your artwork correctly, you can increase your chances of winning. So go ahead and take the plunge - you never know what you might achieve!

Sosa Bhumika  
Semester: 6<sup>th</sup>

## 20.3 Basic Mountaineering Course (BMC)

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After participating in the running competition, we were selected for basic rock climbing course of mountaineering from CAIT, AAU, Anand.

The Swami Vivekananda Institute of Mountaineering (SVIM) in Mount Abu is a premier training institute for mountaineering and rock climbing in India. The institute offers a variety of courses for beginners and experienced climbers, including the basic rock climbing mountaineering course.

The course is typically spread over a period of 10 days and covers various aspects of rock climbing and mountaineering, such as rope work, climbing technique, safety, navigation, and first aid. Participants are given hands-on training in each of these areas, with a focus on safety and proper technique.



One of the key components of the course is rope work. Participants learn to tie different knots and hitches, and use ropes for belaying and rappelling. They are taught the importance of using proper equipment and how to maintain it. Rope work is essential for safe and successful rock climbing, and participants are given ample practice to master the skills.

In these 10 days we can get up early in the morning and walk to the Nakki Lake and go there and run around the Nakki Lake. After running around the Nakki lake, we did exercise. After the exercise we go to the basic field and there they do rock climbing like three point contact climbing, hand jamming and foot jamming, wedging, breaking up and breaking down etc. we will be given lectures by instructors like history of mountaineering, history of mount Everest, rock climbing and its techniques, rappelling and belay, knots etc. In the evening time we can go to basic field for rappelling like log sling, American, stomach etc. Then in the night, to get stress free from all this, cultural activities are done so that everyone can feel free.

On the 9th day we had our exam, if we passed the exam well, then we were given a certificate from the institute based on the marks of this exam, in which if the marks are above 20 you will get B grade and if you bring above 30 A grade.

In the last day a program was held in which we were awarded certificates by the principle madam of the institute. After the program was over, we took a group photo of all and then we left the institute.

By participating in this course, I got to learn a good thing which is team work.

This came to know when we were taken to the cave for caving at night, when we understood the importance of teamwork when we supported each other and got out of there when we didn't even have a light.

**"Coming together is a beginning. Keeping together is progress. Working together is success."**

It also gave another information about this course that if you bring A grade in basic course when you can do advance course of mountaineering.

My excellent opportunity for beginners to learn the basics of rock climbing and mountaineering and gain hands-on experience in a safe and controlled environment. With its experienced instructors, rigorous training programs, and stunning natural beauty.

Himanshi Varma  
Semester: 4<sup>th</sup>



## 20.4 The Impact of Sports on My Mental Health and Well-being

Sports have been an integral part of human society for centuries. From ancient civilizations to modern times, sports have been enjoyed by people of all ages, genders, and backgrounds. Sports not only provide physical benefits but also promote mental health and social interaction.

Engaging in sports can improve cardiovascular health, build muscular strength and endurance, and enhance flexibility and balance. Regular physical activity can also help reduce stress and anxiety, boost self-confidence, and improve mood and overall well-being

Apart from the physical benefits, sports also provide opportunities for social interaction and teamwork. Participating in team sports such as cricket, basketball and volleyball can teach important life skills such as communication, leadership, and cooperation. Sports can also help build strong relationships with teammates, coaches, and fans.

Sports are a great way to stay active and have fun. My self Alpa Sonagara. I have participated in volleyball, running and discus throw. All three games have given me unique experiences.

Playing volleyball requires teamwork, communication, and strategy. It is a fast-paced game that requires quick reflexes and coordination. I enjoyed playing volleyball because it allowed me to work with my teammates and develop a sense of camaraderie. We all worked together to achieve a common goal and it was satisfying to see our efforts pay off with each successful point.

Running, on the other hand, is an individual sport that requires self-discipline and perseverance. It can be a challenging activity, but the feeling of accomplishment after completing a race or achieving a personal best time is incredibly rewarding. Running has also allowed me to explore different areas and enjoy the outdoors.

Discus throw is a challenging and unique sport that demands precision, strength, and technique. This sport has helped me develop my upper body strength, balance, and focus. It has also taught me how to set goals, work hard and persevere through challenges. I have secured Third position in the inter collegiate DISCUS THROW tournament organized by **Anand Agricultural University** during the year 2022-23.

These three games volleyball, running and discus throw have helped me stay physically active and improve my overall health. They have also taught me important life skills, such as teamwork, communication, self-discipline, and perseverance.

In conclusion, sports are a valuable and enjoyable part of our lives. Whether you are an athlete or a spectator, sports can provide numerous physical, mental, and social benefits. So, let's embrace the spirit of sportsmanship and celebrate the joy and excitement of sports.



Sonagara Alpa  
Semester: 2<sup>nd</sup>



## 21. Share Experience

### 21.1 Pandemic taught us lifelong lessons

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Lessons which we won't forget from COVID-19 pandemic :

#### 1.Keep a check on your mental health

Pandemic or not, mental health has been an issue for a long time. COVID-19 has either escalated the vulnerability or made people stronger. The lesson here is to identify any issue of this type and work on a solution. It is important to take some 'me time, read and try and focus on the bigger picture.

#### 2.Motivate yourself

One of the biggest challenges we have faced during this pandemic has been motivation. Students have felt de-motivated and unproductive throughout, especially in the beginning. Always find newer ways to stay motivated and perform better.

#### 3.Your physique should be maintained

In addition to mental health, physical health has also taken a toll. A healthy life is one of the most important aspects of life and has also proven to help people with killer immunities escape this virus. Start your day with yoga, exercise sessions. Going forward, this will help in taking on any challenges that life might throw at you.

#### 4.Preserving the Beauty of Mother Earth

Pollution and crowding which was there in pre-pandemic have reduced considerably. Students are the future of the world and environmental awareness and preservation should be the motto of millennial.

#### 5.Family comes first

This time at home has taught students to enjoy quality time with their loved ones at home in addition to studying/working and continuing their journey towards a brighter future with the support of their families. Nothing feels as encouraging and comforting as the support of one's family and this should not be forgotten going forward.

Rhutu Shah  
Semester: 4<sup>th</sup>

### 21.2 Stop Negative Self-talk

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Self-talk is comprised of the words and thoughts that endlessly run through our mind all day long. These thoughts may be of positive nature such as "I better make a list for the shopping" or "I better bring the clothes in before it rains" but often they can be negative.



These negative thoughts could include things like “I’m useless” or “I failed, I am just not good enough.” It is when our thoughts are negative that they can undermine our confidence, outlook on life and become self-defeating. Some of this negative talk is a misconception of events that we do not have sufficient information about and may not even be realistic or true.

Our self-talk is contributed to by our conscious thoughts and our sub-conscious beliefs.

You can change some of the negative thoughts that you are having. This can be done by challenging the irrational parts and replacing them with more reasonable thoughts. This is where positive thinking techniques come in. By engaging in a more positive attitude we take any negative self-talk such as “I can’t” and “I’m not good enough” and we simply replace them with phrases such as “I can” and “with effort and time I will be good enough.”

It essentially enables us to be more productive rather than letting negative self-talk disable us from trying. With time and practice, you will be able to identify your own negative self-talk as it occurs, and consciously decide to think about the situation in a more realistic and helpful way.

Aneri Bhadja  
Semester: 8<sup>th</sup>

### 21.3 Educative Value of Films

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Films are a product of the modern age of science. They appeal to the young and old alike. Good films can be of great educative value. They enhance our knowledge about human nature. We come to know about different types of people, their customs and their habits. We get a better understanding of human nature and character. Films make a man worldly-wise and mentally smart. Good and educative films are, in fact, a boon for society. The impact of cinema is more lasting than that of books. The cinema can, in fact, serve as a powerful means of imparting education. Social films can help a great deal in bringing about social reforms. Good social films have produced a visible effect on our society. People are now up against many social evils. Girls refuse to marry the dowry-seekers. The poor are fighting for their rights. Many social evils have almost disappeared from our society.

Anish Thakor  
Semester: 4<sup>th</sup>

### 21.4 Importance of Sports in Our Life

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Sports have been an integral part of human society for centuries, and they continue to play an important role in our lives today. Whether you're a professional athlete, a weekend warrior, or simply a fan of your favorite team, sports offer a wide range of pros. In this article, we'll explore some of the reasons why a sport is important.

Firstly, sport is a great way to stay physically fit and healthy. Whether you're running around a soccer field or hitting a tennis ball, sports require physical exertion and can help you maintain a healthy weight, build muscle, and improve your health. In addition to the physical benefits, sports can also be a great way to relieve stress and improve your mental health. Exercise has been shown to release endorphins, which can help reduce feelings of anxiety and depression, and participating in team sports can help build social connections and increase feelings of camaraderie.



Beyond the physical and mental benefits, sports also offer a range of other benefits, sports also offer a range of other benefits. For example, participating in sports can help develop leadership skills and teach valuable lessons about teamwork and perseverance, whether you are a captain of a group, sports require cooperation and communication, and they can help you learn how to work together to achieve a common goal.

Sports can also be a great way to develop self-discipline and learn how to set and achieve goals. Whether you are trying to improve your performance or working towards a championship, sports require dedication and hard work and they can help you develop the discipline and focus necessary to succeed in other areas of your life as well, finally, sports offer a unique form of your life as well.

Finally, sports offer a unique form of entertainment and enjoyment. Whether you are watching your favorite team play on television or attending live game, sports can provide a sense of excitement and joy that is unmatched by other forms of entertainment. From the roar of the crowd to the thrill of victory, experience that brings people together and creates lifelong memories.

Sports play an important role in our lives and offer a wide range of benefits that extend beyond the physical realm. Whether you are a professional athlete, form of entertainment and enjoyment that can help you stay physically fit, improve your mental health, develop important life skills and create lifelong memories. So whether, You are hitting the gym, lacing up your sneakers, or turning in to the big game, remember that sports are more than just part of the human experience.

Vachhani Dhritee  
Semester: 4<sup>th</sup>

## 21.5 Yoga and mind healing

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In addition to yoga, interventions included massage therapy, progressive muscle relaxation, stress management, and listening to music.

When you approach your yoga practice from a perspective of awareness, or 'presence', your mind starts to calm down and become more coherent, more present. I believe that the greatest healing occurs when you have a relaxed and coherent mind.

Yoga for the Body and Mind. Kripalu. Also called "gentle" yoga, Kripalu integrates mind, body and spirit in three stages - willful practice, willful surrender and meditation in motion. It claims to promote spiritual healing by evoking awareness of your physical, mental and emotional experience.

Yoga is known to promote good physical and mental health. Practicing yoga can help you calm your body and mind, which would, in turn, help you with your overall day-to-day performance in every field. Here are a few pointers to help you understand why exactly practicing yoga would be a good decision on your part.

Kinu  
Semester: 2<sup>nd</sup>



## 21.6 Job or Business: Which One Is Right for You

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When it comes to choosing a career path, there are two main options: getting a job or starting a business. Both options have their pros and cons, and it ultimately depends on the individual's goals, interests, and skills.

Jobs provide a stable income and benefits such as health insurance, retirement plans, and paid time off. They often come with clear job descriptions, set work hours, and a defined career path within the company. Jobs also offer the opportunity to learn new skills, work with a team, and have a sense of security.

However, jobs can also be limiting. There may be little room for creativity or innovation, and promotions may be dependent on seniority rather than merit. Jobs can also be subject to layoffs, downsizing, or changes in management, which can lead to job insecurity.

On the other hand, starting a business offers the potential for unlimited earnings and the freedom to set your own schedule and work on your own terms. Business owners have the opportunity to pursue their passions and create something meaningful while having control over the direction of the company.

However, starting a business also comes with a lot of risks. There is no guaranteed income, and business owners are responsible for all aspects of the company, from finances to marketing to customer service. Starting a business requires a lot of time, effort, and money, and success is never guaranteed.

Before deciding between a job or a business, it's important to consider one's personal goals and preferences. Those who value stability, predictability, and a steady income may prefer a job, while those who value independence, creativity, and risk-taking may be more suited for entrepreneurship.

It's also important to assess one's skills and interests. Starting a successful business requires a unique set of skills, such as leadership, creativity, and risk-taking, while a job may require more specialized skills and education.

Moreover, entrepreneurs should be ready to handle the uncertainty that comes with starting a business. You might have to work long hours, have limited or no initial income, be constantly making decisions and taking risks, and, sometimes, facing the possibility of failure.

Ultimately, the decision between a job or a business is a personal one, and it depends on the individual's unique circumstances and preferences. Both options offer their own advantages and disadvantages, and it's important to weigh these carefully before making a decision.

In conclusion, the decision between a job or a business is a complex one that requires careful consideration of personal goals, skills, and interests. Both options offer their own advantages and disadvantages, and the choice ultimately depends on the individual's unique circumstances and preferences. Whatever decision you make, it's important to plan and prepare well in order to achieve success and fulfillment in your career.

Madkiya Farid  
Semester: 8<sup>th</sup>



## 21.7 How to Survive in the IT Industry

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The Information Technology (IT) industry is one of the fastest-growing industries in the world, offering a vast range of career opportunities for individuals with technical skills and an appetite for innovation. However, surviving in this industry can be challenging, particularly for newcomers or those looking to advance their careers. In this article, we'll explore some ways to survive in the IT industry.

- 1. Keep Learning** :In the IT industry, keeping up-to-date with the latest technology trends is crucial. Attending conferences, workshops, and training sessions will help you stay informed about the latest technology advancements, which can keep you ahead of the competition. You can also expand your knowledge and expertise by pursuing additional degrees, certifications, and online courses.
- 2. Network** : Networking is essential in the IT industry, as it helps you build relationships with peers, mentors, and potential employers. Joining industry events, online communities, and connecting with people on social media can help you build a network. Building relationships with other professionals can help you stay informed about job opportunities, get mentorship, and even collaborate on projects.
- 3. Embrace Challenges** :As an IT professional, you will face many challenges and obstacles. Instead of fearing them, embrace them as opportunities to learn and grow. Learn from your mistakes and setbacks, adopt a growth mind-set, and focus on continuous learning and improvement.
- 4. Develop Soft Skills** :While technical skills are crucial, soft skills such as communication, problem-solving, and teamwork are equally important in the IT industry. You can develop these skills by taking on leadership roles, working on group projects, and seeking feedback from colleagues. Strong soft skills can help you collaborate effectively with team members and communicate technical information to non-technical stakeholders.
- 5. Stay Flexible** : The IT industry is known for its rapid pace of change, which means that staying flexible is essential to survival. Be open to new ideas, technologies, and ways of working. Keep up-to date with the latest industry trends and be willing to pivot your career path as needed.
- 6. Prioritize Work-Life Balance** : IT professionals can easily get caught up in work and neglect their personal lives. Maintaining a healthy work-life balance is crucial for long-term success and well-being. Set boundaries, take breaks, and prioritize self-care to avoid burnout.

In conclusion, surviving in the IT industry requires a combination of technical expertise, soft skills, a growth mind-set, and a willingness to stay up-to-date with the latest trends. Building relationships with peers, staying flexible, and prioritizing work-life balance can help you thrive in this exciting and dynamic field. By following these tips, you can survive and thrive in the IT industry.

Berani Jayesh  
Semester: 8<sup>th</sup>





## 21.8 Is ChatGPT replaces software developers?

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As a language model, ChatGPT is a tool that can assist developers in certain aspects of their work. However, it is not a replacement for developers. In this article, we will explore the capabilities of ChatGPT and the role of developers in the age of AI.

ChatGPT is an AI-powered language model that can generate natural language responses to a wide range of prompts. It has been trained on a vast amount of text data and can generate responses that are similar in style and tone to human language. While ChatGPT can be a valuable tool for developers, it is not a replacement for the human expertise that developers bring to the table.

Developers play a critical role in creating software applications, websites, and other technological solutions. They are responsible for designing, coding, testing, and maintaining these solutions, ensuring that they meet the needs of users and perform as intended. Developers bring a range of skills to their work, including knowledge of programming languages, software design principles, and problem-solving techniques.

While ChatGPT can assist with some tasks, such as generating code snippets or suggesting solutions to common coding problems, it cannot replace the expertise of developers. Developers bring a level of creativity, problem-solving ability, and real-world experience that cannot be replicated by an AI-powered tool. They are also responsible for ensuring that the solutions they create are ethical, secure, and meet the needs of users.

In addition to their technical skills, developers also bring a range of soft skills to their work. They must communicate effectively with stakeholders, collaborate with other team members, and manage projects effectively. These skills are essential for ensuring that software solutions are developed and delivered successfully.

AI-powered tools like ChatGPT can be valuable for developers, but they should not be seen as a replacement for human expertise. Developers should view these tools as a supplement to their work, using them to augment their skills and improve their productivity. By leveraging AI-powered tools, developers can focus on the more creative and strategic aspects of their work, allowing them to develop more innovative and effective solutions.

In conclusion, ChatGPT is a powerful tool that can assist developers in their work. However, it is not a replacement for the human expertise that developers bring to the table. Developers play a critical role in creating technological solutions, and they bring a range of technical and soft skills to their work. By leveraging AI-powered tools like ChatGPT, developers can enhance their productivity and focus on the more creative and strategic aspects of their work. In the age of AI, developers will continue to play a vital role in creating the technological solutions that power our world.

Dalsaniya Kapilkumar

Semester: 8<sup>th</sup>



## 21.9 Opportunities for Freshers in AI/ML Jobs in Gujarat

### Introduction:

Artificial Intelligence (AI) and Machine Learning (ML) are rapidly growing fields that have become an integral part of various industries such as healthcare, finance, education, and more. Gujarat, being a hub of industrial development in India, has seen a significant rise in AI/ML jobs in recent years, providing ample opportunities for freshers to build a career in this field.

### Current scenario of AI/ML Jobs in Gujarat:

Gujarat is home to various tech giants and startups that are constantly exploring new ways to implement AI/ML technologies in their businesses. From data-driven decision-making to automation, AI/ML is revolutionizing the way organizations operate.

### Job roles in AI/ML:

There are various job roles available in AI/ML, including data analyst, machine learning engineer, AI researcher, data scientist, and more. These roles require different skill sets, and freshers can choose a career path based on their interests and skill sets. For example, a data analyst job may require knowledge of SQL and data visualization tools like Tableau, while a machine learning engineer job may require proficiency in programming languages like Python and knowledge of machine learning algorithms.

### Skills required for AI/ML jobs:

A part from technical skills, AI/ML jobs also require strong problem-solving, analytical, and communication skills. Freshers can improve their skills through online courses, internships, and personal projects. Many universities and institutions in Gujarat offer AI/ML courses and certifications that can help freshers gain industry-relevant skills.

### Salary range for AI/ML jobs:

The salary range for AI/ML jobs in Gujarat varies based on the job role, experience, and skill set. As a fresher, one can expect an entry-level salary of around INR 3-5 lakhs per annum. However, with experience and upskilling, the salary can go up to INR 10-15 lakhs per annum.

### Conclusion:

AI/ML jobs in Gujarat offer a promising career path for freshers who are passionate about technology and innovation. With the right skills and knowledge, one can secure a high-paying job in this field. It is important to keep oneself updated with the latest trends and technologies in AI/ML and continuously up-skill to stay relevant in the industry.

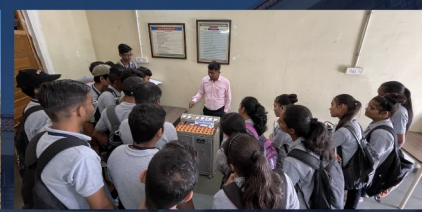
Mihir Ladani  
Semester: 8<sup>th</sup>

# 22.Photo Gallery

## Education Tour:



**NSS Camp :**



## Placement Interview :



# Sports Activity :

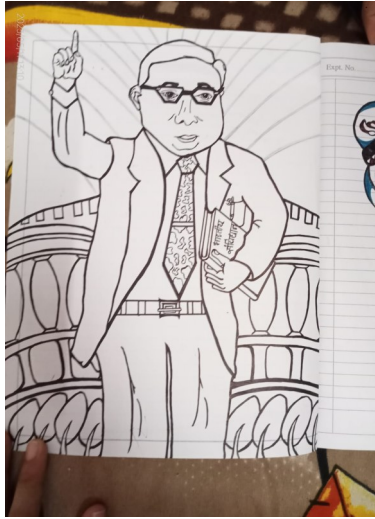


**AIT Family :**

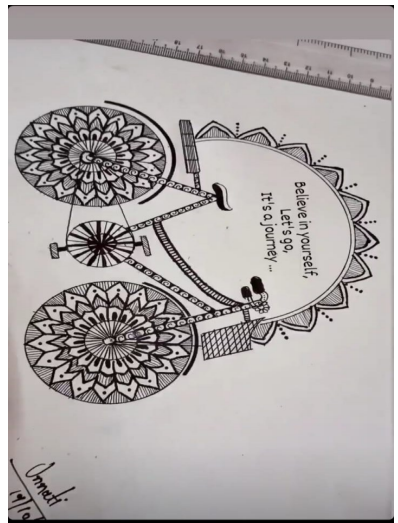


*AIT  
family*

# 23.Creative Corner

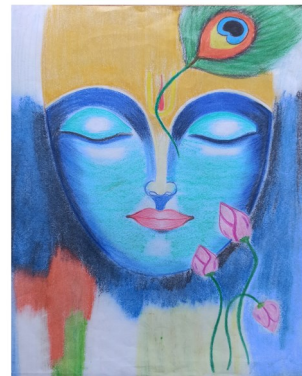
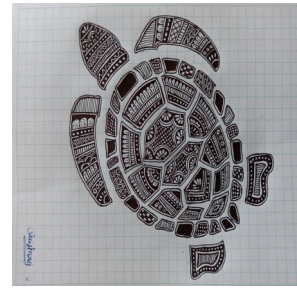


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# How To Reach College Of AIT



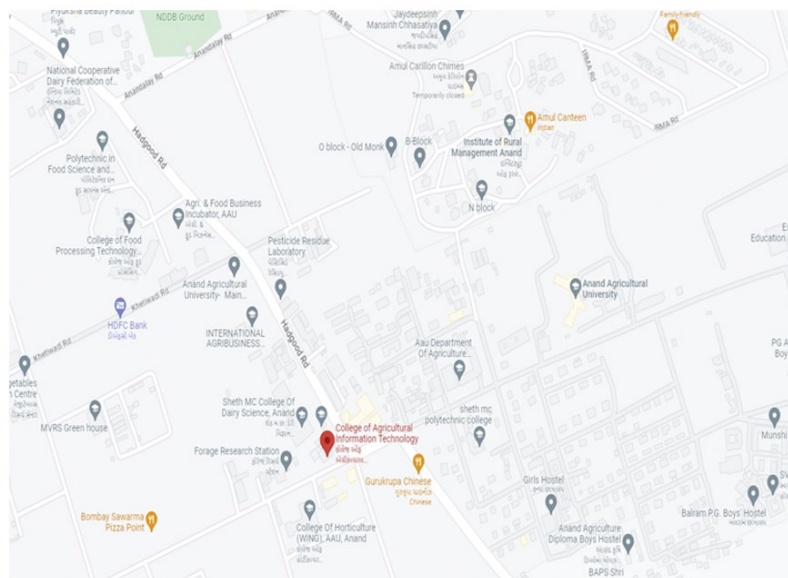
**College Of Agricultural  
Information Technology  
Opp. Central Bank Of  
India  
Anand Agricultural  
Unersivisy, Anand**



The nearest Railway Station and State Transport Bus Station are just 6 Kilometers away from the college of AIT. Anand Railway Station of the Western Railway lies between Ahmedabad and Vadodra.



Anand - Popularly Knowns as the MILK-CITY is about 88 Km from The Sardar Patel International Airport, Ahmedabad and about 40 Kilometers from Vadodra (Baroda) Airport.



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