

### St. John College of Engineering and Management

(A Christain Religious Minority Institution)

Approved by AICTE, Recognised by DTE and affiliated to the University of Mumbai, MSBTE

NAAC Accredited with Grade 'A' (2017-2022)

Two U.G. Programmes Accredited with NBA for 3 years (2021-2024)

One P.G. Programme Accredited with NBA for 3 years (2022-2025)



# DEPARTMENT OF COMPUTER ENGINEERING

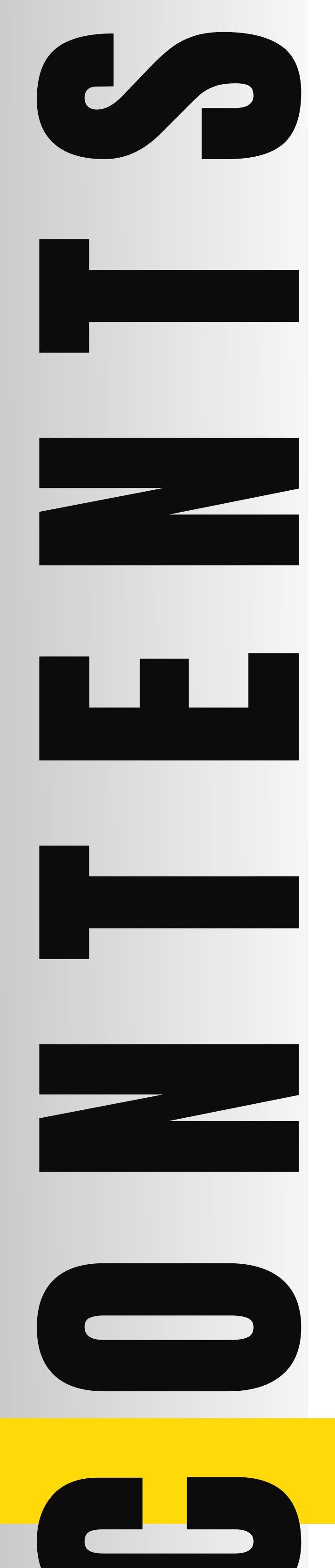
Vol. 04 | Issue No. 01 September 2022



Thronicles of IECHIES
A. My 2021-22

ST. JOHN TECHNICAL AND EDUCATIONAL CAMPUS

VILLAGE VEVOOR, MANOR ROAD, PALGHAR(EAST) 401404



## STUDENTS' ACHIEVEMENTS

STUDENTS' CERTIFICATIONS

TOPPERS & TOP
PROJECTS

2 PLACEMENTS

INTERNSHIPS

ALUMNI SPEAKS

TECHNICAL ARTICLES

POETRIES

**B** ARTWORKS

EXCLUSIVE COVERAGE

INTRODUCTION

FROM THE DESK OF...

EDITORIAL BOARD'S MESSAGE

DEPARTMENTAL ACTIVITIES

SPCA EVENTS

GSI EVENTS

ISTE EVENTS

FACULTY ACTIVITIES

PUBLICATIONS

Output

Description:





## Vjsjon

• Excellence in Engineering Education & Creating Next-Gen Leaders/Managers in the Service of Society.

## Institute mission

- To impart quality engineering education for holistic development.
- To promote innovation technology enable teaching and learning process.
- To provide conducive environment for joyful learning, innovation & research.
- To nurture socially responsible engineers, entrepreneurs & leaders.
- To enhance employability skills to meet changing industrial trends.

## VjSjon

 To be a department committed to develop capable and efficient Computer Engineering graduates with an aptitude for research and leadership qualities.

# Department

- To inculcate a habit of lifelong learning to become globally competent Computer Engineering graduates.
- To promote excellence by encouraging creativity, critical thinking, and discipline.
- To establish relationships with other institutes as well as industries to have collaborative learning.

### PROGRAM SPECIFIC OUTCOMES

- An ability to apply concepts of engineering mathematics, discrete mathematics, data structures, algorithmic principles, object-oriented programming concepts, and theoretical computer science in the modelling and design of computer-based systems.
- To apply a research-based approach using innovative tools and techniques in the field of networking, operating systems, artificial intelligence security techniques, and database management and mining techniques to deliver quality results and valid conclusions.
- Ability to secure employment or be an entrepreneur and apply the knowledge and understanding of engineering principles while portraying competencies like teamwork, effective verbal and written communication skills, and a zeal for lifelong learning with an ethical responsibility.

### PROGRAM EDUCATIONAL OBJECTIVES

- To attain knowledge, skills, and competencies for futuristic needs required at national and international levels with ethical standards.
- To contribute to the development of computer engineering through research.
- To display personal growth by pursuing higher studies, professional development courses, and/or engineering certification.



## Department of

From Left - Right
Mrs. Vidya Kawtikwar
Mrs. Aditi Raut
Mr. Samir Shaikh
Mrs. Rashmi Bhat
Ms. Priti Rumao
Mrs. Manali Patekar
Mr. Sunny Sall
Dr. Nilesh Deotale
Mr. Vivian Lobo
Mr. Ajay Sirsat
Mrs. Tanvi Patil
Mrs. Jisha Tinsu
Mrs. Prachi Guray

Mrs. Abira Banik

The department was established in 2008 with an intake of 60, and

PALGHAR

subsequently, it was increased to 120 in 2010. It is one of the leading departments on campus.

OF COMPUTER,

DEPARTMENT

ENGINEERING

The department strives its best to provide high-quality education to students so

that students — when graduated-can compete globally meeting industry expectations and standards, possess the vision to become a successful entrepreneur, or take research as a profession.

All these three potentials are aligned with the department's vision and mission, and if need be, they are appropriately revised in Departmental Advisory Board (DAB) meetings so that the department remains at par with contemporary technological trends. Moreover, this year we have started with AI/ML Dept.

Our Department adopts various teaching - learning methods such as flipped classroom, blended learning, amongst others so that students can have an excellent learning experience. The department has 8 well-equipped laboratories such as programming lab, networking lab, cloud computing lab, security lab, software engineering lab, DBMS lab, amongst others, with licensed software and internet connectivity that helps students in performing their experiments/assignments/project work/research efficiently. The department has active institute-level student chapters, i.e., Computer Society of India (CSI), Indian Society for Technical Education (ISTE) & also departmental level Sophisticated and Perpetual Coders Association (SPCA) that organize several workshops and hands-on sessions by industry experts for the benefit and knowledge upgradation of students. The department promotes collaborative learning that helps students to learn from their peers. The department has endeavored to provide consistent results academically and has been successful too. The placement records of the department are phenomenal.

On the whole, the department offers an all-round knowledge





## Chairman

Mr. Albert W. D'Souza

Aldel Education Trust (AET)

I AM HAPPY TO SEE THE
FOURTH EDITION OF
NEWSLETTER OF COMPUTER
ENGINEERING DEPARTMENT
UNDER ENGINEERING
SECTION OF ST. JOHN
COLLEGE OF ENGINEERING
AND MANAGEMENT,
PALGHAR.

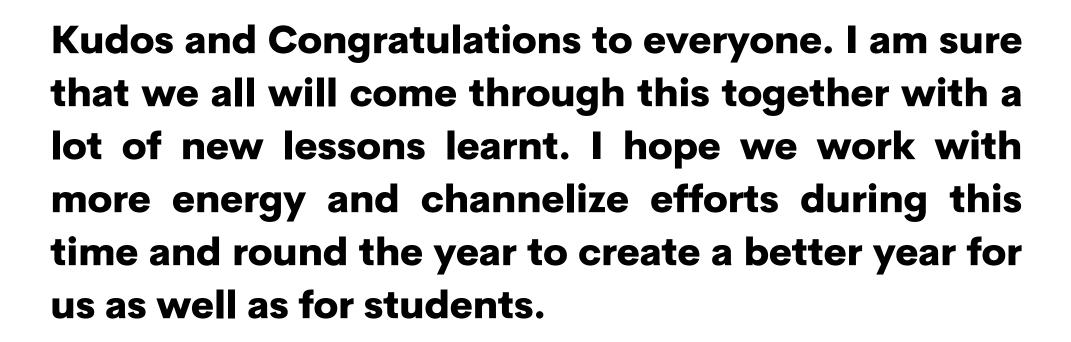


The newsletter is a communication medium for all students, staff, parents and friends to know the recent activities and developments that are taking place at department level. I congratulate the HOD, staff, students and the editorial team for coming up with this new issue of newsletter for department. At St. John, we remain committed to give very best to the students under our assistance. I want to extend my heartfelt gratitude to all the parents, students, stakeholders who have put their trust in us and been a part of this wonderful journey of St. John Technical Campus. Let's come together to work with vision of Trust "Excellence in Serving to Educate and Educating to Serve".

# Principal Dr. G. V. Mulgund Aldel Education Trust (AET)

#### Dear students and faculty members,

The year began on a note of hope and fulfilment with the celebration of sports week, annual social gathering, and sci ence fest. We celebrated the institute's technical event, i.e., Megaleio, and the second-ever 24-hour hackathon (i.e., MegaHack 2.0) with a grand success. We celebrated the 75th Independence Day (Azadi Ka Amrit Mahotsav) with all grandeur and responsibility. Furthermore, in academics and research, various departments organized expert lectures, published research papers, and several faculty members were invited as experts/resource persons. The progress of St. John College of Engineering and Management's STEP activity cell was rewarding in itself and provided the right amount of encouragement to do better. The first three months were eventful in all senses as we witnessed many fests and equally overwhelming responses. Our students did well in hackathons (SIH 2022) and other technical as well non-technical events oganised at various places.



## Member

Mr. Aldridge D'Souza

Aldel Education Trust (AET)

I am very pleased to see the fourth edition of the newsletter of the Computer Engineering Department. The newsletter contains all the information related to students activities, achievements, faculty achievements, workshops other activities conducted at the departmental level. Indeed, it is a canvas that has taken its forum through the contribution of all the concerned in the department. I would like to congratulate the Head of the Department, faculty members and the students of SJCEM.



I wish many more activities, academic pursuits, and achievements coming across our path as we journey together to conquer the milestone with St. John Technical Campus, Palghar. The department also skillfully conducts workshops, expert lectures, and seminars in general and technical areas for continuous improvements of students and faculty members. The newsletter mainly focuses on the achievements of the students and faculty members in curricular, co-curricular and extracurricular activities. Besides, it highlights on the activities conducted on recent trends in the area of Computer Engineering. The last but not the least, I congratulate all my team members for their constant efforts in launching the newsletter.



In February 2022, St. John Campus started its teaching-learning process in offline mode. However, due to the ongoing concern of the pandemic, many academic activities as well as student activities were carried out in hybrid mode. With the use of ICT, several workshops, seminars, STTPs, FDPs, PTIs, MegaHack 2.0, PRUSTUT and IC-TEAM 2022 took place in hybrid or virtual mode, which observed maximum participation from outsiders (i.e., students & staff from other colleges/institutions). It was observed that many students took advantage of hybrid mode and did several certification courses from various MOOC platforms. Moreover, the department obtained a major feat of winning the first position in SIH 2022. May you all have a flashback of the beautiful memories that are included in COT. Happy Reading!!!



With the dawn of the new beginning of the academic year 2022-23, I am highly gratified to share my thoughts via the medium of this accelerated timeline of communication.

Technology is the spectrum of ideas that the technical world comprises, has no limit certainly, rather, it will turn every impossible idea into reality. Currently, technology has spread its wide-range wings into various arenas. The current market has added AI, ML, Blockchain, AR & VR and other innovative trends. Department of Computer Engineering at SJCEM, has introduced the budding and aspirants future engineers with the upgraded innovative technical skills with hands-on training activities to ensure their holistic development. As far as NEP is concerned, we have applied all possible practical exposures along with theoretical applications. This will aid students / learners to analyse and comprehend the cut-throat competition in the market and why there is an urge to walk, align, and tune with current required skills.

I sign off with my hearty wishes to the entire team of the vibrant timeline "Chronicles of Techies".



#### Dear Readers,

With great joy, we present to you the much-awaited 4th volume of Chronicles of Techies (COT) for A.Y. 2021-22. COT comprehends several enthralling articles and some proud and joyful moments, which we feel you all will love to read. It consists of a crisp outline of the department, followed by the Vision, Mission, PSOs and PEOs, and the photograph of the strong pillars of our department, i.e., our dear faculty members.

COT includes the message of the visionary of this institute and the Chairman of Aldel Education Trust, i.e., Mr. Albert W. D'Souza Sir. It also covers the messages of Mr. Aldridge D'Souza Sir, Member, Aldel Education Trust, Dr. G.V. Mulgund, Principal SJCEM, and Dr. Nilesh Deotale, HOD, Computer Engineering, SJCEM. It also focuses on departmental activities, namely SPCA, CSI and ISTE events, faculty and student achievements, paper publications, placement details, alumni speaks, co-curricular, and extra-curricular activities...!!

We have made every effort to capture each and every event that had taken place in A.Y. 2021-22. This wouldn't have been possible without the constant support and guidance of our HOD, the dedication and timely support of our faculty members, and the voluntary efforts and enthusiasm rendered by COT's editorial team. We truly hope that the articles and success stories in COT will inspire our budding engineers to showcase their talents and continue the legacy in the upcoming years!!

Wishing you all success and a great academic year ahead.

Happy Reading!!!

#### Hello all tech-savvy folks!

Greetings from the Editorial Team! We are back again with great ardour to present our fourth edition of the Newsletter of our very own Computer Department "Chronicles of Techies". After the success of the previous edition, we were eager to get back and chronicle all the events of the Computer Department that many of you have been a part of. So, the biggest challenge for this edition was the inadequate time. With just 12 days in hand to complete it was the biggest task for all of us. But, what? After all, we all are Engineers and we know how to make things work and there it all started. The team of 13 made it possible and here we are with the fourth edition. In this edition, we are showcasing some of our Departmental Activities, followed by some beautiful artworks and poetries from among our own classmates. showcasing the best projects from the Computer Department, and some motivational messages from the alumni. To quote John Singer Sargent, "I do not judge, I only chronicle". Our utmost thanks to our respected Chairman. Principal, HOD, and the entire Computer Engineering Department for their guidance and motivation in helping us bring you this, the fourth edition of Chronicles of Techies. Keep your spirits up until we meet again. Work hard to make your dreams a reality so that we can chronicle them too.

Enjoy Reading!!



#### From Left to Right

Shubham (Editor), Jugal (Designer), Poorva (Co-Editor), Viraj (Photo-Editor), Aditi (Content Writer), Ranjeet (Designer), Vivek (Photo-Editor), Ayush (Co-Designer) Aniruddha (Designer), Mehtab (Co-Designer), Swaraj (Leader), Chirag (Designer Head), Chris (Co-Designer).







Mrs. Prajaktee Chaudhary

"Some people lives, our footprints hearts, and we never the same."

Our colleague Mrs. Prajaktee Chaudhari from the Department of Computer Engineering, SJCEM has left us forever and moved to heavenly abode, on 06th March 2022. Indeed it was a great shock to the department as well as the entire SJCEM. We pray that many happy memories of Prajaktee mam with all of us will overcome the sadness and pain that have accompanied us all. Prajaktee mam had contributed a lot in the department particularly we remember her dedication towards her students while teaching. She was a hard-working and sincere faculty who prepares the documents beforehand related to her subject and portfolio. As a person, she was really wonderful and admired by many people because of her soft-spoken nature. Although no words can ease the loss you bear, know you're very close in our thoughts and prayers.

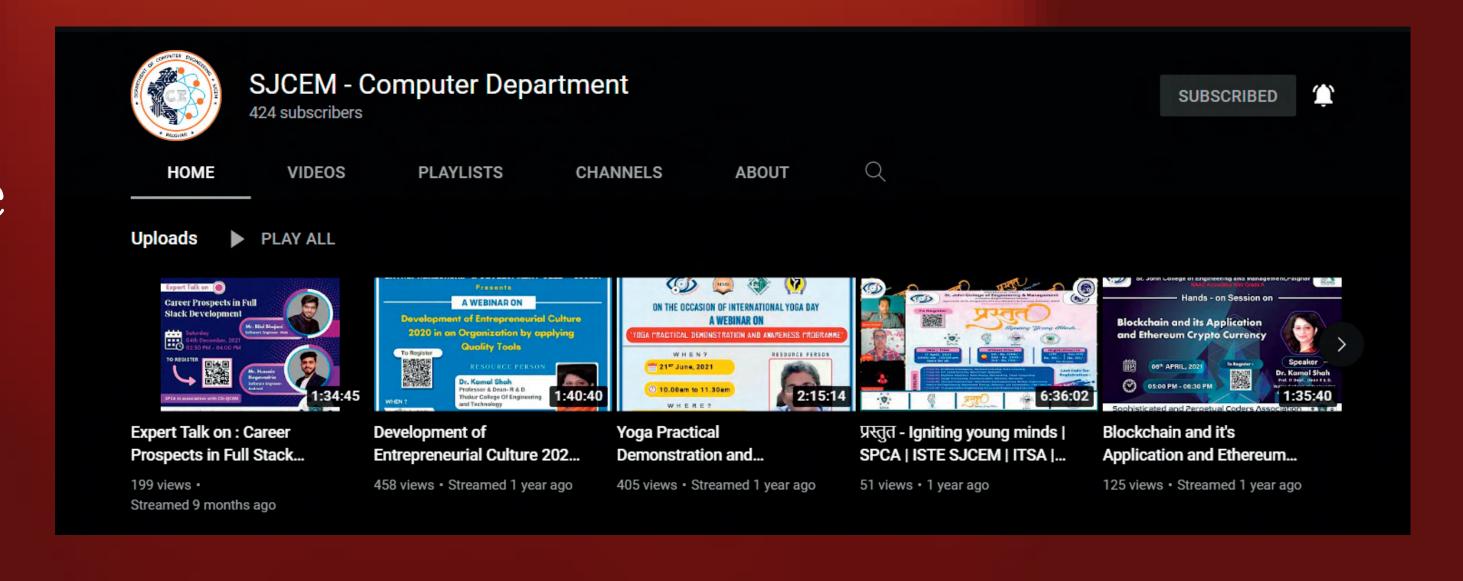
Heartfelt condolences on behalf of the entire Department to Prajaktee mam.



## DEPARTMENT YOUTUBE CHANNEL



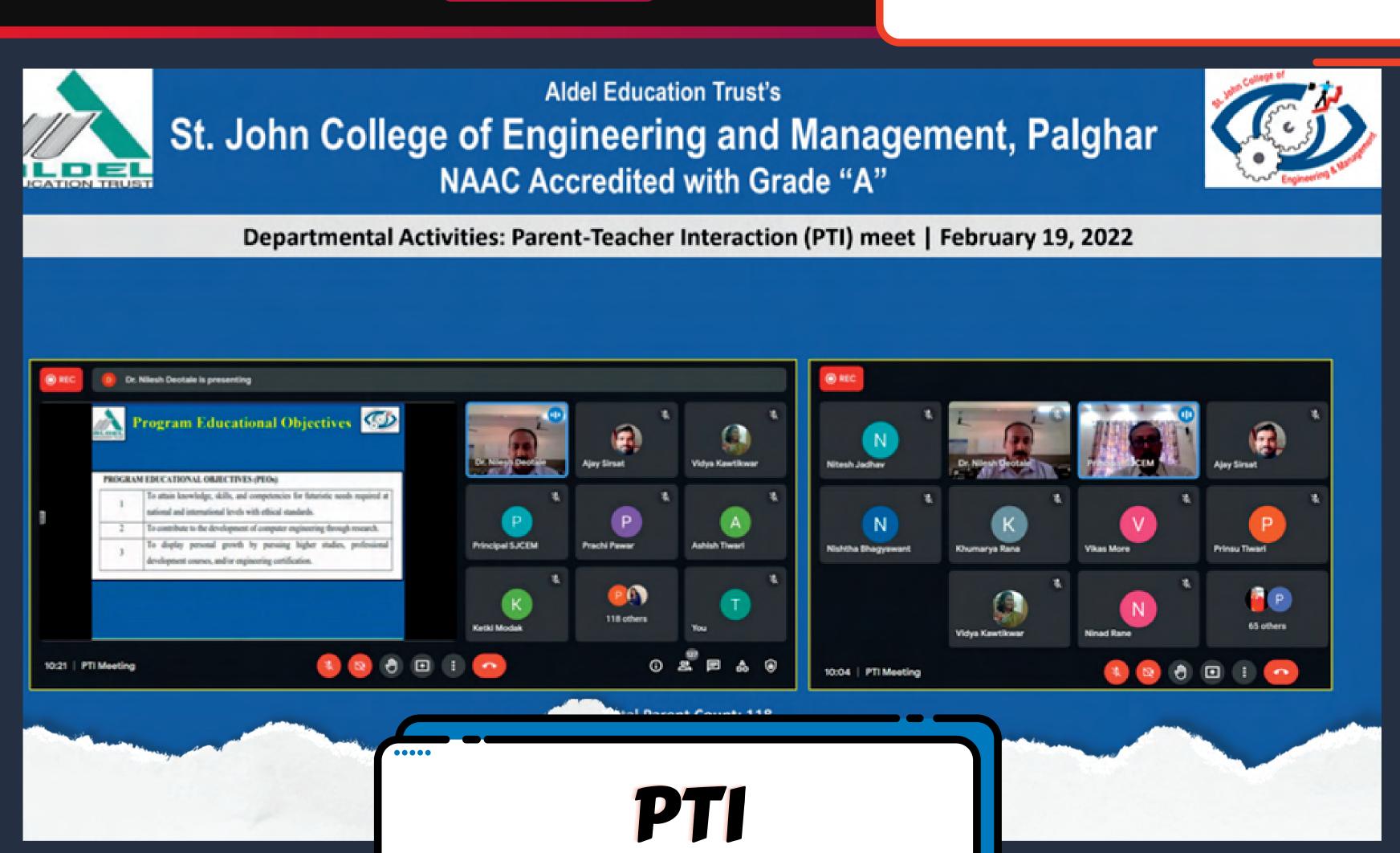
Subscribe to our channel







### ALUMNI MEET







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#### **Aldel Education Trust's**



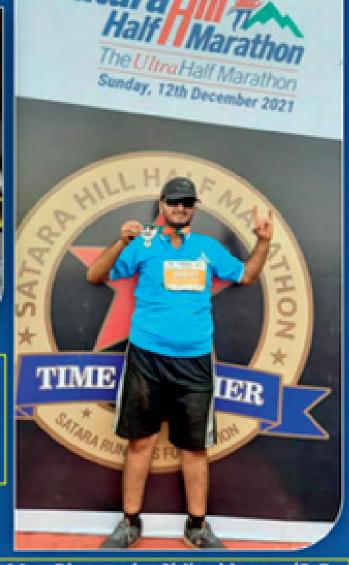


#### **Student Achievements**





Mr. Amol Singh (Captain), Mr. Ashish Mishra, Mr. Prathamesh Kanade, Mr. Ratnadip Shetye, and Mr. Anupam Shrivas from T.E. COMPS A won 1st prize in Box Cricket in Vyro 2022 conducted by UCOE on 1st April 2022.

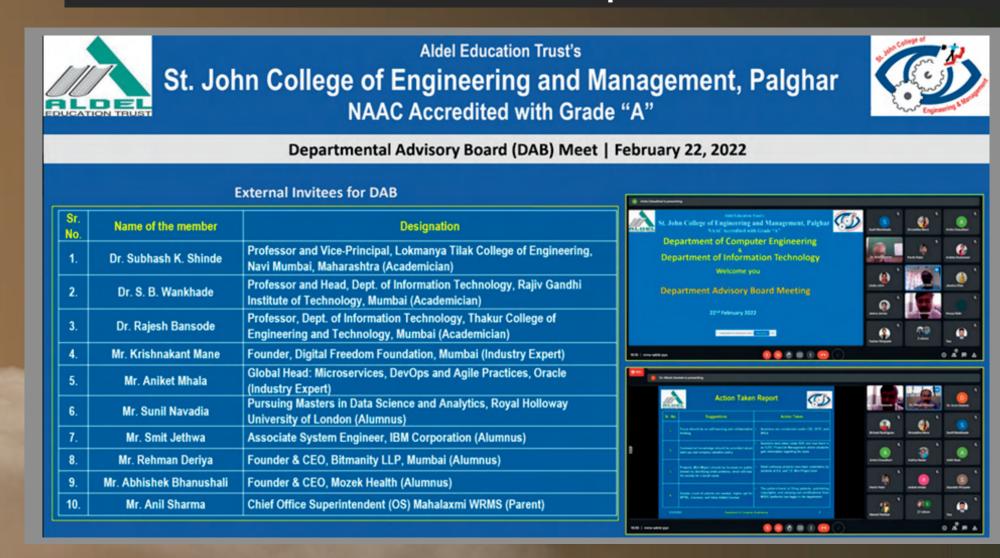


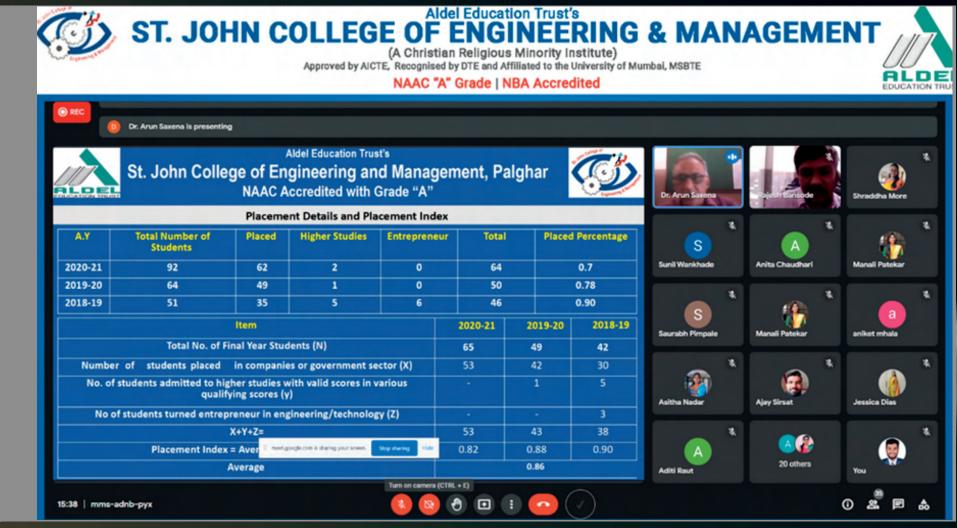
Mr. Bhagyesh Shikarkhane (B.E. COMPS) has secured a Bronze Medal in Satara Half Hill Marathon 2021 on 12th December 2021.

**STUDENTS'** ACHIEVEMENTS



#### Departmental Advisory Board (DAB)





Industrial Visit to SPCL Infotech Services Pvt. Ltd. & Arena Animations, Pune | March 31 to April 02, 2022

A total of 54 (B.E. Computer Engineering) students went for an industrial visit accompanied by Mr. Vivian Lobo and Mrs. Vidya Kawtikwar







St. John College of Engineering and Management (SJCEM), Palghar organized its first 3-day industrial visit after the pandemic for B.E. (Computer Engineering) students from March 31, 2022 to April 02, 2022. The companies visited were SPCL Infotech Services Pvt. Ltd. and Arena Animations, which are situated in Pune, Maharashtra. A total of 54 B.E. (Computer Engineering) students were a part of the industrial visit. Mr. Vivian Lobo and Mrs. Vidya Kawtikwar from Computer Engineering were the faculty co-ordinators who accompanied 54 students.

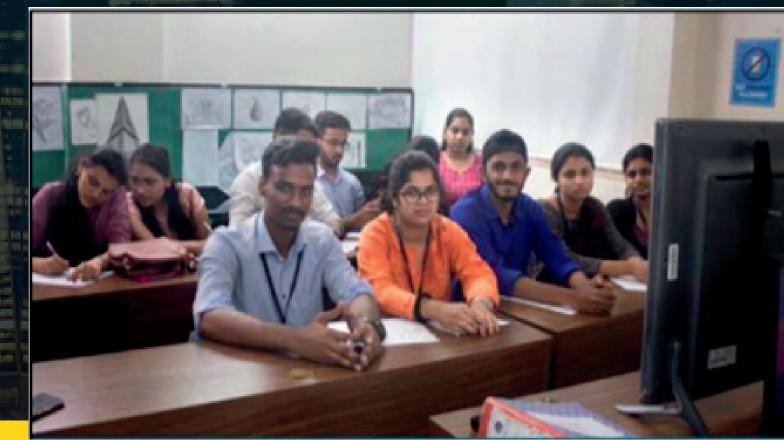














Teachers have three loves: love of learning, love of learners, and the love of bringing the first two loves together.





#### **Aldel Education Trust's**

St. John College of Engineering and Management, Palghar



Departmental Student Association: Sophisticated and Perpetual Coders Association (SPCA) | Office Bearers | A.Y. 2021-2022





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#### Faculty Interactions with other Institutions | UoM Faculty Orientation Programme

	Sr. No.	Date	Faculty Name	Course & Lab Name	College Name	
	1.		Dr. Nilesh Deotale			
2.	2.	12/01/22	Mr. Vivian Lobo	Cryptography & System Security and CSS Lab	Vidyalankar Institute of Technology, Wadala	
	3.		Mrs. Prachi Gurav			
	4.		Mrs. Manali Patekar	System Programming & Compiler		
	5.	10/01/22	Mr. Samir Shaikh	ikh Construction and SPCC Lab Pillai College of Engineering, New Panve	Pillai College of Engineering, New Panvel	
	6.	11/01/22	Mr. Ajay Sirsat	Mobile Computing and MC Lab	Mahatma Gandhi Mission's College of Engineering and Technology, Navi Mumbai	
	7.	40/04/00	Mrs. Jisha Tinsu	Mrs. Jisha Tinsu		
	8.	10/01/22	22 Artificial Intelligence and AI Lab Ms. Nancy Nadar	Atharva College of Engineering, Malad		
	9.	07/01/22	Ms. Priti Rumao	Internet of Things	Vartak College of Engineering, Vasai	
	10.	13/01/22	Mr. Sunny Sall	Digital Signal & Image Processing		
	11.	12/01/22	Mr. Vivian Lobo	Quantitative Analysis	Thadomal Shahani College of Engineering, Bandra	
	12	00/01/22	Mc Driti Dumas	Skill Pased Lab Courses Cloud Computing		

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Faculty Interactions with other Institutions/Organizations (Guest Lecture	Expert Talk   Reviewer)

Sr. No.	Date	Faculty Name	Details	Name of the Institute
1.	16/03/22	Dr. Nilesh Deotale	Reviewer for Journal of Engineered Fibers and Fabrics	Journal of Engineered Fibers and Fabrics, UK
2.	29/10/21	Mr. Vivian Lobo	Reviewer for an IEEE Conference: International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON) 2021	AISSMS College of Engineering, Pune
3.	17/12/21	Mr. Vivian Lobo	Reviewer for an IEEE Conference: International Conference on Advanced Network Technologies and Intelligent Computing (ANTIC-2021)	Banaras Hindu University, Varanasi, India
4.	21/01/22	Mr. Vivian Lobo	Expert talk on "NPTEL Awareness Session"	F.E.   Student Induction Programme (SIP)   SJCEM
5.	28/02/22	Ms. Nancy Nadar	Expert talk on "Coursera Awareness Session"	F.E.   Student Induction Programme (SIP)   SJCEM
6.	03/12/21	Mr. Vivian Lobo	Publicity Chair for IC-TEAM 2022	SJCEM, Palghar

7.	18/09/21	Dr. Nilesh Deotale	IC-TEAM 2022 Conference Organizing Chair	SJCEM, Palghar
8.	28/03/22	Mr. Vivian Lobo	Successfully organized Internal Institute-Level Hackathon for Smart India Hackathon (SIH 2022)	SJCEM, Palghar
9.	16/12/21	Mrs. Prachi Gurav	Reviewer for BMC Medical Informatics and Decision  Making	BMC Medical Informatics and Decision  Making
	07/12/21	AA DIN D	8-1	A-1- B-10- 1 1



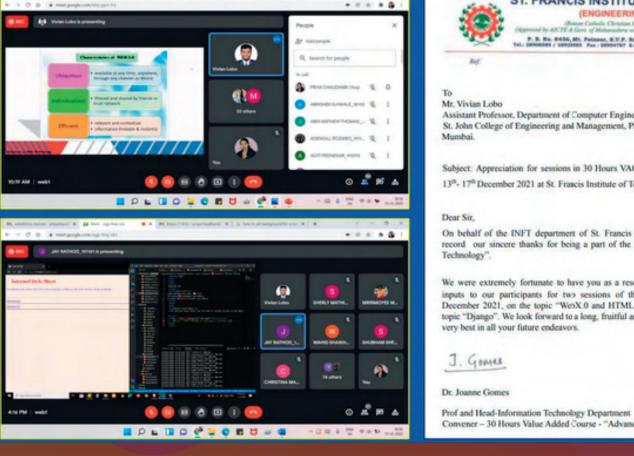


#### Aldel Education Trust's

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#### Faculty Interactions with other Institutions/Organizations (Guest Lecture | Expert Talk)





Mr. Vivian Lobo delivered an expert session on 'Advances in Web Technology: Web X.0' and a hands-on session on 'Django' at St. Francis Institute of Technology, Mumbai on December 13 and 17, 2021, respectively.



#### **Aldel Education Trust's**

St. John College of Engineering and Management, Palghar NAAC Accredited with Grade "A"



#### Faculty Interactions with UoM | Paper Setter

Sr. No.	Date	Faculty Name	Course Name & Semester	Position (Convener/Member)
1.	01/11/21	Mr. Vivian Lobo	Computer Network   Sem V	Member
2.	01/11/21	Mrs. Angelin Florence A	Microprocessor   Sem V	Member
3.	31/10/21	Mr. Sunny Sall	Data Structures   Sem III	Member

#### Faculty Interactions with UoM | Syllabus Design/Revision Committee for B.E. (R-19 'C' Scheme) | Sem VII and VIII

Sr. No.	Date	Faculty Name	Course Name	Position (Convener/Member)
	18/03/22	1/03/22 6/03/22 Dr. Nilesh Deotale 5/03/22 2/03/22	Mobile Ad-hoc Network (MANET)	Convener
	21/03/22		Augmented Reality and Virtual Reality (AR & VR)	Co-convener
	26/03/22		High Performance Computing and HPC Lab	Member
1.	16/03/22		Digital Forensics and DF Lab	Member
	15/03/22		Optimization in Machine Learning and OML Lab	Member
	12/03/22		Deep Learning and DL Lab	Member
	12/03/22		Machine Learning and ML Lab	Member



"Teachers have three loves: love of learning, love of learners, and the love of bringing the first two loves together."

### SIH 2022 WINNERS & FINALISTS







WINNERS OF SMART INDIA HACKATHON (SIH) 2022 | AUGUST 25 TO 26, 2022

ALDEL EDUCATION TRUST'S ST. JOHN COLLEGE OF ENGINEERING AND MANAGEMENT





Team Name: Ethical Coders

Mr. Prashant Shukla (Team Leader), Mr. Vivek Pandey, Ms. Rohini Rana, Ms. Poorva Talekar, Ms. Aditi Singh, Ms. Akanksha Mudge | **Team Mentors**: Ms. Priti Rumao and Dr. Nilesh Deotale







FINALISTS OF SMART INDIA HACKATHON (SIH) 2022 | AUGUST 25 TO 26, 2022

ALDEL EDUCATION TRUST'S ST. JOHN COLLEGE OF ENGINEERING AND MANAGEMENT





Mr. Om Thakre (Team Leader), Mr. Chinmay Dandekar, Mr. Swaraj Patil, Ms. Pradnya Ingale, Mr. Suryakrishnan Nair, Mr. Shreyas Sureshkumar | Team Mentors: Mr. Ajay Sirsat and Mr. Vivian Lobo Department of Space, Indian Space Research Organisation (ISRO) | SS596 | Software Edition

Team Name: Imagine\_28







FINALISTS OF SMART INDIA HACKATHON (SIH) 2022 | AUGUST 25 TO 26, 2022

ALDEL EDUCATION TRUST'S ST. JOHN COLLEGE OF ENGINEERING AND MANAGEMENT





Team Name: Statesman

Mr. Ishan Lokhande (Team Leader), Mr. Bharat Mali, Mr. Jayesh Dhuri, Ms. Sneha Chauhan, Mr. Shubham Bane, Mr. Mohd Atiq Shaikh | Team Mentors: Mr. Sunny Sall and Mr. Vivian Lobo Cyber Crime Unit, Special Cell, Delhi Police, MHA | RV1259 | Software Edition



## HANDS-ON IOT







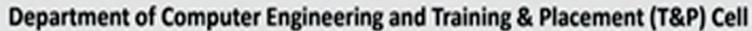
## Convocation & ARVR FDP





St. John College of Engineering and Management, Palghar
NAAC Accredited with Grade "A"







RESOURCE PERSON

Mr. Suroj Powor

03.30 pm to 05.30 pm

Desicode Infoscilutions LLF
15th & Hith August 2021

Overelf Coordinator: Feculty Coordinator:

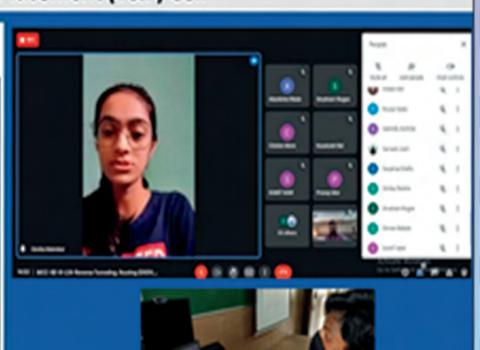
A workshop on "Ethical Hacking: Step Towards Security" was conducted on August 15 and 16, 2021 in virtual/online mode and 97 students attended it.



20th August 2021 6000 P.M onwards

Overall Coordinator: Facults Coordinator: 1900 Computer Department
Mr. Namelev Full Mr. Ajry Street Dept. CREFT Coordinator
Mr. Vikus More
Dept. CREFT Coordinator

A session on "Placement Preparation" was conducted on August 29, 2021 in virtual/online mode and 80 students attended it. Platform used was Zoom.





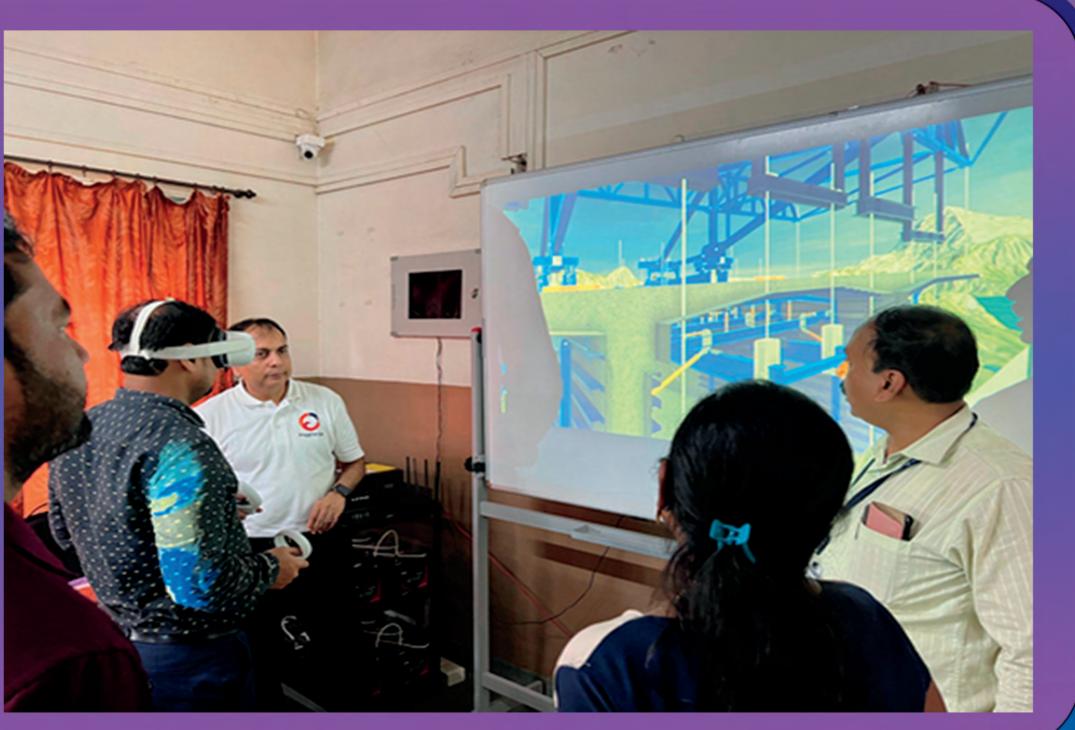
Senior-Junior interaction session by Ms. Devika Babrekar and Mr. Saniket Patil on Sept. 04, 2021 and August 16, 2021, respectively.

DEPARTMENT OF COMPUTER ENGINEERING | ST. JOHN COLLEGE OF ENGINEERING AND MANAGEMENT | PALGHAR

## GRADUATING BATCH 2020–2021

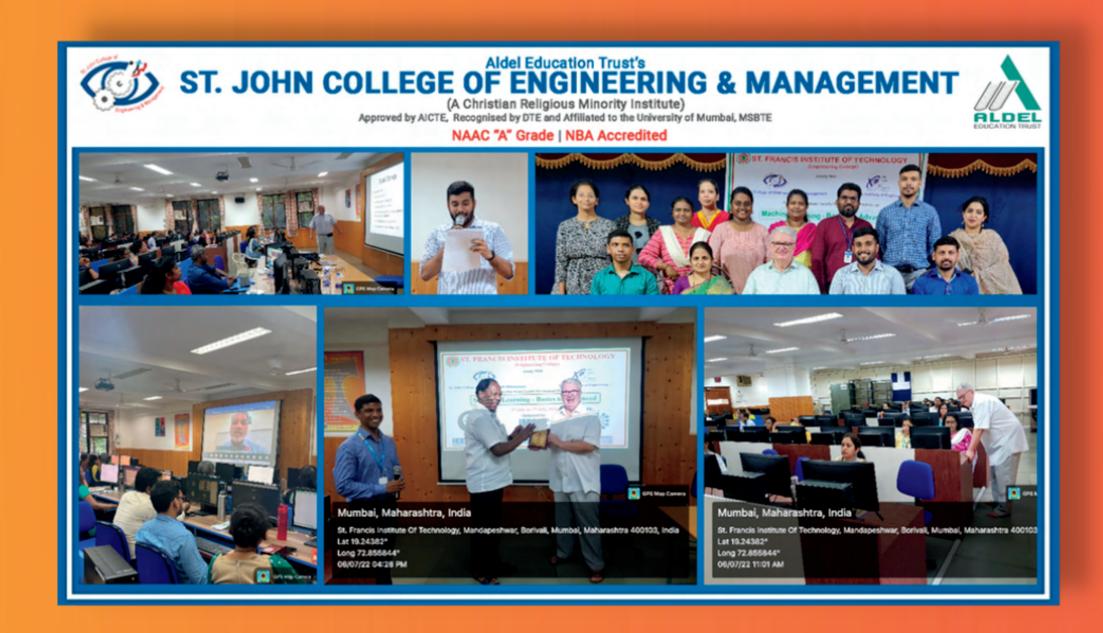




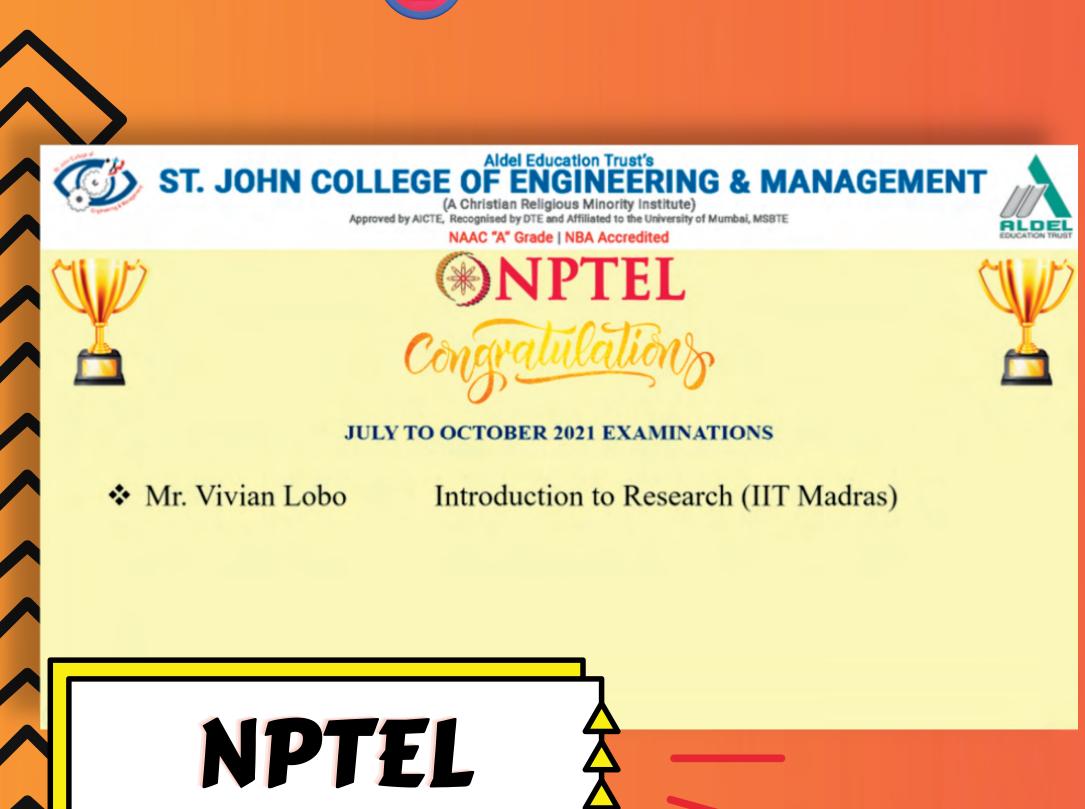






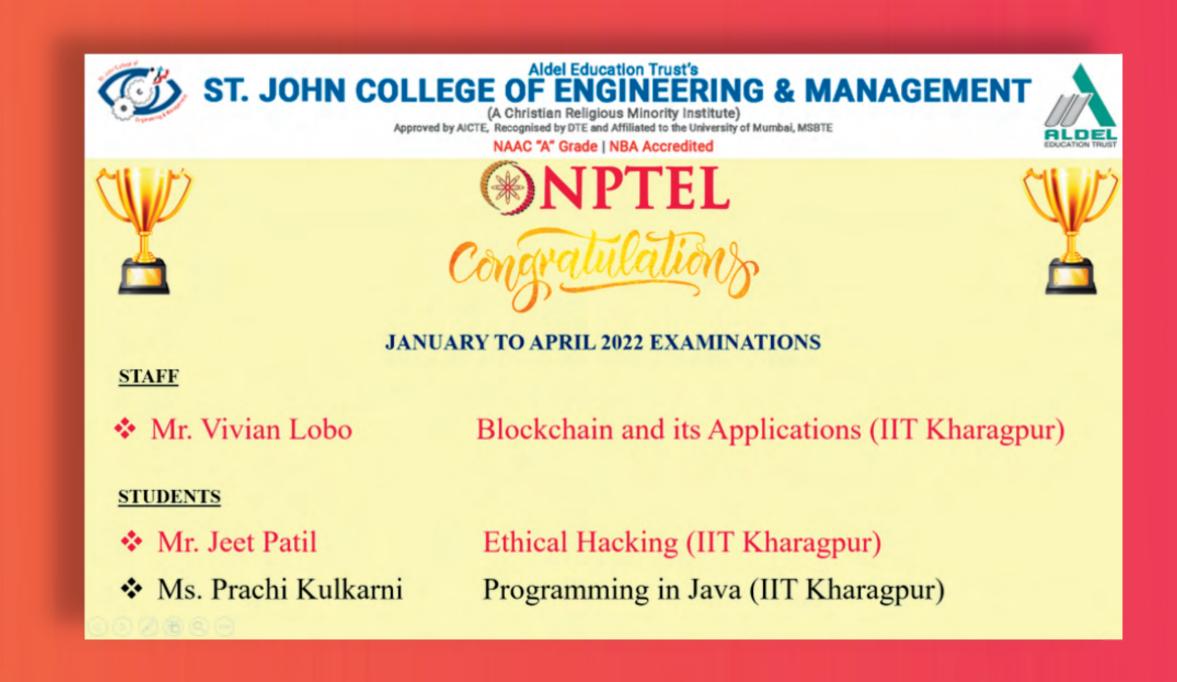
















### Sophisticated and Perpetual Coders Association [SPCA]

Sophisticated and Perpetual Coders Association (SPCA) came into existence in 2020 by the initiative of a group of students and faculty members of Department of Computer Engineering. During the period of the global pandemic when academic and curricular activities were on a hold, Prof. Vivian Lobo, Prof. Angelin Florence A, Prof. Jisha Tinsu (Assistant Professors | Faculty Co-ordinators of SPCA), and Mr. Jayesh Patil (Student | B.E. COMPS) with the guidance and support of Dr. Rahul Khokale (HOD) and Dr. G. V. Mulgund (Principal, SJCEM) established SPCA on the strong foundation of it's able core committee. SPCA works for a common goal, i.e., to converge all students under the shield of Department of Computer Engineering irrespective of domains they choose to excel in, and this can only be accomplished if there is a common factor that will hone their existing knowledge in a particular field/domain and enhance it even more.

### VISION

TO CONVALESCE STUDENTS' SKILL SETS AND SOCIAL VALUES BY SHARPENING THEIR EXISTING KNOWLEDGE IN VARIOUS DOMAINS OF COMPUTER ENGINEERING.

## MISSION

- TO OFFER OPPORTUNITIES THAT ENRICH KNOWLEDGE AND BOOST CONFIDENCE IN EXTRACURRICULAR ACTIVITIES.
- To provide moral support and a base for nurturing career skills.
- To disseminate empowerment through the conduction of numerous workshops and seminars.

**SPCA WEBSITE** 



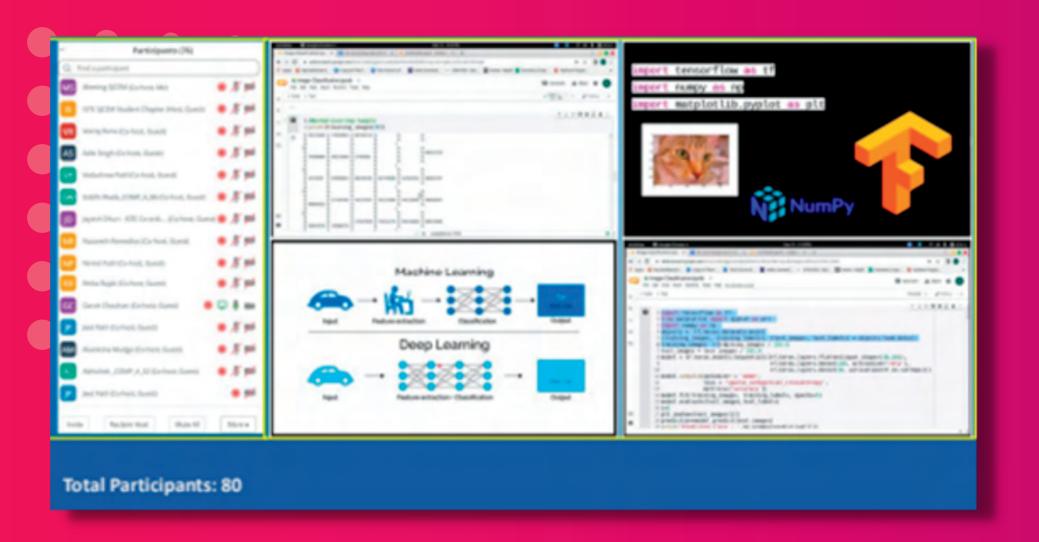
**SPCA INSTAGRAM** 

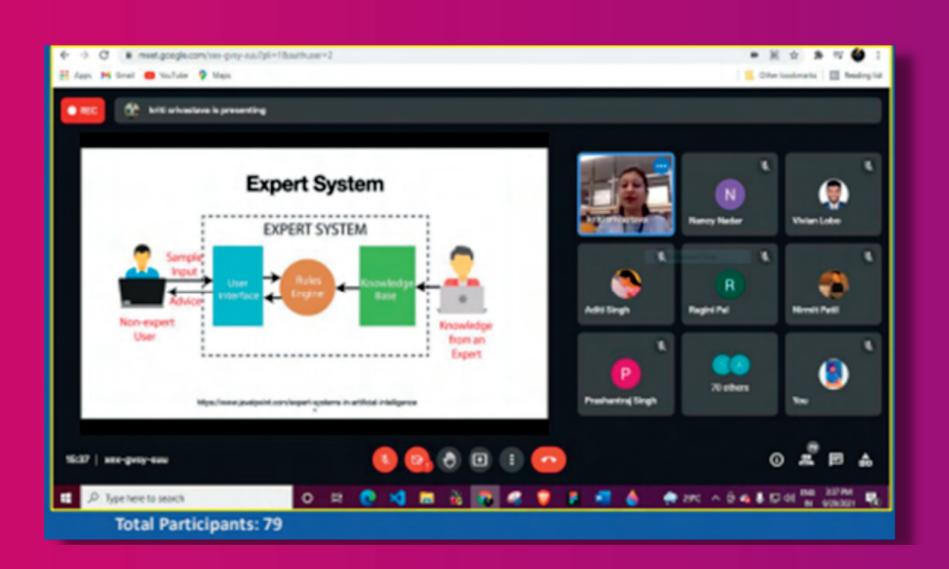




"It has become appallingly obvious that our technology has exceeded our humanity."





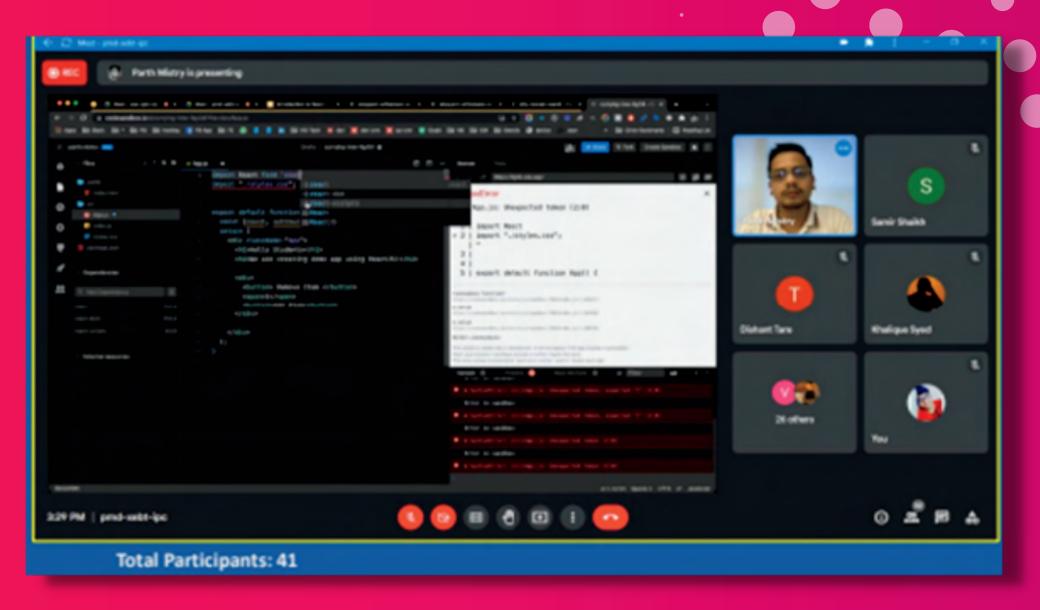


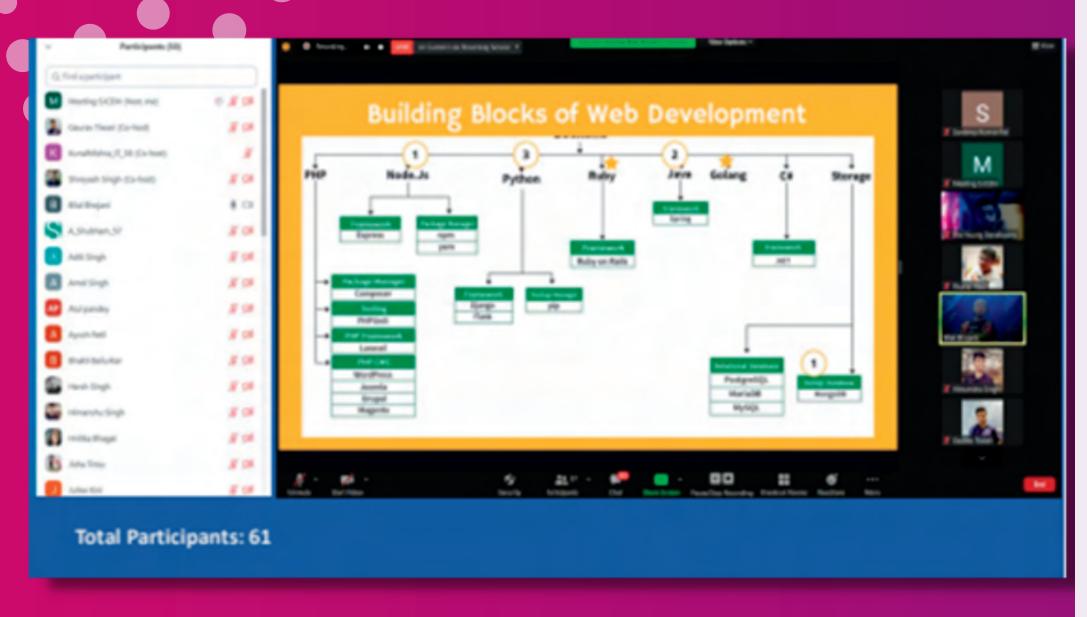




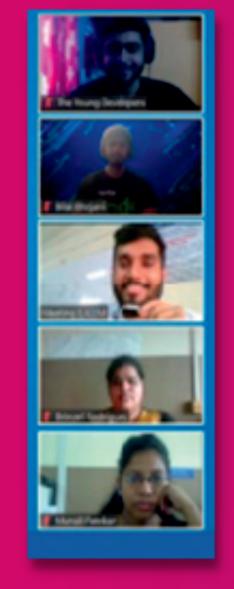
# SPCA: EVENTS

Many more to come...





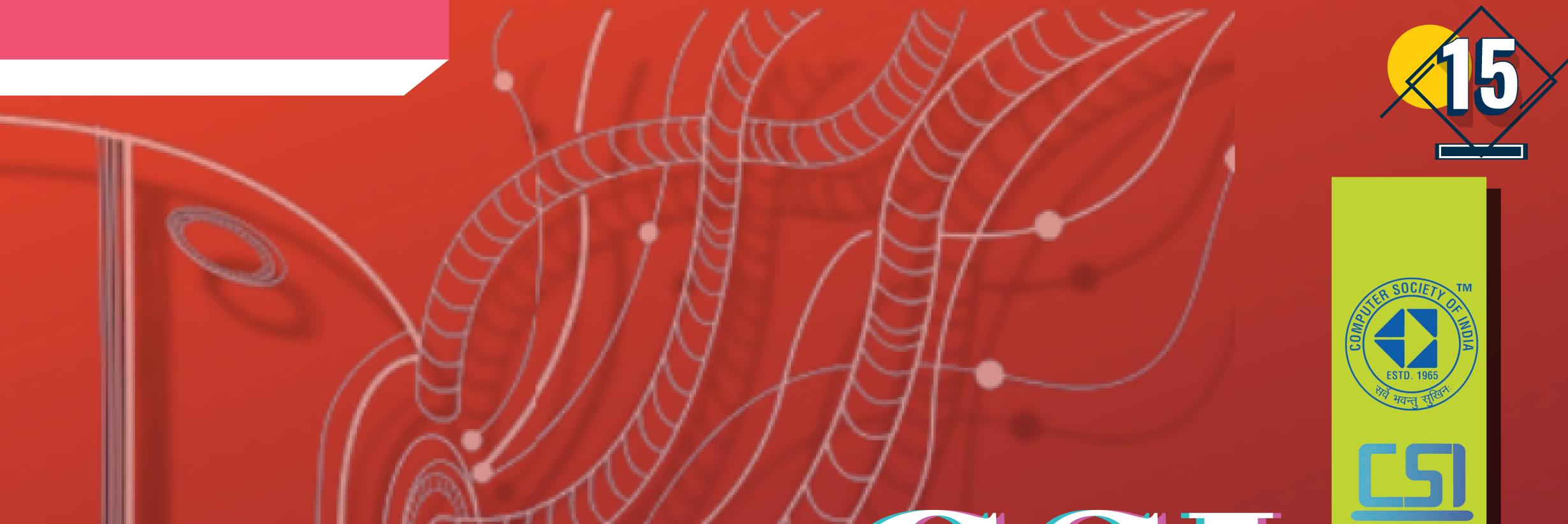






<sup>&</sup>quot;The achievements of an organization are the results of the combined effort of each individual."









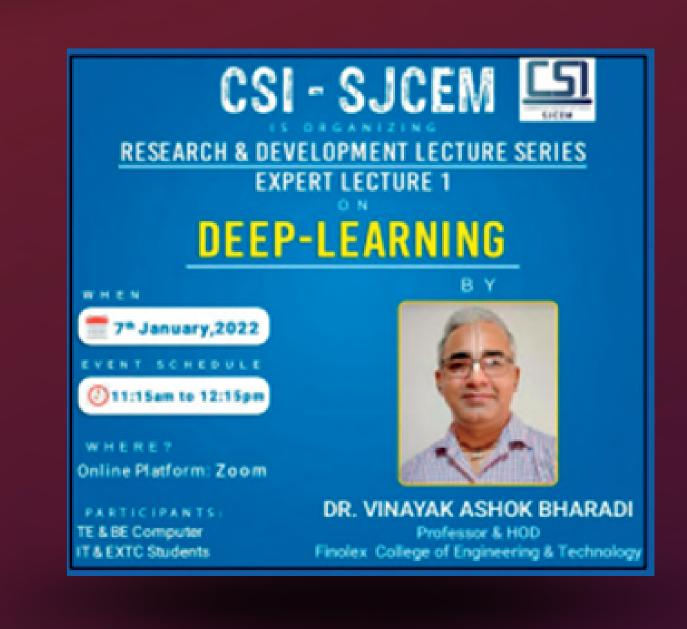


11:20am to 12:10pm

Online Platform: Google Meet MS. SAVITA DADHWAL Certified Ethical Hacker (CEH) and founding member of Fortify Solutions CYBER SECURITY & LAWS

~ MS. SAVITA DADHWAL

DEEP-LEARNING ~ DR. VINAYAK A. BHARADI



CSI - SJCEM 55 EXPERT SESSION NAVIGATING CAREERS: ESSENTIAL AI & ML SKILLS WHEN? 14\* March 2022 (10:30 am to 12:30 pm Instagram WHERE? Main Auditorium - SJCEM 3rd Floor PARTICIPANTS CEO and Co-Founder Third Year Computer of a Health Tech Startup and founder of a storytelling community

NAVIGATING CAREERS ~ MR. DARSHAN SAVALIA





Mr. Vivian Lobo, Ms. Shraddha More, Published a book entitled "Web Application Development" ISBN No: 978-935-583-1088



Mr. Rupesh Mishra St. Francis Institute of Technology, Rorivali

Mr. Vivian Brian Lobo

Mr. Vivian Lobo, Ms. shraddha More, Published a book entitled "Blockchain" ISBN No: 978-93-5583-121-7



### FACULTY ACTIVITIES

#### Mr. Vivian Lobo

- Successfully completed Ph.D. (Technology)
   'Course Work' with a Semester Performance
   Index (SPI) of 10 (First Class with Distinction) at
   Thadomal Shahani Engineering College
   (Research Center) under University of Mumbai
   from July 2021 to February 2022.
- Completed a Course on AICTE ATAL on Research Methodology and Optimization Techniques
- Completed a Course on AICTE ATAL approved FDP on Introduction to Research
- Completed a Course on AICTE-ISTE sponsored Online Refresher Program on Cyber Security and Ethical Hacking.

### Mr. Ajay Sirsat

- Successfully received 01 'Outhouse Project' from ShubhChintak Technology Pvt. Ltd.
- Attended HIV/AIDS Awareness Programme.

### Mr. Sunny Sall

- Attended a Hands-on training Session on Ouriginal (Urkund) as an Anti-Plagiarism Tool.
- Participated in IEEE Teachers Congress.

### Mrs. Vidya Kawtikwar

- Attended an FDP on Electronics in Al and ML
- Attended an FDP on Recent Advancements in ML & Al

#### Mrs. Aditi Raut

- Completed a course on Big Data and Analytics
- Participated in an STTP on Exploring Machine Learning and Deep Learning Algorithms for Natural Language Processing (NLP) Applications.

### Mrs. Jisha Tinsu

 Completed a Course on AICTE-ISTE sponsored Online Refresher Program on Cyber Security and Ethical Hacking.

#### Dr. Nilesh Deotale

- Attended a Hands-on training Session on Ouriginal (Urkund) as an Anti-Plagiarism Tool
- Attended a Session onNew Education Policy (NEP)



Perfection is not attainable, but if we chase perfection is not attain attainable, but if we chase perfection is not attainable perfection is not attainable.

### **PUBLICATIONS**

Dhedia, Ritik, Nixon Paliakkara, Vivian Brian Lobo, Deepak Gupta, and Vaibhav Sharma. "Smart Agri-Farming on Satellite Imageries using Machine Learning." In 2021 6th International Conference on Communication and Electronics Systems (ICCES), pp. 1342-1347. IEEE, 2021. DOI: 10.1109/ICCES51350.2021.9489130

Patil, Jayesh, Vaibhav Patil, Dhaval Walavalkar, and Vivian Brian Lobo. "Road Accident Analysis and Hotspot Prediction using Clustering." In 2021 6th International Conference on Communication and Electronics Systems (ICCES), pp. 763-768. IEEE, 2021. DOI: 10.1109/ICCES51350.2021.9489074

Kimaya Raut, Jui Patil, Siddhi Wade, Jisha Tinsu, "Mental Health and Personality Determination using Machine Learning", 7 th International Conference on Communication and Electronics Systems (ICCES 2022), pp. 1239-1244.

Mr. Diwakar Shah, Ms. Vidya Rautela, Mr. Chirag Sharma, and Mrs. Angelin Florence A, "Yoga Pose Detection using Posenet and k-NN", 1 st IEEE International Conference on Computing, Communication and Green Engineering (CCGE21), IEEE Pune Section, pp. 1-4, September 23 to 25, 2021. DOI: 10.1109/CCGE50943.2021.9776451

Singh, Aditya Vijaykumar, Ashwin Omprakash Tiwari, Shreyash Sanjay Singh, and Vivian Brian Lobo. "A Criminal Record Keeper System using Blockchain." In 2022 6th International Conference on Trends in Electronics and Informatics (ICOEI), pp. 840-845. IEEE, 2022. DOI: 10.1109/ICOEI53556.2022.9776725

Urunkar, Abhijeet, Amruta Khot, Rashmi Bhat, and Nandinee Mudegol. Fraud Detection and Analysis for Insurance Claim using Machine Learning. In 2022 IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (SPICES), vol. 1, pp. 406-411. IEEE, 2022. DOI:10.1109SPICES52834.2022.9774071

Khot, Amruta, Rashmi Bhat, Abhijeet Urunkar, and Nandinee Mudegol. "High Frequency Forecasting on Stock Market using Machine Learning." In 2022 3rd International Conference for Emerging Technology (INCET), pp. 1-6. IEEE, 2022. DOI: 10.1109/INCET54531.2022.9824109

Dr. Nilesh Deotale, Allen Famy, Saurabh Jagadale, Daniel Karunanidhi, "FURNIT-AR: Augmented Reality Interior Design Store Application" International Journal of Scientific Research in Engineering and Management (IJSREM), vol. 06, no. 01, pp. 1-7, January 2022. DOI: 10.55041/IJSREM11480

"Someone is sitting in the shade today because someone planted a tree a long time ago."

FOR MORE SCAN >>



## STUDENTS ACHIEVENESIS





Oracle
Application
Express 18
Developer

Certified

Professional.

**B.E.** Ms. Saujanya Shetty

Certificate of Bootcamp on Python and ML by ShapeAI.

**B.E.** Ms.Ankita Mondal

Project Oriented
Winter Training
Program on
"Android App
Development".



Programming for Everybody
(Getting
Started with Python).

T.E. Ms.Ankita Yadav

HTML&CSS
Course By
Progate

T.E. Mr. Harshal Chavan

Certificate for
"Cyber Security:
Individual,
Technology &
Research
Trends"

S.E. Mr.Vivek Pandey

The full stack
Development
IN MERN



S.E. Ms.Payal Nandre

Programming
Foundations
with
JavaScript,
HTML
and CSS

S.E. Mr. Matlup Ali Mir

C for Everyone: Programming Fundamentals



## STUDENTS CERTIFICATIONS

Chirag Sharma (B.E):
AWS Certified Cloud
Practitioner certificate

Ankita Mondal (B.E):
Data Science Training Certificate of Completion

Harshal Chavan (T.E): Certificate for "Cyber Security"

Bhakti Bailurkar (T.E): Coursera UX Design Process2 Certificates

Aman Jha (S.E): The Internet of Things (IOT): 2021 Certification

Prachi Kulkarni (S.E):
Certificates on Introduction to serverless Computing

Viraj Nagvekar (S.E): Certificates on AI for ALL Badges Purva Patil (B.E):
Certification in Introduction to
Cybersecurity

Kunal Dalvi (B.E): Certificate of participation in Vedic Maths Basic Level

Sonia Sharma (T.E): Certificate of Developing Innovative React-Native

Jeet Patil (T.E): Certificate on Django workshop

Pauras Raut (S.E):
Foundations: Data Everywhere coursera certificate

Ninad Rane(S.E):
Certificate for student induction program



Chirag Patil (T.E): Certificate for Designing NEWSLETTER OF COT





## DEPARTMENT TOPPERS

B.E.

Pratiksha Laldas

CGPA: 9.77

Krutik Patel

CGPA: 9.50

Shreyash Singh

CGPA: 9.49

T.E.

Santosh Indulkar

CGPA: 9.81

Tanaya Patil

CGPA: 9.33

Rahil Shaikh

CGPA: 9.29

S.E.

Khumarya Rana

CGPA: 9.94

Nirmit Patil

CGPA: 9.88

Payal Nandre

CGPA: 9.81



## TOP B.E. PROJECTS



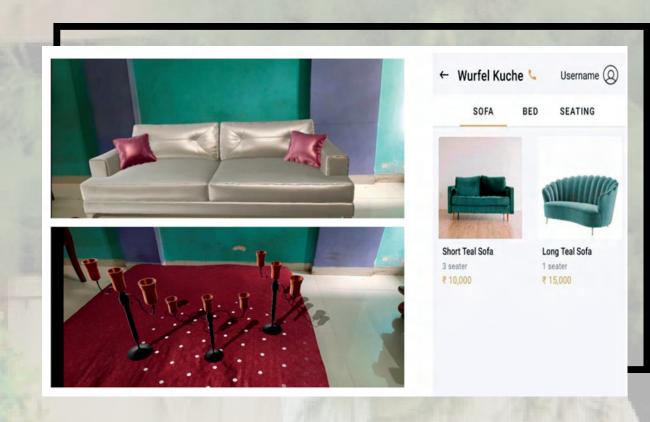
Project Title: FURNIT AR: Augmented Reality Interior Design Store and Application

Project Guide: Dr. Nilesh Deotale

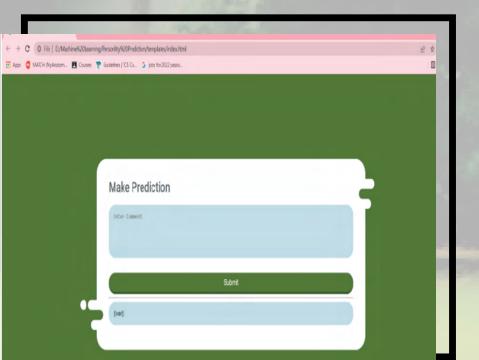
Group Members: Allen Famy, Saurabh Jagadale, Daniel Karunanidhi

#### **Abstract:**

Furniture is something that fills the house more than people, it gives you sound sleep, support when you are back home tired from work. When you are out there purchasing furniture for yourself or your loved ones, you always want something that looks appealing and is of the best quality as well. Purchasing something without a trial is a very common mistake that you encounter in the traditional method. But with FURNIT AR: AUGMENTED REALITY INTERIOR DESIGN STORE AND APPLICATION and with the help of Augmented Reality you can try things virtually before making any move.







Project Title: Mental Health and Personality Determination using Machine Learning

Project Guide: Mrs. Jisha Tinsu

Group Members: Jui Dileep Patil, Kimaya Atul Raut, Siddhi Santosh Wade

#### **Abstract:**

With the increasing popularity of social media, a slew of new ways for determining a user's mentality based on their social activities and language usage habits have arisen. In recent years, social networking sites such as Facebook, Twitter, and Instagram have become some of the most popular internet destinations. Different methodologies are required for different machine learning methods, data sources, and feature sets. The purpose of this project is to use Twitter, Facebook, and Instagram comments to identify a person's mental health and personality. To evaluate and compare several models for mental health and personality prediction, the predicted accuracy shows that the XGBoost classifier gives the best accuracy of 69 percent for personality prediction and predicts 16 distinct personality types across four axes, even when tested on the same dataset. Introversion (I) – Extroversion (E), Intuition (N) – Sensing (S), Thinking (T) – Feeling (F), Judging (J) – Perceiving (P), whereas Logistic Regression predicts mental health with the maximum accuracy of 87 percent.



"Success doesn't come to you, you've got to go to it.





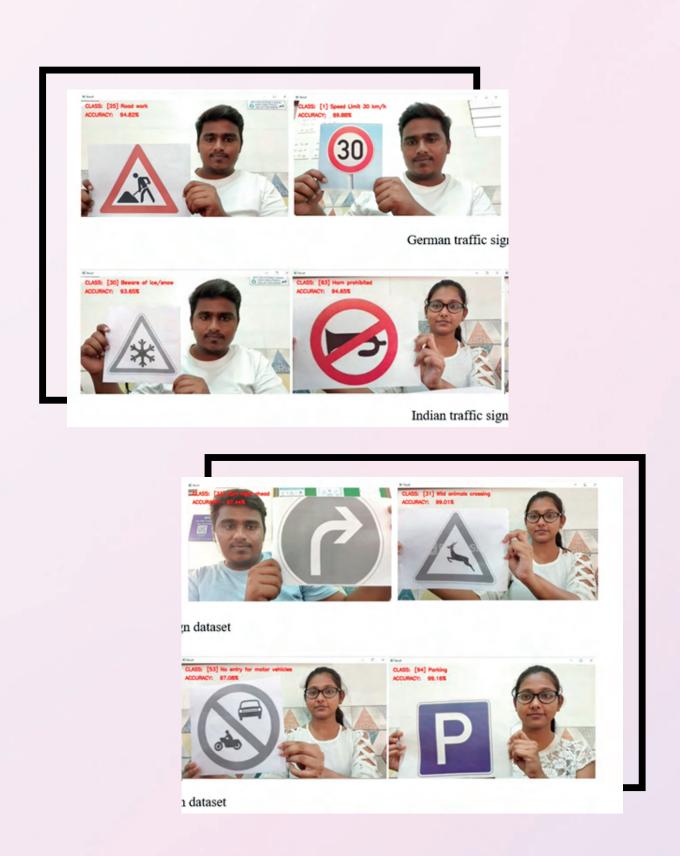
## Project Title: A Real-Time Traffic Sign Detection and Recognition System using Deep Learning

Project Guide: Mr. Vivian Lobo

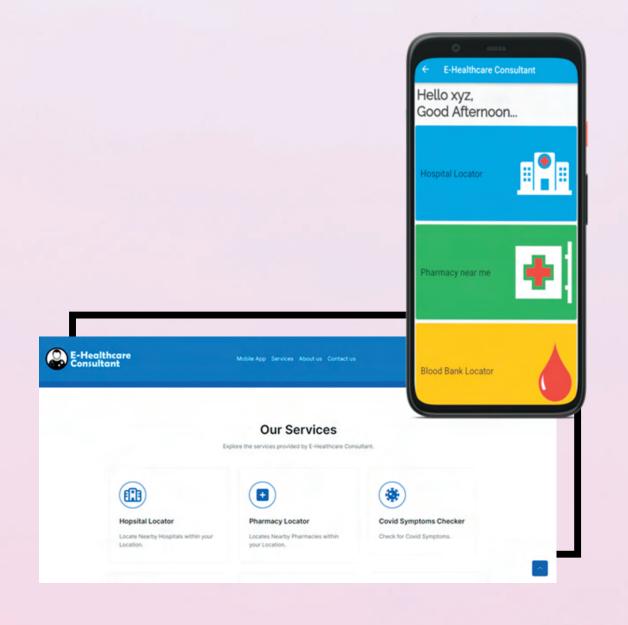
Group Members: Neel Bhatt, Pratiksha Laldas

#### **Abstract:**

We simplify almost everything in our lives today by automating tasks. When driving, we often miss signs on the side of a road because our attention is focused on the road. This is hazardous to us and to people around us. If a driver is alerted without having to shift his/her attention, then this problem can be avoided. Traffic sign detection and recognition (TSDR) plays a major role in this as it detects and recognizes traffic signs, thereby alerting a driver if any traffic signs are approaching. By doing so, besides the safety on road being ensured, the driver will feel more relaxed when navigating tricky or unfamiliar roads. Oftentimes, it is difficult to comprehend signs and other warnings. Using this approach, drivers will not have to struggle with translating signs. This study aims to propose a model for TSRD using deep learning wherein convolutional neural networks are used for recognizing traffic signs using a hybrid dataset that comprises a German traffic sign recognition benchmark dataset from Kaggle and a self-created Indian traffic sign dataset. In addition, the proposed model is trained on both datasets individually so that the output from the proposed model can be compared with the output of existing models. Experimental results revealed that the proposed model attained an accuracy of 95.45% for hybrid datasets and for the Indian dataset alone 91.08%, whereas for the German dataset alone, accuracy yielded was 99.85%.



## TOP FEEDROJECTS



## Project Title: E-Healthcare Consultant: Web and Mobile Applications using Machine Learning LISUCCESS BUSINESS

Project Guide: Mrs. Vidya Kawtikwar

Group Members: Swaraj Patil, Omkar Nikam, Aniket Raut, Suryakrishnan Nair

#### **Abstract:**

E-Healthcare is an online Web and Mobile Application where doctors, hospitals do the task of providing online information regarding diseases to the patients. In this app, doctors/hospitals upload diseases, symptoms/disease, pairs of symptoms, actual diagnosis with treatment and diet control. Treatment can be done by selecting symptoms or a pair of symptoms age wise. After payment is done, he/she gets a prescription along with the list of medical stores then by selecting appropriate nearby medical store Patients get home delivery of medicines. The users can also track their information regarding the medicines and problems faced by them. Also, it satisfies the services needed to the society. The service can be accessible on any Phone/Tablet by installing the app.

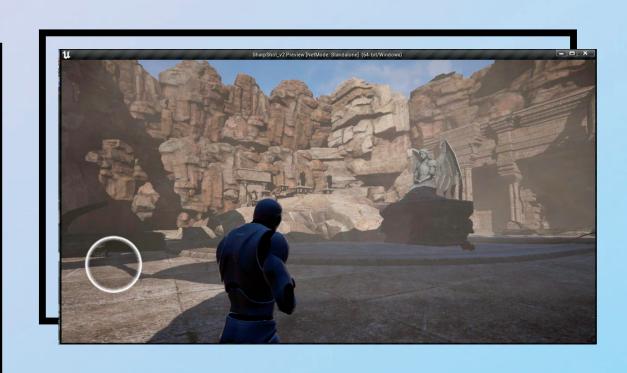
#### Project Title: SharpShot: Multiplayer game for Android using Unreal Engine

Project Guide: Ms. Priti Rumao

Group Members: Omkar Parekh, Siddhesh Kondaskar, Yashar Shaikh, Neha Shende

#### **Abstract:**

SharpShot will be a 3D MULTIPLAYER FPS game which will be designed exclusively for android devices, featuring competitive combat with a cyberpunk style environment. The outcome of this game will be determined by the player's own skill and strategy set, offering no 'PAY-TOWIN' format. The game will be freely available on android devices. Players will be provided with the option to choose from various classes like Attacker, Long range, Defense and medic (Classes name is subject to change in future). Each class will have unique weapon loadout and perks. Each character will have unique abilities which the player can use to change the course of the battle. The map of this will be featuring Japanese style cyberpunk environment with all assets and environmental particle having a neon tint, providing equal advantage for all character and futuristic styled character consisting of 6 different classes with each character having classes advantage along with each character having their own unique abilities ranging from grappling hook, to area restricted healing effect (mentioned abilities are just for understanding purpose). Each match will be of 5 rounds where the team with the highest winning score wins the game.











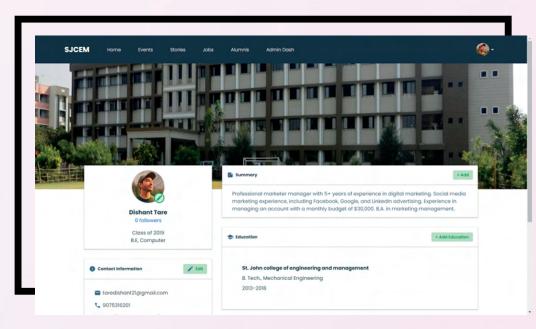
#### **Project Title: Alumni Portal for SJCEM**

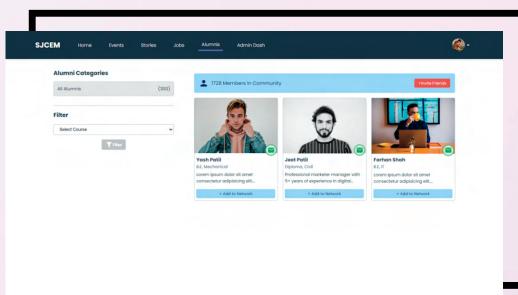
Project Guide: Mrs. Aditi Raut

Group Members: Jeet Patil, Dishant Tare, Abhinav Rawat, Yash Patil

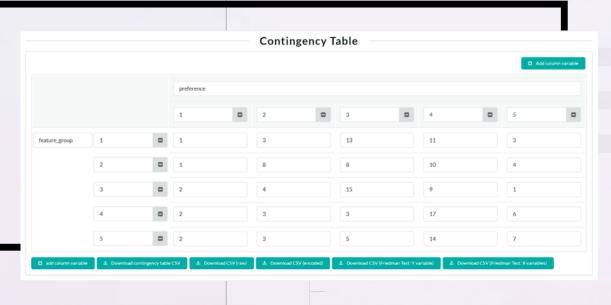
#### **Abstract:**

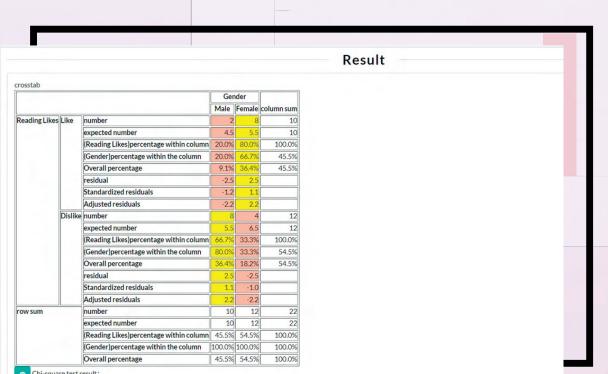
Current methods for keeping track of alumni and keeping up-to-date with their professional lives are inefficient and time-consuming as the maintainer has to update the alumni portfolio and also keep in touch with them manually. A web based Alumni Portal could solve this problem and also introduce several beneficial features. The portal can provide a central repository to store alumni data. Such a system will also help in student-alumni interactions which will allow the alumni to be actively involved in institutional activities and establish a vital long-term relationship, allowing the alumni to give back to their institution. Alumni can be allowed to create posts which contain job or internship opportunities or to just communicate with the students. The students will be able to communicate with the alumni via commenting on their posts. All verified users can know about alumni and their achievements via looking at their profiles. The alumni will be allowed to update their profiles, reducing the workload of system maintainers. The system can also have one or more administrators to ensure proper conduct on the platform, to verify alumni registrations, to manage all the users, to moderate the platform and perform other administrative tasks. The system can be designed to be low on resources and costs and have low maintenance needs.





## TOP S.E. PROJECTS





#### Project Title: Chi Square Test Calculator

Project Guide: Mrs. Rashmi Bhat

Group Members: Vivek Pandey, Chris D'souza, Parth Babre, Smith Pereira

#### **Abstract:**

Emotion is an instinctive or intuitive feeling which is distinguished from reasoning or knowledge, it is a strong feeling derived from one's circumstance or surroundings. The Chi-square statistic is a non-parametric (distribution free) tool designed to analyse group differences when the dependent variable is measured at a nominal level. Like all nonparametric statistics, the Chi-square is robust with respect to the distribution of the data. Specifically, it does not require equality of variances among the study groups or homoscedasticity in the data. It permits evaluation of both dichotomous independent variables, and of multiple group studies. Unlike many other non-parametric and some parametric statistics, the calculations needed to compute the Chi-square provide considerable information about how each of the groups performed in the study. This richness of detail allows the researcher to understand the results and thus to derive more detailed information from this statistic than from many others.



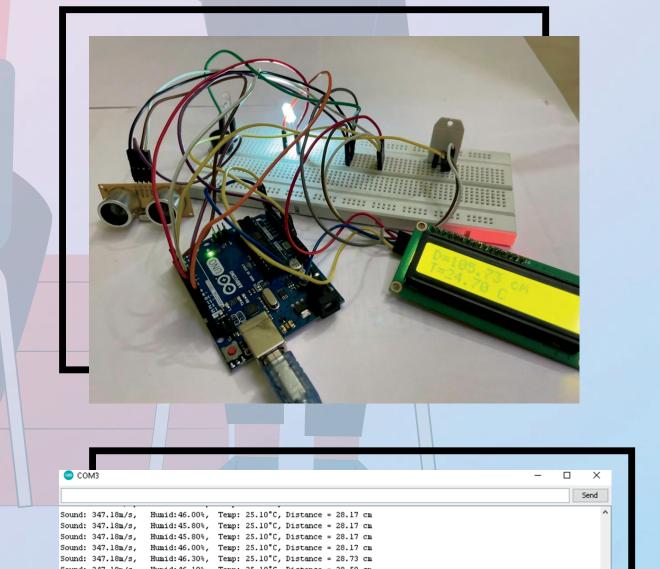
#### Project Title: Distance Measuring Device using Ultrasonic Sensor and Arduino

Project Guide: Mrs. Abira Banik

Group Members: Khumarya Yogesh Rana, Krish Pankaj Patel, Aayush Ninad Wade, Durgesh Tiwari

#### **Abstract:**

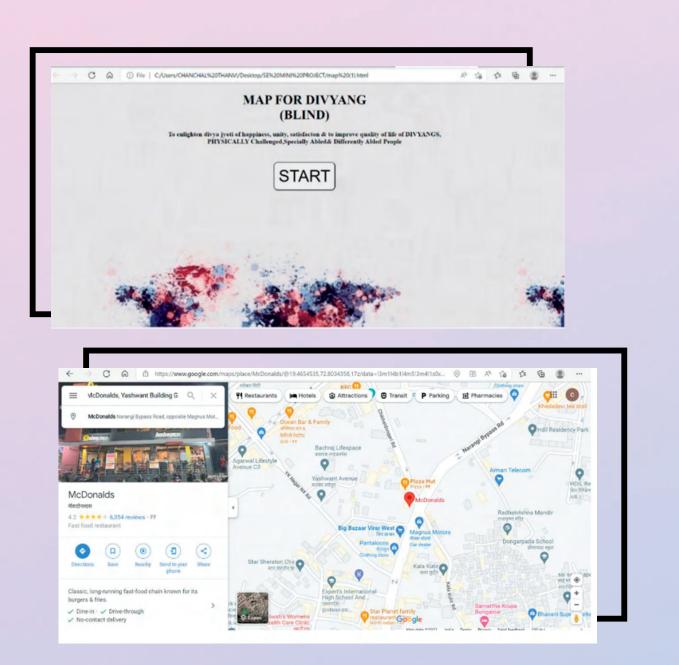
With the advent of technology in the 21st century, industries have expanded and improved, bringing advanced tools with higher precision and accuracy than traditional tools. The use of traditional tools is often associated with more injuries. A measuring tape isn't always precise, reliable, or accurate at measuring distance. Our study aims at creating a device for measuring distance accurately using an Ultrasonic sensor, Arduino, and LCD display. The ultrasonic sensor uses the reflection of sound in obtaining the time between the wave sent and the wave received. It usually sends a wave at the transmission terminal and receives the reflected waves. The time taken is used together with the normal speed of sound in air (340ms-1) to determine the distance between the sensor and the obstacle.



Humid: 45.90%, Temp: 25.10°C, Distance = 121.84 cm

Distance = Out of range Distance = Out of range





#### **Project Title: Map for Divyang**

Project Guide: Mr. Sunny Sall

Group Members: Chanchal Thanvi, Neha Naik, Ketki Modak, Purva Patil

#### **Abstract:**

People with disabilities face many barriers and obstacles in their daily lives, making it difficult to perform everyday tasks. The purpose of this work is to improve their living conditions by providing an app with accessibility information in an updated, reliable and friendly form.



Success is a ladder that cannot be climbed with your hands in your pocket.





## **PLACEMENTS**

Shreyash Singh TCS, Mumbai | 7.00 LPA

Diwakar Shah TCS, Mumbai | 7.00 LPA

Pranshu Singh TCS, Mumbai | 7.00 LPA

Aadil Dhanani TCS, Mumbai | 7.00 LPA

Chirag Sharma
SquareOps Technologies,Gurugram

Shubham Patil LTI, Mumbai | 6.5 LPA

Aditya Singh Deloitte, Mumbai | 6.00 LPA Himanshu Kushwaha Ugam solution, Thane | 5.00 LPA

Saujanya Shetty NTT DATA, Pune | 5.00 LPA Sohanlal Choudhary
Contentstack, Virar | 5.00 LPA

Rushikesh Shinde Vistaar, Mumbai | 4.00 LPA

Bhagyesh Shikarkhane Capgemini, Mumbai | 4.00 LPA

Vivek Hariya LTI, Mumbai | 4.00 LPA

Pratik Parab Vistaar, Santacruz | 4.00 LPA

Krutik Patel
Vistaar, Santacruz | 4.00 LPA

Purva Patil
In-Solutions, Goregaon | 3.80 LPA

SCAN IT!!!



"Doing the best at this moment puts you in the best place for the next moment."

## INTERNSHIPS



#### BE-B

#### Samiksha Raul

**Bhabha Atomic Research Center** 

Domain: Research Duration: 21 days

#### **BE-A**

#### Riddhi Patil

Infuzex Ventures
Domain: Testing

#### **BE-A**

#### Sony Kurian

Xovex It International Domain: Development Duration: 3 months

#### **BE-A**

#### Vishakha Prajapati

HEPTA Agency
Domain: Development
Duration: 3 months

#### SE-A

#### Yash Chaudhary

Vision IAS, S.B.F

Domain: Campus ambassador

Duration: 1 month

#### **BE-A**

#### Disha Tamore

**TATA STEEL** 

Domain: Data Analysis

Duration: 1 month

#### TE-B

#### Prachi Kulkarni

**StudioVity** 

Domain: Digital Marketing

Duration: 2 months

#### BE-A

#### Utkarsha Kasar

**TATA STEEL** 

Domain: Data Analysis

Duration: 1 month

#### TE-B

#### Prashant Shukla

**Retail investors** 

Domain: Full stack php developer Duration: 1 month and 18 days

#### **BE-B**

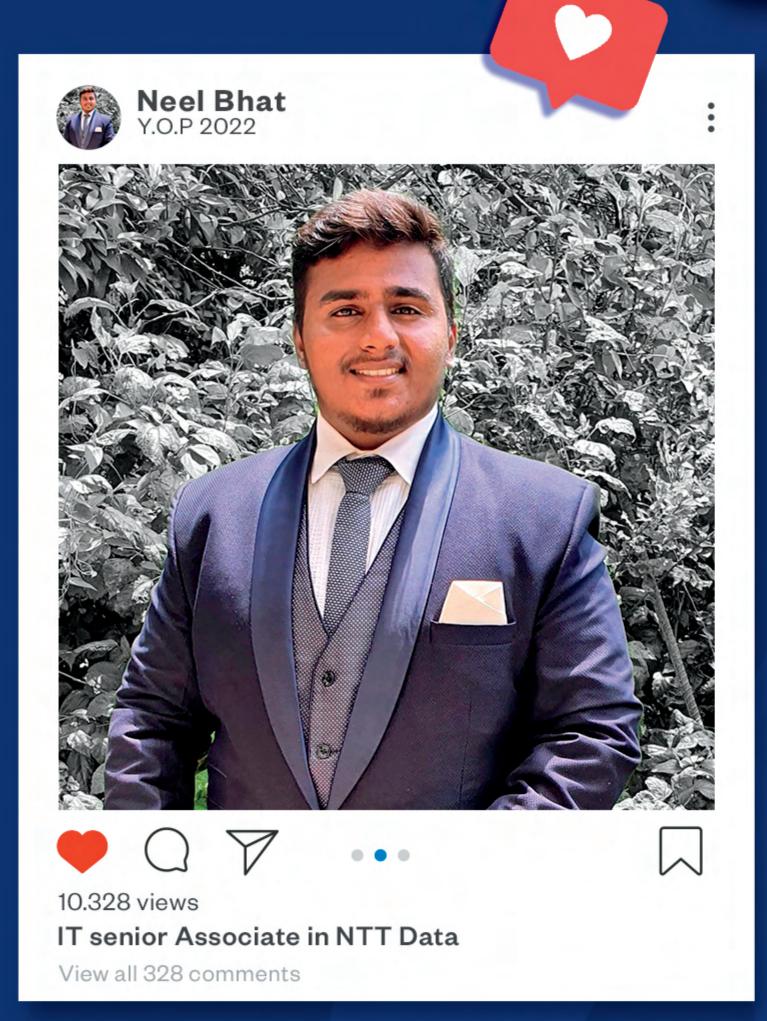
#### **Chirag Patil**

Let's grow more Domain: Web Development

**Duration: 1 month** 

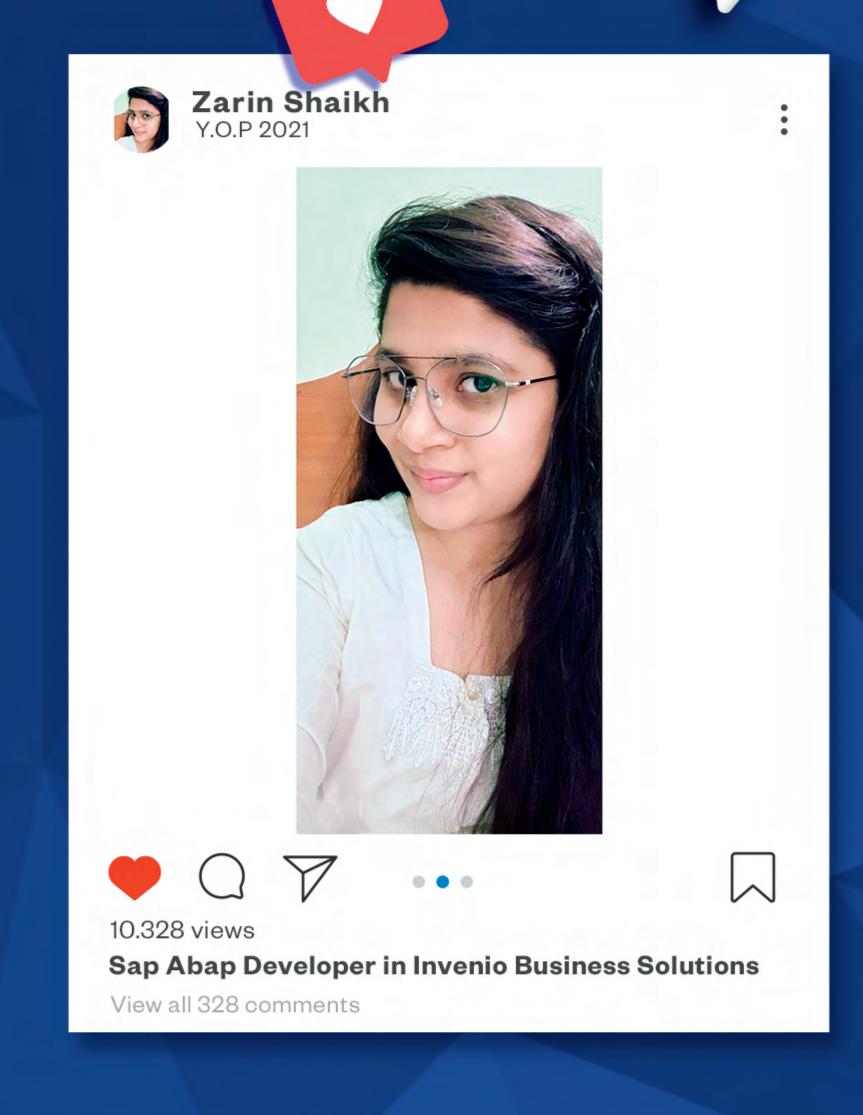
## 26

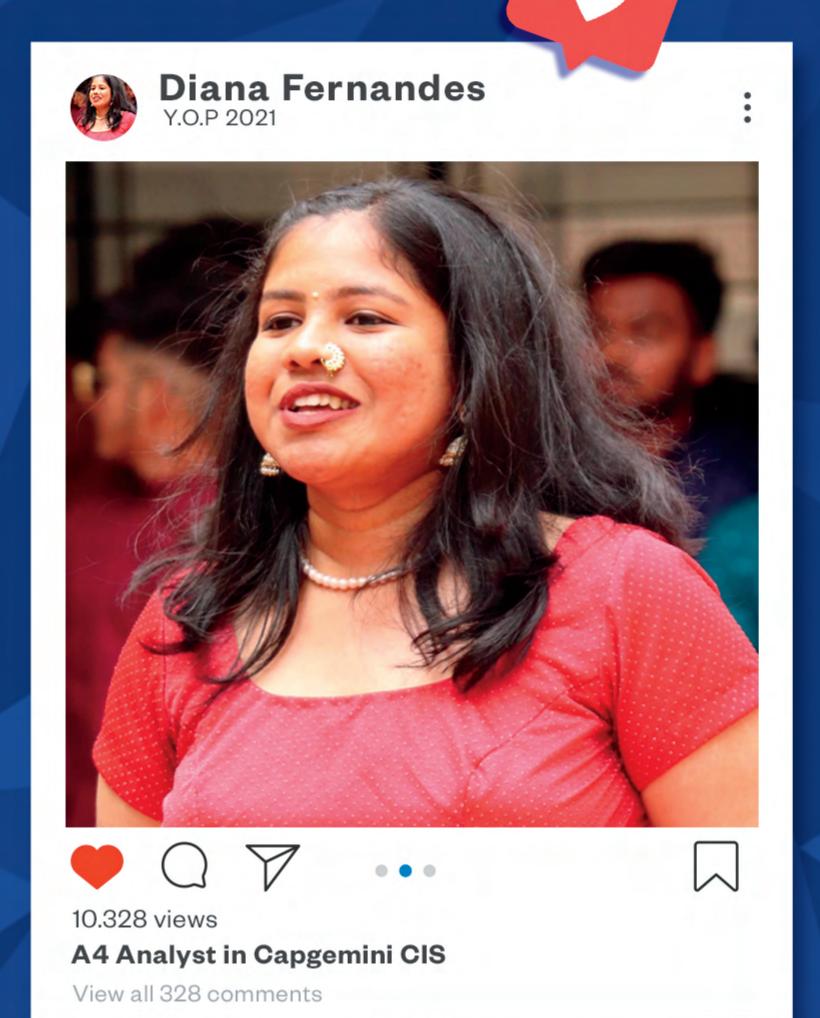
### ALUMNI SPEAKS



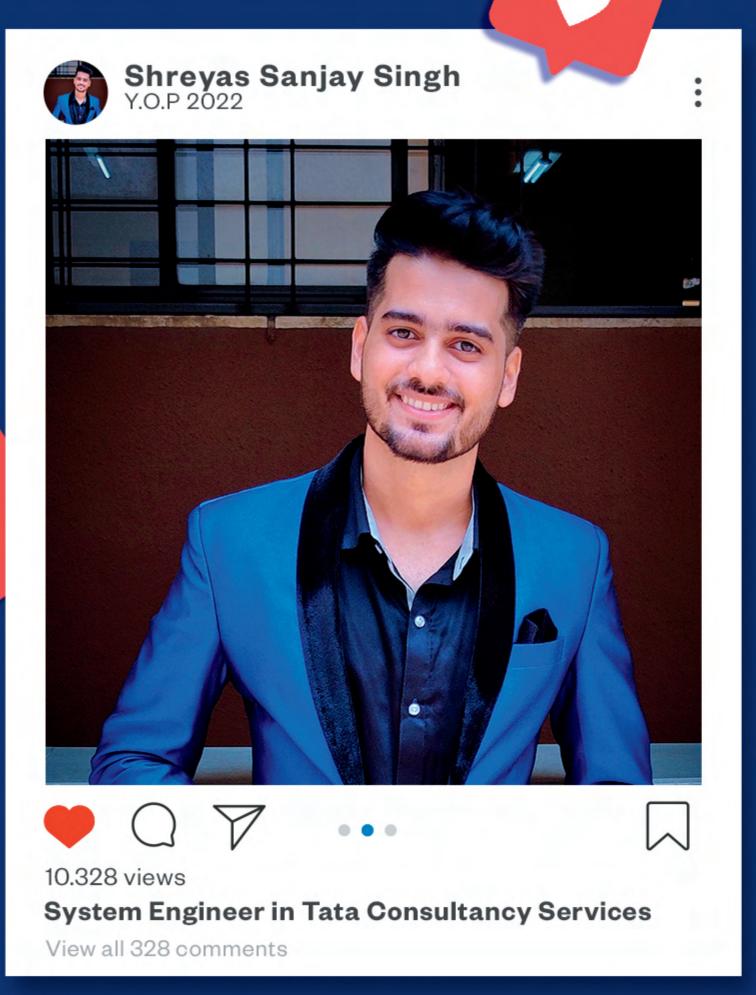
SJCEM, amidst excellent facilities and supportive, knowledgeable, and intellectual faculty, I witnessed our skills and competence rising to a zenith. In addition to preparing us for the academic curriculum, SJCEM's learner-centred environment encouraged us to broaden our knowledge by giving us practical group projects to work on each semester. Group projects were a fantastic opportunity to develop a closer bond with your classmates and make some lifelong friends. The organized cultural and athletic events are the best stress relievers and a wonderful opportunity for all the branches to come together and share amazing moments. I, personally, have made wonderful memories and great friends on the basketball court, and I'm always going to cherish the memories made on and off campus at my alma mater SJCEM.

College life was the best journey of my life. Whenever I remember my College days,I get tears in my eyes. These four years were like four days for me which completed very fast. But, during these days many memories have been created. The teachers were like a backbone for me, friends were the reason for my smile .Everyone recognized my talent with open arms always.I am very grateful to the Institute for providing guidelines and motivation to inspire me to achieve my goals.





As much as chaotic the journey of being an Engineering student was, I still and will always miss being a student at SJCEM. One might say that surviving an Engineering college is tough, but I found the right people for myself along with the happiness that cultural activities got me. Be it Megaleio, Traditional day, Prasang, Sports day, Annual day, Science fest or any other event, I made sure to make the most of it. This cumulative experience of organizing, managing and anchoring for events has built my confidence and I'll forever be grateful to SJCEM for those opportunities.



My college days are unforgettable, and in fact, those were the happiest and most fruitful days of my life. I feel really blessed to have had great teachers and mentors who guided and supported me throughout engineering, both academic and in person. I have seen the college from offline to online and then back again to offline with the same zeal. I feel these 4 years are the best time to try out new things, explore opportunities, and develop new skill sets. Try to take part in all events and activities happening at the college. Always remember one thing, "These four years will be the best years of your life, so Explore, Enjoy, and achieve Excellence."

An institution of higher Education is a partnership of among students and Alumni, faculty and administrators, donors and trustees, neighbourhoods and more, to build a community and a culture. Nobody cares about an institution more than its alumni. I cherish the memories, the favourite past times I had in my college life! I look forward to keep in touch always while I am away. SJCEM has provided me a wonderful environment and opportunity to learn and grow myself academically as well as to secure a place in the corporate with its best placement sevices.





SJCEM to me is a place where I have grown so much. Not only evolved my technical skills but also as a person. My advice to you guys would be to definitely focusing on research and publishing at least one research paper in good journal. Apart from academics get an internships as it will help you gain practical knowledge. Get involved in organising events, it'll help you boost confidence. If you do not understand anything, ask the faculty they are always willing to help you out to the best of their ability. Do not fear anything. If you get KT, clear it out and move on. Help your friends and grow together. I feel very blessed to have such supportive teachers and an amazing journey. Enjoy the journey. All the Best!



### TECHNICAL ARTICLES



Ms. Deepika Nadar,
Assistant Professor,
Comps Dept.

## **Quantum Computing**

Classical Computers are built up of processors, Integrated circuits and transistors. Data in classical computers are processed in bit's i.e, either 0 or 1 (any one at a time). To hold the charge for binary value 0 or 1 at a particular point of time, transistors are used. So, millions of transistors are used to process data. In order to increase speed & amp; reduce the size of classical computers. The number of transistors were increased and the size of the transistor was reduced. Moore law -According to Gordon Moore, Co-Founder, Intel - says that the number of transistors on microchip doubles every two years. But in 2013, due to reduction of transistors size it exceeded the physical limits and was not able to hold charge below the 5nanometersize of the processor. Quantum computers were evolved in the 1980's, it works with quantum theory. It uses quantum particles (electrons or photons). Each particle is called quantum bits or qubits. Quantum bits allow these particles to exist in more than one state i.e, 0 and 1 at the same time. This is known as quantum superposition. This lets quantum computers handle more complex problems. Quantum Entanglement allows qubits to connect with each other that are located far away that is why it can compute & camp; process the data located far away from each other. Quantum programming - QCL is the first implemented quantum programming language. A Quantum computer takes all superposition input, processes it & amp; gives all superposition output. After that a Grover operator/Algorithm is applied to get the Required output. Example -We have a computer having a password 0011 i.e, 4 bit and we want to log into a computer. In classical computers, 16 binary combinations of password will be used one by one as input to match the password of computers but, in quantum computers, all 16 combinations of password will be inputed at the same time, it processes the input very quickly and generates output which will have all possible results. To extract a required result, Grover's algorithm is used to eliminate unmatched passwords and we get matching passwords i.e, is 0011 as output. There are many companies that use quantum computing. In 2016 IBM offered cloud-based Quantum computing. In 2021 QCI offered a SAAS - quantum computing platform called Qatalyst to let companies access quantum resources on Classical computers. Companies like xanadu, Microsoft, D-wave system offer quantum computing platform and its resources. In 2019, Google announced they have achieved quantum Supremacy i.e, Google's 54-Qubit Sycamore processor was able to perform calculations in 200 sec that would have taken 10,000 years by a supercomputer. Application -Quantum Simulation helps to understand diseases like Alzheimer's, Parkinson's and Huntington's disease. Structured light microscopes can detect macular degeneration in a much earlier stage and can save a Person from blindness. Quantum radar has the ability to detect stealth aircraft which will be useful for the defence department. Quantum computing can be used in AI / ML for processing multi-dimensional data efficiently & amp; accurately. Other uses are Big Data Search, weather forecasting, strong Encryption for Security while sharing information, etc.

# Mr.Himanshu Chavan, B.E comps



## Big Data and its Emerging Technologies

Data and Big Data

Data is an important part of our daily lives. Data is just not limited to business requirements but also our personal life. Every day we use social media platforms and different applications. What's the main thing it is dependent on? Right, Data.

Data is stored using databases and processed by its specific query language one of the popular languages is SQL (Structured Query Language). However, there has been continuous growth in the organization's information and data so these traditional methods were not very efficient. To handle such a large amount of data, the concept of big data was introduced. The term big data is used to describe a massive amount of data that increases with time.

Big Data is of two types:- 1) Operational 2) Analytical

- 1. Operational data works on a huge amount of data produced on a regular basis. This may include social media which produces huge amounts of daily data such as posts, stories, new accounts, etc.
- 2. Analytical data is more inclined towards the processing of real-time data which is crucial in business decisions. Stock markets are a great example of data that needs to be visualised, improving algorithmic understanding results in more precise predictions.

  Emerging Technologies in Big Data
- 1. TensorFlow: It has multiple libraries, a flexible ecosystem, and a great community of resources that helps in building scalable machine learning applications. It also offers the right tools to deploy machine learning applications. It provides specific use cases such as Image processing and video detection, Time series algorithms, text detection, etc.

It was introduced in 2019 by the Google Brain team. It is based on C++, CUDA, and Python.

2. Docker: It is a tool specifically created for creating and deploying isolated environments for running applications with their dependencies. To explain in simple terms every PC has different specifications and versions. An application is perfectly running on one computer but can have issues while running on different computers such as specifications not being met, and version issues. Docker solves these problems by creating a common environment so no matter what computer you are using it will just work fine.

It was first introduced in March 2003 by Docker Inc. It is one of the biggest tools for big data which makes continuous deployment and development of a container swift.

3. Kubernetes: It is an open-source container orchestrator and a platform for developing cloud-native applications. It is used to automatically deploy, scale and manage containerized applications. Kubernetes allows sharing of resources to make processes more efficient. It provides a singular platform for automation, deployment, escalation, and application container operation in host clusters.

It is an open-source platform that was made available by Google in 2014. It was introduced in 2015 by Cloud Native Computing Foundation.

FOR MORE SCAN >>



## TECHNICAL ARTICLES



Mr. Vivian Lobo,
Assistant Professor,
Comps Dept.

### Decentralized Finance (DeFi)

Decentralized finance, also known as DeFi, refers to the transition away from traditional, centralized financial systems and toward peer-to-peer finance enabled by decentralized technologies built on the Ethereum blockchain. The DeFi ecosystem has launched a vast network of integrated protocols and financial instruments, ranging from lending and borrowing platforms to stablecoins and tokenized BTC.DeFi has emerged as the most active sector in the blockchain space with over \$13 billion in value locked in Ethereum smart contracts and a wide range of use cases for individuals, developers, and institutions. Whereas our traditional financial system is based on centralized infrastructure that is managed by central authorities, institutions, and intermediaries, decentralized finance is powered by code that runs on the Ethereum blockchain's decentralized infrastructure. DeFi developers can launch financial protocols and platforms that run exactly as programmed and are accessible to anyone with an Internet connection by deploying immutable smart contracts on Ethereum.DeFi's breakthrough is that crypto assets can now be used in ways that fiat or "real world" assets cannot. Decentralized exchanges, synthetic assets, and flash loans are entirely new applications that can exist only on blockchains. This paradigm shift in financial infrastructure offers several advantages in terms of risk, trust, and opportunity.

#### How is DeFi better than centralized Finance?

- →Open-source system; built on top of permissionless blockchains.
- →Anyone can use/ interoperate or build on top without third-party approval & agreement.
- → Assets are not custodied by a single third-party.
- →No single entity responsible for upgrade decisions & admin privileges.

#### Features of DeFi

- → Eliminate third parties
- →Smart contract
- $\rightarrow$  Automation
- →Cost savings
- → AutonomyAdvantages of Defi
- → Efficiency Removing rent-seeking intermediaries
- →Open finance and universal accessibility.
- →Anyone can inspect the smart contract code and verify the execution and state of the system
- → Automation & programmability.
- → Self-custody and censorship resistant.
- → DeFi applications often are much simpler and faster to develop than CeFi counterparts.

#### Use cases for DeFi

- → Asset management
- →Compliance and Know-Your-Transaction (KYT)
- → Data and analytics
- → Gaming
- → Insurance
- → Lending and Borrowing
- → Margin Trading

## Ms.Sanjivanee Kumbhar, T.E Comps



## Ethical Hacking

Ethical hacking is a booming career. To take up Ethical hacking as a corporate career or to become an I.T security professional is a great prospect. Thus the ethical hacking stream is a good opportunity for students aspiring to become network and web security professionals and reduce cyber crime in the country.

Ethical Hacking is done by computer experts who use their programming capabilities to understand the system vulnerabilities and hack them. Ethical Hacking is performed by an individual who is termed as White hat or skilled expert with computers, who is authorised to attempt to gain unauthorised access to a computer system. Hacking may be defined as an illegal act of breaking a system by legal privilege. Hacking has many types such as html hacking, web server hacking, password hacking. The computer security community is strongly self-policing, given the importance of its work there are no rules for hacking but it must be done legally. Hacking tools like Ettercap helps the ethical hacker in

Mr. Ishan Lokhande, B.E comps



### Swift- The proprietary language for iOS

Just like Java, Kotlin and flutter have been used in android programming the iOS playground has a sole contender known as Swift. The reason it was able to maintain its lead and exclusivity over other languages in the iOS ecosystem was the locked environment provided by Apple Inc.

It was developed by Apple in 2010 and was heavily inspired by Objective-C, Ruby, Rust, Python, C#, and Haskell. In the year 2016 it was finally opened for Linux and in 2020 for windows and was allowed for partial development. But since the final deployment required Apple iOS-based OS the use of swift was not encouraged outside the apple ecosystem.

Apple intended Swift to support many core concepts associated with Objective-C, such as dynamic dispatch, widespread late binding, extensible programming, and similar features, but in a "safer" manner, making it easier to catch software bugs; Swift has features addressing some common programming errors, such as null pointer dereferencing, and provides syntactic sugar to help avoid the pyramid of doom. Swift supports the idea of protocol extensibility, a system of extension that can be applied to types, structs, and classes, which Apple advertises as a true revolution in programming paradigms they call "protocol-oriented programming."

"Technology like art is a soaring exercise of the human imagination."

investigations.

Life in mumbai is never at ease
There are up's and down's
Changes and fights
Startup's and backup's
One has a destiny for life
Every route has a adventure
Every hobby has a room
And as the journey begin's everyone is lost
In city of dreams .....
Yes! I am describing just one factor of mumbai,
Railway's - The Life line of mumbai!



हातावर रंगलेल्या मेहंदी मध्ये जणू, इंद्रधनुष्याचे रंग सापडतात. तुझ्या या प्रेमात मला माझ्या आयुष्याचे स्वर सापडतात. काळ्या आभाळात भिडलेल्या चंद्राची चांदणी जशी, तुझ्यासोबत असल्याने मला अंधारात ही मार्ग सापडतात.

Mr. Ishan Lokhande, B.E

## நினைவுகள்

Mr. Jayesh Dhuri, B.E

சில நினைவுகள் அழுகையை வரவேற்கும்! சில நினைவுகள் அகமகிழ செய்யும்! சிந்தையின் சிதறுகளாய்! ஆழ்மனதின் ஆணிவேராய்! அவ்வப்போது அவதரிக்கும் கனவுகளில்! Mrs. Angelin Florence A, Asst. Prof.



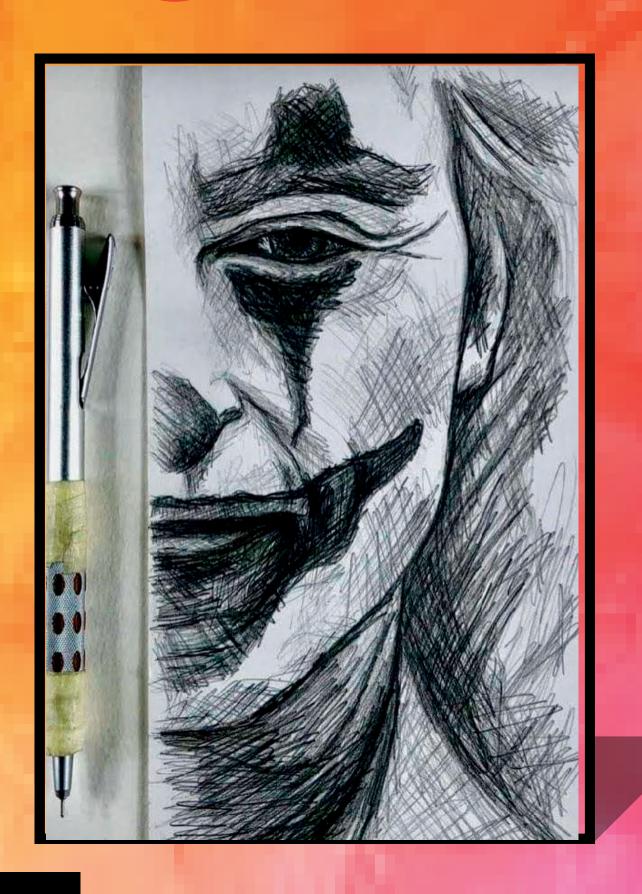
Poetry is reflection of feeling that you can't express

## ART WORKS

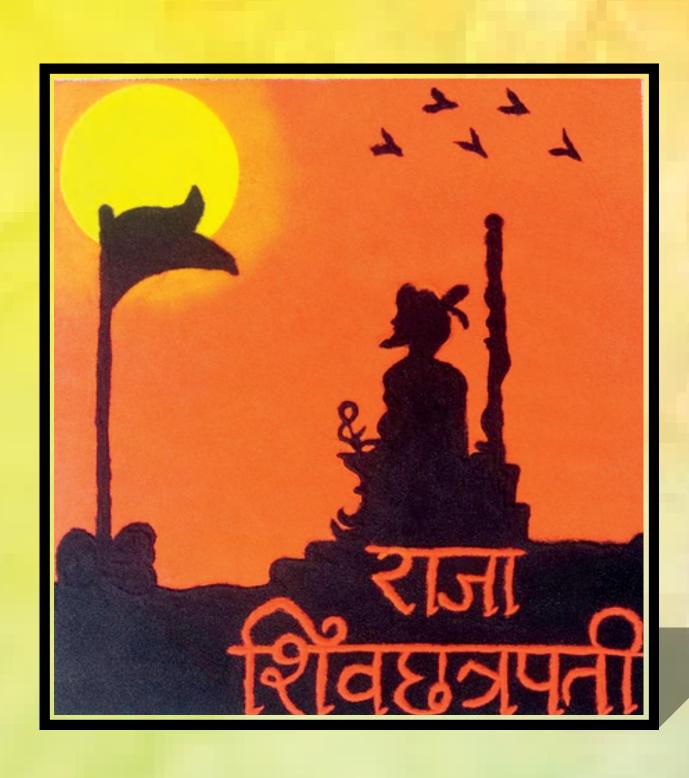


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Prof.

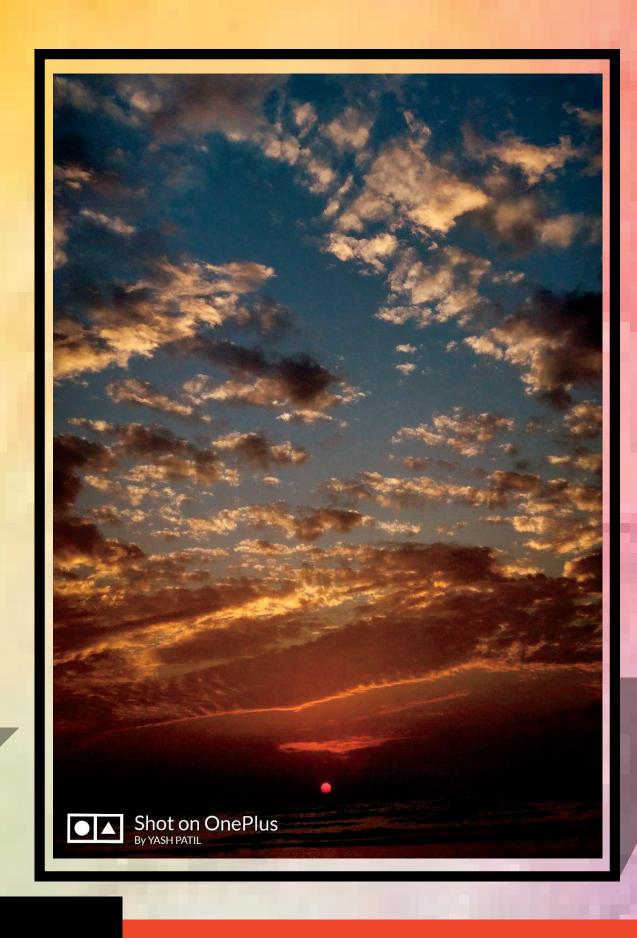
Mrs. Pooja Patil



T.E Mr. Jugal Prajapati



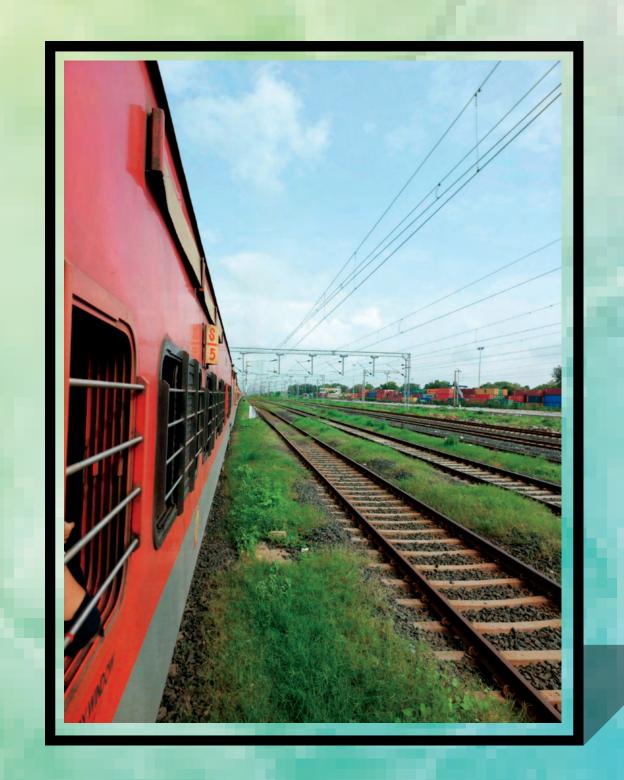
B.E Ms. Juilee Kini



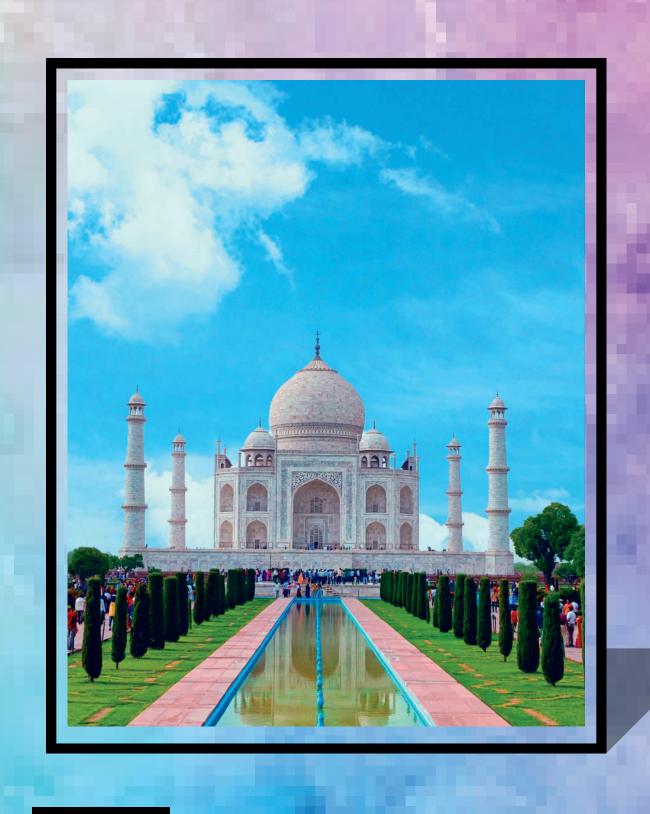
B.E Mr. Yash Patil



T.E Ms. Poorva Talekar



B.E Mr. Swaraj Patil



B.E Mr.Yash Sankhe



## ART WORKS

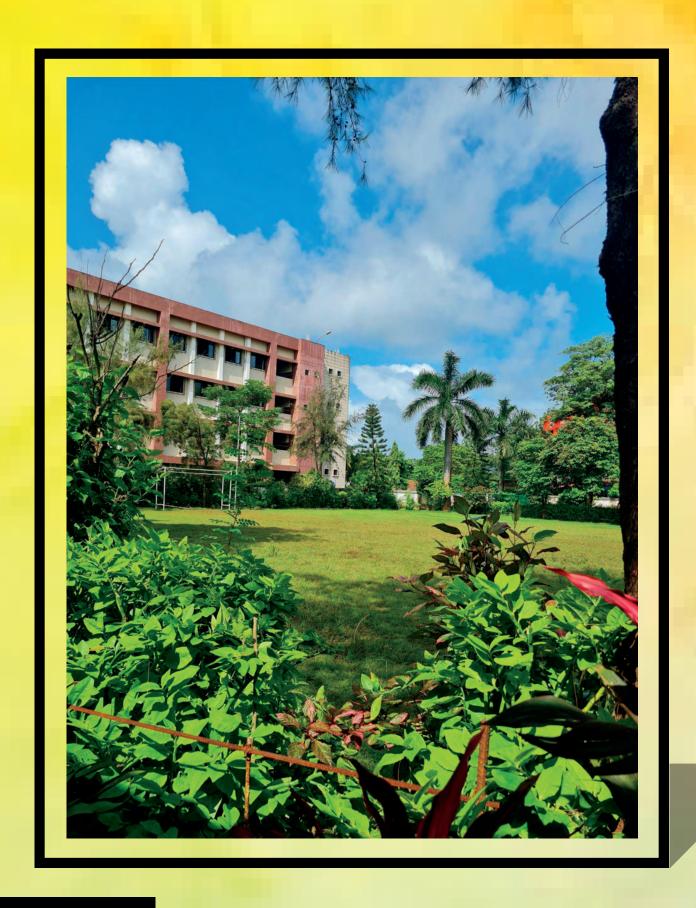




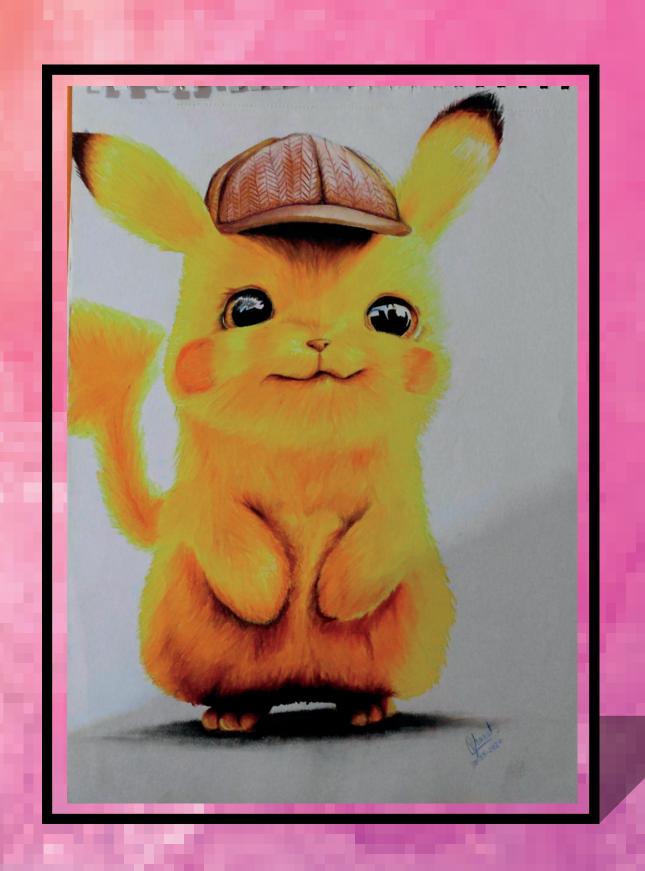
Ms. Rutuja Abhang



Mr. Ninad Rane







Asst.

Prof. Mrs. Angelin Florence A

T.E Mr. Vikrant Gharat



B.E Mr. Omkar Nikam



B.E Ms. Anushka Wagh

Art and love are the same thing: It's the process of seeing yourself in things that are not you.

## EXCLUSIVE

COVERAGE



Mr. Sunny Sall



- 1) How long have you been working at the SJCEM?
- 3 years.
- 2) What gives you the motivation to wake up each day and come to college?
- A sense of responsibility gives me motivation for it.
- 3) What's the weirdest/funniest rumour that students spread about
- That I am strict.
- 4) What's the funniest nickname that students have ever given to you?
- Daya, from CID.
- 5) What is your proudest moment so far?
- Each student that passes and gets placed is the proudest moment for me and their parents.



Mrs. Rashmi Bhat

66

- 1)How long have you been working at the SJCEM?
- 3 years
- 2)Have you ever sent someone out of your class? why?
- Yes, because students were disturbing the discipline of the class.
- 3)What is the best gesture a student has ever done to you?
- Even after 3 years of passing out, one of my student is in touch with me and taking guidance for his career.
- 4)Do you share your lunch box with your best friends?
- Yes, daily.
- 5)What gives you the motivation to wake up each day and come to college?
- Enthusiasm to share knowledge with students.



Mr. Ajay Sirsat



- 1)How long have you been working at the SJCEM?
- years.
- 2)Who is your best friend on campus?
- All are my good friends.
- 3)Do you share your lunch box with your best friends?
- Yes, always.
- 4)What gives you the motivation to wake up each day and come to college?
- Responsibility, Placement drives, and lectures.
- 5)What will be your proudest moment?

All students get at least one offer letter.

99



Mrs. Manali Patekar

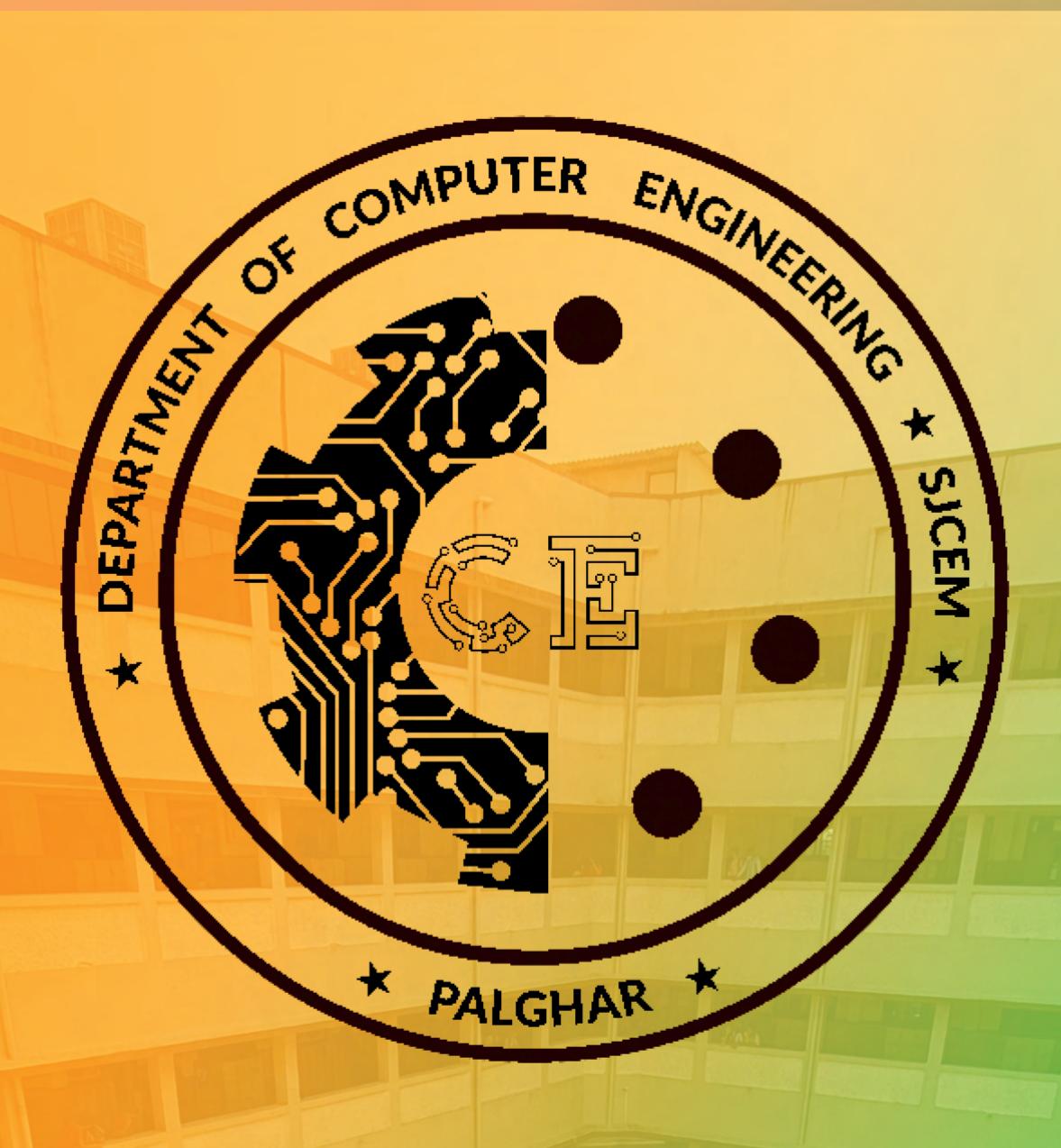
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- 1)How long have you been working at the SJCEM?
- 9 years.
- 2)Have you ever sent someone out of your class? why?
- No, I personally don't like to send students out. If they are disturbing I warn them and even if they aren't listening then I give them punishments in the form of writing assignments or solving examples.

  3) What is the best gesture a student has ever done to you?
- Even after getting passout, students stay in touch and show their willingness to meet.
- 4)Do you share your lunch box with your best friends?
- Yes, I love to share my lunch box with my friends.
- 5)What gives you the motivation to wake up each day and come to college?
- The love and affection towards students and sharing knowledge with them.

It is better in prayer to have a heart without words than words without heart.





## UNIVERSAL PRAYER OF PEACE

Lord, Make me an instrument of your peace
Where there is hatred, Let me bring love
Where there is injury, Your pardon lord
And where there is doubt, True faith in you
Make me an instrument of your peace
Where there is discouragement, Let me bring hope
Where there is darkness, Let me bring light
And where there is sadness, Let me bring joy
Make me an instrument of your peace
It is in pardoning that we are pardoned
It is in giving that we do receive, And it's in dying we're born to life.