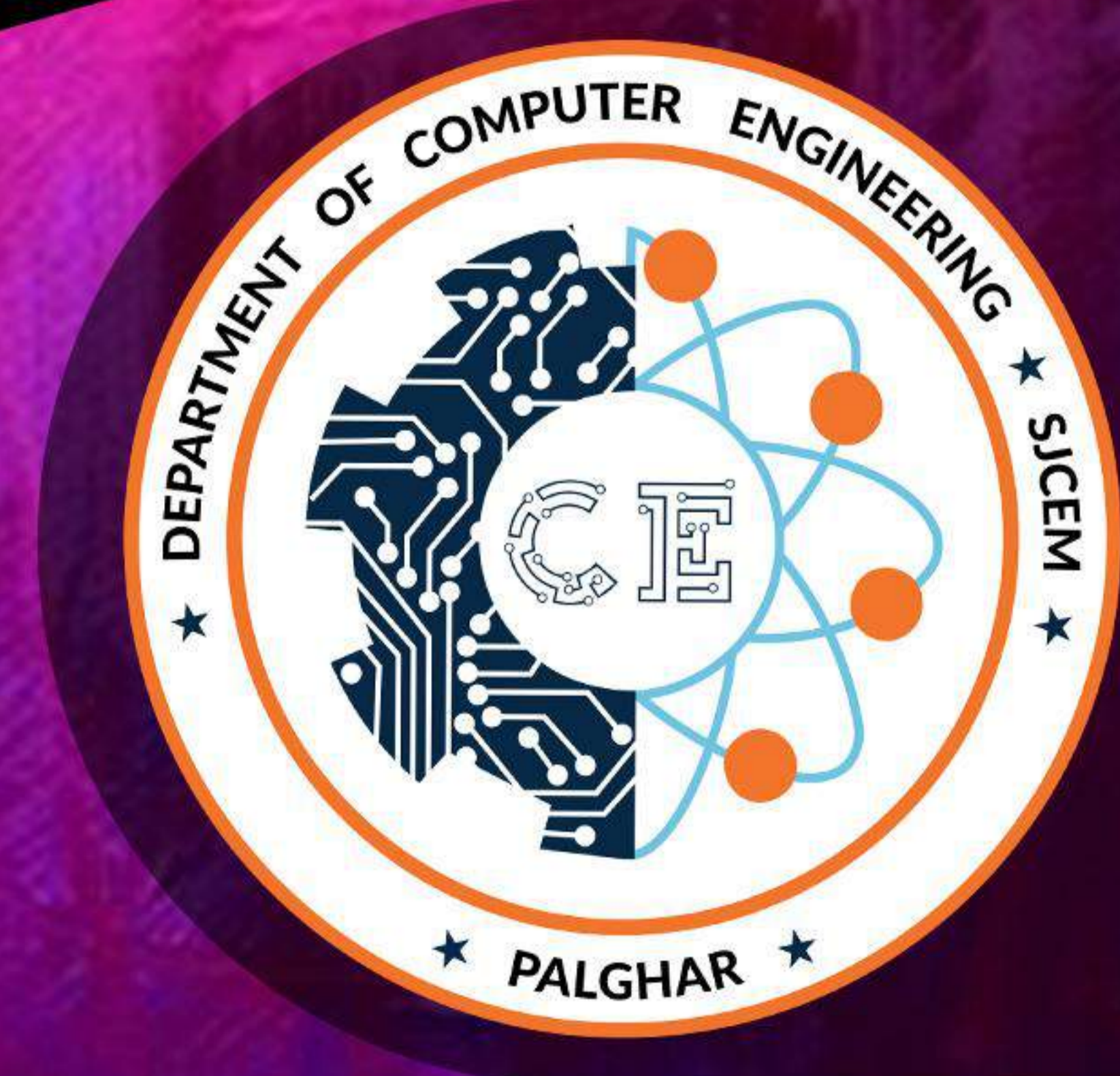# Chronicles of Techies

A.Y. 2020-21
Vol. 03 | Issue no. 01
September 2021

DEPARTMENT OF
COMPUTER ENGINEERING

ST. JOHN TECHNICAL AND
EDUCATIONAL COMPLEX, VILLAGE VEVOOR, MANOR ROAD,
PALGHAR (EAST) - 401404

TABLE OF CONTENTS

INSTITUTE VISION

- 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 provide conducive environment for joyful learning, innovation and research.
- To promote innovative technology enabled teaching and learning process.
- To nurture socially responsible engineers, entrepreneurs and leaders.
- To enhance employability skills to meet changing industrial trends.

DEPARTMENT VISION

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

DEPARTMENT MISSION

- 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 (PSOs)

- 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 (PEOs)

- 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.

"Gratitude makes sense of our past, brings peace for today, and creates a vision for tomorrow."
- Melody Beattie

Department of Computer Engineering

From left to right -
Mr. Sunny Sall
Dr. Rahul Khokale
Dr. G. Murugan
Mrs. Rashmi Bhat
Mrs. Jisha Tinsu
Mrs. Vidya Kawtikwar
Mrs. Sana Ansari
Ms. Shraddha Dabhade
Ms. Snehal Dmello
Mr. Vikas More
Mr. Ajay Sirsat
Mr. Vivian Lobo
Mrs. Aditi Raut
Mrs. Angelin Florence A
Ms. Nancy Nadar
Ms. Tina D'abreo
Mr. Anas Dange

The department was established in 2008 with an intake of 60, and subsequently, it was increased to 120 in 2010. It is one of the leading departments on campus. 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, the 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 efficaciously. Till date, the departmental library has a total of 119 books comprising disciplines like data structures and algorithms, object-oriented programming, discrete structures and graph theory, computer graphics, operating system, electronic devices and circuits, microprocessors and microcontrollers, computer networks, software engineering, project management, artificial intelligence, machine learning, virtual reality, cloud computing, cyber security, data mining, image processing, etc., which acts as a source of true knowledge/ reference/guide to faculty members and students. E-books of the above-mentioned disciplines are also available in the departmental library. The department has active institute-level student chapters, i.e., Computer Society of India (CSI) and Indian Society for Technical Education (ISTE) 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 and brings a holistic growth for students.

"Leadership and learning are indispensable to each other."
– John F. Kennedy

Chairman's Message

I am happy to see the third edition of the newsletter (i.e., Chronicles of Techies) of Department of Computer Engineering under the 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 the department level. I congratulate the HOD, staff, students, and editorial team for coming up with the new issue of the newsletter. 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, and stakeholders who have put their trust in us and been a part of this wonderful journey of St. John Technical and Educational Campus. Let's come together to work with the vision of trust "Excellence in Serving to Educate and Educating to Serve".

Mr. Albert W. D'Souza
Chairman
Aldel Education Trust

AET's Member Message

Just like 2020, 2021 is turning out to be an astonishing year, it feels like this year too will be 730 days long. The whole world has turned on its head because one man decided to have some bat soup. Who said that one man couldn't change the world?

The entire world is healing and slowly and steadily we are coming back on track. Thanks to the invention of vaccines that are made available to people of all age groups. Half of the country's population has been fully vaccinated, which includes our staff too.

Out of this crisis though, so many opportunities have arisen and flourished too. Everybody has migrated all together online—E-commerce portals are enjoying their best results, small businesses have all created websites to offer their products and services, schools and colleges have all moved to online teaching methods, and now, blended learning has also been encouraged. And this seems to be the new "Normal". The convenience of work from home (WFH) has been highly appreciated by most people.

Companies that invested crores in office space are finding it cheaper to give their employees a laptop and ask them to work remotely. Clients are questioning the need of some of their projects altogether. The might of remote operations is clearly showing and is here to stay.

Heartiest congratulations to all the B.E. students of A.Y. 2020-2021 for getting placed in reputed MNCs with best packages. Many of our B.E. students already have job offers in their hands, but the one who haven't, here's a golden opportunity. Suddenly, everyone needs system analysts to make sure their IT services are configured correctly and working 24/7. Many companies operating in analogue mode have felt the need to go digital immediately. Teaching–Learning has also begun online for students of S.E., T.E., and B.E through the implementation of G-suite.

Mr. Aldridge D'Souza
Member
Aldel Education Trust
(AET)

Principal's Message

Dear students, parents, and faculty members,

The year began on a note of hope and fulfilment that things shall fall back in place after the occurrence of the 1st wave of COVID-19, but the situation wasn't that pleasant though wherein the 2nd wave struck. Despite this hurdle, we, at SJCEM, virtually organized MegaHack2.0—a 24-hour national-level hackathon—with a grand success. प्रस्तुत | Igniting young Minds…—a technical paper cum poster competition was organized by the institute virtually under ISTE student chapter. Furthermore, in academics and research, various departments organized expert lectures, STTPs, 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 and other technical as well non-technical events organised at various places. Faculty members as well as students faced academic challenges, and with the need and novel thoughts and perspective, faculty members conducted online classes and ensured no academic loss of students with limited resources from their home. I thank all faculty members, students, and parents for co-operating with the institute. The uncertainty continued and the department took the initiative of organizing one-week ISTE approved online STTP on "Deep Learning for Computer Vision" proving that we can encounter challenges with everyone's cooperation.

I am sure that we all will come through this together with a lot of new lessons learnt. I hope we work with more energy and channelize efforts during this time and round the year to create a better year for us as well as for students.

Kudos and Congratulations to everyone who have worked tirelessly in bringing the best version of Chronicles of Techies, vol. 03, no, 01 of A.Y. 2020-2021.

Dr. G. V. Mulgund
Principal

"A good objective of leadership is to help those who are doing poorly to do well and to help those who are doing well to do even better."
- Jim Rohn

HOD's message

We live in a technological age, and technology is at the heart of what we do in Department of Computer Engineering – we design, develop, and explore modern technologies in order to expand our world and quality of life.

I extend my warmest welcome to you in Computer Engineering at St. John College of Engineering and Management, Palghar. Computing has modernized our world as we know it in the past two decades and will continue to serve as the core of all technologies in the 21st century.

To stand out from the crowd, the Department is always enhancing and enriching in the varied field by taking active participation to meet the current demand. Therefore, to polish the existing technical skills on regular intervals and to maintain pace and accord in newfangled technology as per international standards, we always believe in learning, imbibing, honing the required skills.

We believe in goal settings, targeting, achieving, and meeting the desires of the aspirants. We follow this modus operandi throughout in teaching-learning process ranging from academics to co-curricular and extracurricular activities to ensure the holistic development of our students. We also open wide-ranging vistas for our students by organizing national and international seminars, conferences, technical festivals, technical quizzes, excursion tours to industry for technical know-how, refers students for internships in the industry, and companies of rank for hands-on training experience, tie-ups with fecund companies for placing the aspirants.

Come and explore with us the 21st-century world of technology and innovation. I hereby wish all the aspirants a wonderful, fruitful and heartening journey at St. John College of Engineering and Management.

Dr. Nilesh T. Deotale
Head of Computer Department

Editor-in-chief message

Dear Readers,

Hope you all are doing well and taking good care of yourselves & are vaccinated…

I, Mr. Vivian Lobo, feel privileged to present before you SJCEM's Department of Computer Engineering's Newsletter, i.e., Chronicles of Techies (COT) (vol. 03 | no. 01) for A.Y. 2020–2021. "Chronicle" means a truthful written account of important or bygone events in the order of their occurrence and a "techie" means a person who is an expert in or enthusiastic about technology, especially computers and programming. Ours is the department filled with a plethora of splendid events that have taken place, and as the department name suggests (i.e., computer), we have a bunch of technology enthusiasts (i.e., our own students) or we can simply say that we have technology geeks in the department who are always keen to learn new skills and keep themselves updated with latest technologies.

COT comprises several interesting reads and happy and proud moments, which we feel that you all will love reading. It begins with a crisp overview of the department followed by the vision, mission, PSOs, PEOs, and the photograph of the strong pillars of the department (i.e., our dearest faculty members).

The newsletter 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.

The newsletter focuses on departmental activities, namely SPCA, CSI, and ISTE events, faculty and student achievements, research and paper publications, placement details, alumni speaks, co-curricular, and extra-curricular activities…!!!

We have tried our best to capture each and every event that has taken place in the A.Y. 2020-2021. Without the constant guidance of our HOD, timely support of the faculty members, and the voluntary efforts taken up by the students, launching this newsletter would seem impossible…!!!

We sincerely hope that by reading the success stories in COT, we could inspire other fellow budding engineers to open up for their upcoming opportunities.

Wishing you all triumph and a great academic year ahead.

Mr. Vivian Lobo
Ph.D.(Pursuing)
Deputy HOD

Editor's message

Mrs. Rashmi Bhat
Assistant Professor

Hi folks! We are honoured to be taking on the role of COT newsletter editor!

On behalf of our editorial team, we would like to offer a word of thanks to our readers, contributors, authors, editors and anonymous reviewers, all of whom have volunteered to contribute to the success of COT.

So much has changed in a short period of time – the world around us, our neighbourhoods, gathering spaces, the places we work and call home. Life in the midst of COVID-19 has sparked fear, frustration and anxiety all around. It is easy for distractions, criticism and stress to creep in. There will be an appropriate time to debrief, to look carefully at all aspects of this pandemic, to learn and rethink our approaches. But now, more than ever, we must focus all of our energy on defeating this pandemic and the challenges associated with it. The COVID-19 has resulted in schools shut all across the world. Globally, over 1.2 billion children are out of the classroom. As a result, education has changed dramatically, with the distinctive rise of e-learning, whereby teaching is undertaken remotely and on digital platforms.

For those who do have access to the right technology, there is evidence that learning online can be more effective in a number of ways. Our message to our dear students: As a student the most important thing to remember is that laziness is your worst enemy and hard Work is your best friend.

"Study like there's no tomorrow because if you keep putting off your studies for tomorrow, you'll probably be too late". Your journey towards achieving your goals might not be smooth, but it will be definitely worth the risk taking. Do not hesitate to take risks in your life. If you are not taking risks, you are taking risks. Consider this pandemic situation as an opportunity to excel your skills, to spend more time learning something new. Remember, the only person you are competing against is yourself.

"Enjoy the journey as it comes and make it better than it was ever before."

An enormous amount of work has been done towards the development of this magazine in the past days and tried our best to capture each and every event that had taken place in the A.Y 2020-21. New ideas, new sections in the issue of COT are always welcome by the Editorial Board. The editorial board is looking forward to making this newsletter a vehicle for students to express their innermost thoughts.
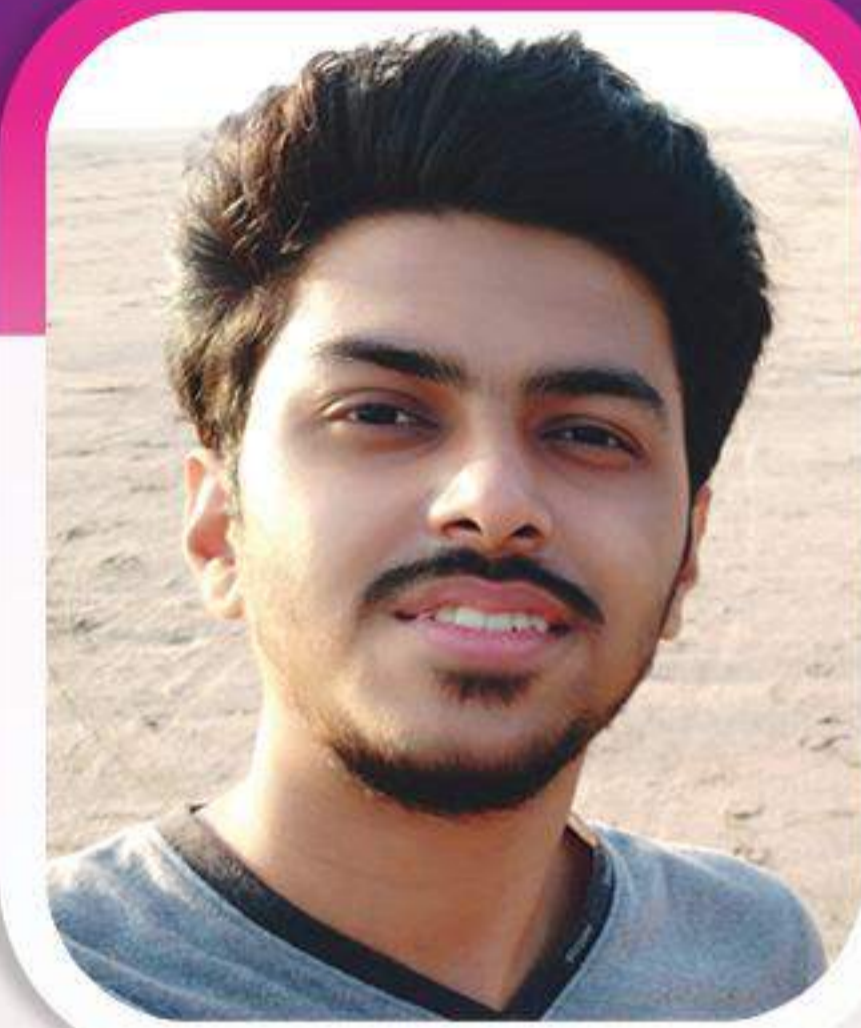
Hebert Spencer said-

Mrs. Sana Ansari
Assistant Professor

"A leader is one who knows the way, goes the way, and shows the way."
– John C. Maxwell

Ms. Shruti Lade
Designer

Mr. Nazareth Remedios
Content Writer

Mr. Swaraj Patil
Co-Editor

Ms. Siddhi Kadam
Editor

Ms. Saujanya Shetty
Co-Designer

Mr. Jeet Patil
Photo-Editor

Mr. Chirag Patil
Co-Designer

Mr. Shreyash Singh
Team Leader

Hello all tech-savvy folks!
Greetings from the editing team!

We are back again with great ardour to present our third 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.

We are yet shackled to our homes, our movement is constricted, but our minds, and our potential for creative thinking is limitless as ever. It is this conglomeration of brilliant minds that have brought you this reminder of the shared memories we have created together. Even in this lockdown era, talented and skilled individuals and groups are time and again proving their mettle by following the timeless proverb, "Where there's a will, there's a way". In this edition, we are welcoming our new faculty members, presenting some beautiful artwork 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." We hope you all remain safe and sound in your homes and are having a warm cup of coffee, enjoying the monsoon showers and reading this newsletter. Our utmost thanks to our respected Chairman, Principal, HOD, and the entire Computer Department for their guidance and motivation in helping us bring you this, the third 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! 😊

"It must be a balance in everything we do, not too much of everything, keep it simple, not complicated."
- Abdullah Ahmad Badawi

New Faculties Appointed for A. Y. 2021- 2022

Dr. Nilesh T. Deotale

Head of Computer Department & Associate Professor

Mrs. Prachi S. Gurav

Assistant Professor

Ms. Priti Rumao
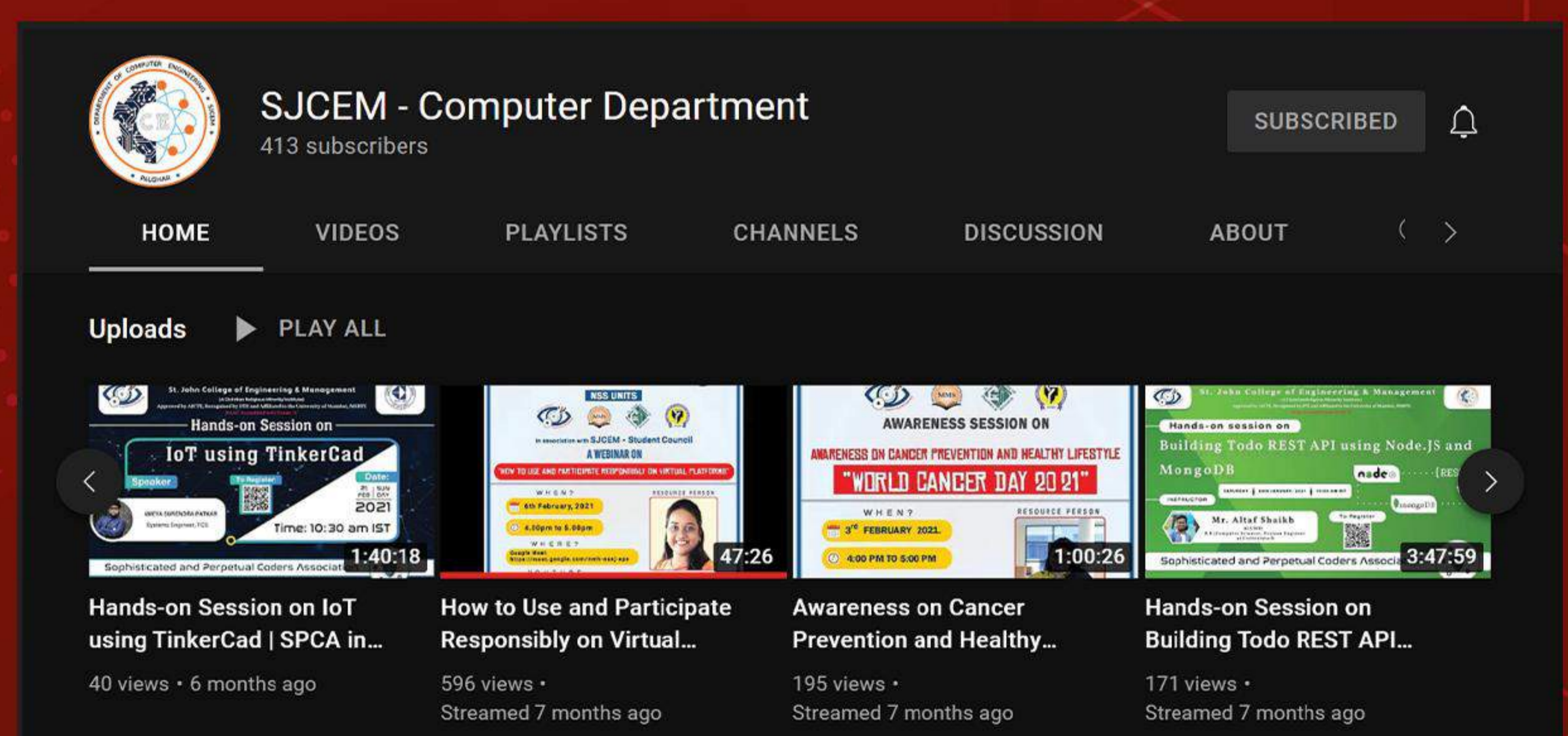
Assistant Professor

Mrs. Prajaktee Y. Chaudhari

Assistant Professor

Departmental YouTube Channel

Scan to get our page

Subscribe to our channel

SJCEM - Computer Department
413 subscribers

SUBSCRIBED

HOME   VIDEOS   PLAYLISTS   CHANNELS   DISCUSSION   ABOUT

Uploads   ▶ PLAY ALL

Hands-on Session on IoT using TinkerCad | SPCA in...
40 views · 6 months ago

How to Use and Participate Responsibly on Virtual...
596 views · Streamed 7 months ago

Awareness on Cancer Prevention and Healthy...
195 views · Streamed 7 months ago

Hands-on Session on Building Todo REST API...
171 views · Streamed 7 months ago

"Extend your arms in welcome to the future. The best is yet to come!"
- Anthony de Mello

Parent-Teacher Interaction (PTI) meet

Parent-Teacher Interaction (PTI) meet for A.Y. 2020-21 (Odd Semester) was conducted on November 28, 2020 in virtual/online mode and 259 parents attended it. Platform used was Zoom.

R&D lecture series

Dr. Rahul Khokale conducted a session under R&D lecture series on "Intellectual Property Rights and Patents" on December 09, 2020 and all faculty members of the department attended it. Platform used was Google Meet.

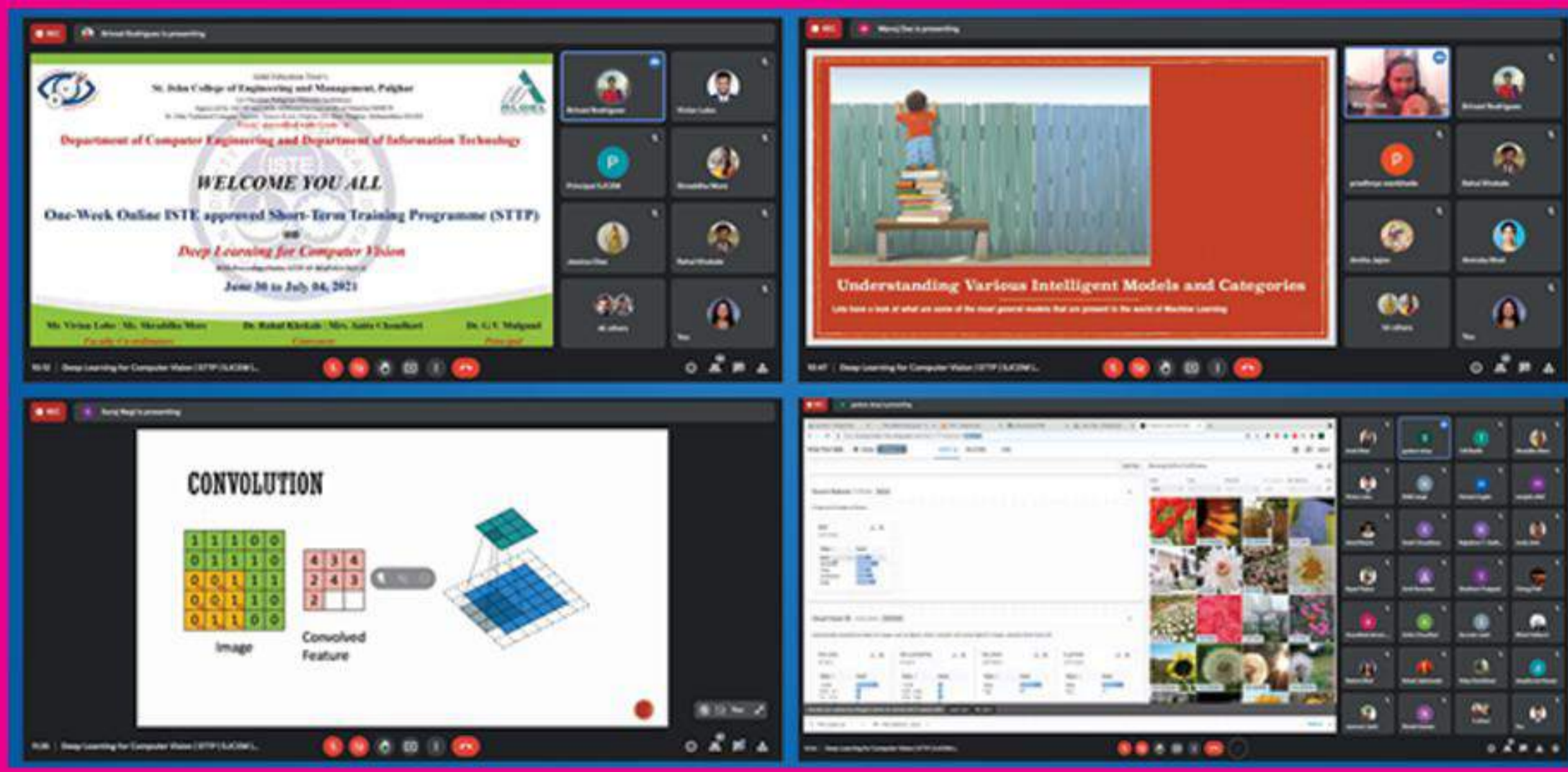## Departmental Advisory Board (DAB) meet

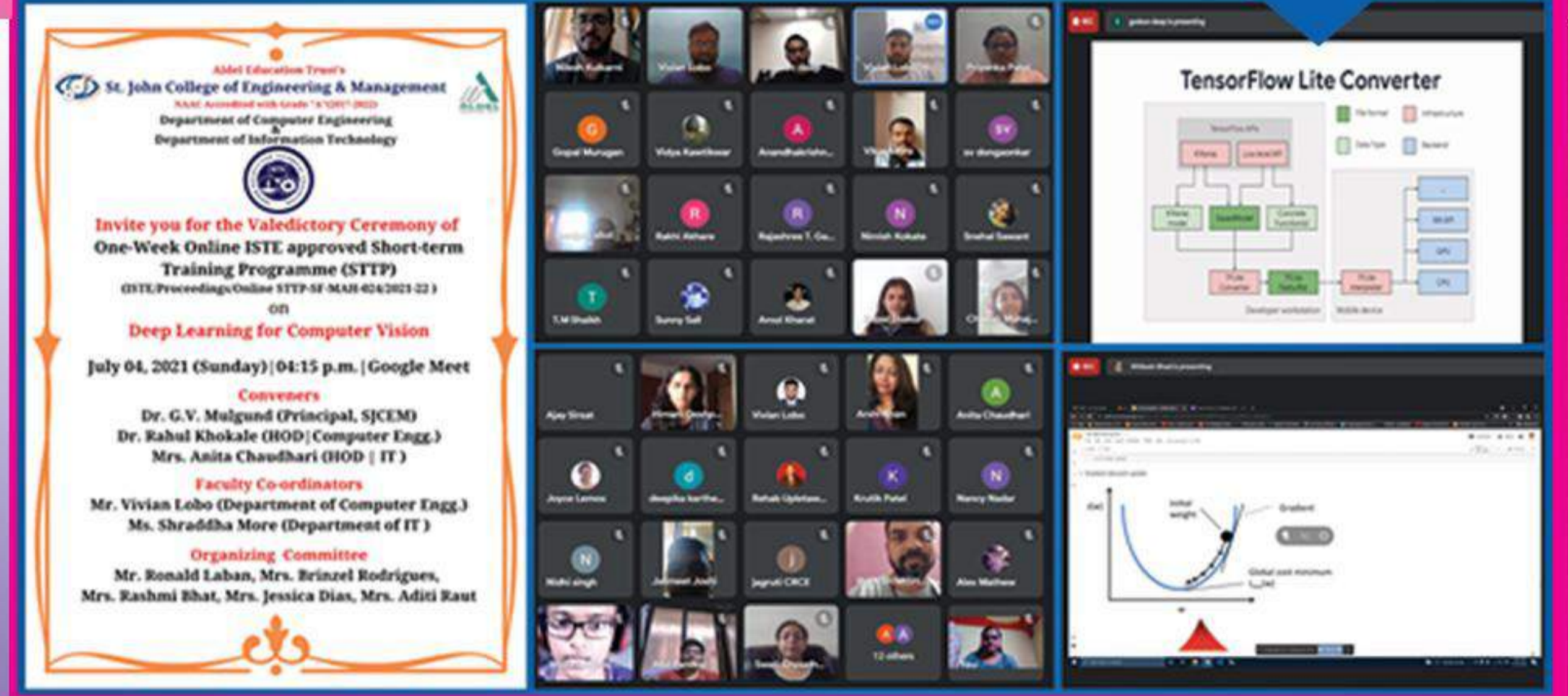*Departmental Advisory Board (DAB) meet for A.Y. 2020-21 (Odd Semester) was held on December 29, 2020.*

Program Assessment Committee (PAC) meet

Program Assessment Committee (PAC) meet for A.Y. 2020-21 (Odd Semester) was held on January 28, 2021.

"A perfect life is a perfect blend of activity and idleness."
*- Marty Rubin*

S T T P

Department of Computer Engineering organised One-Week Online ISTE approved Short-Term Training Programme (STTP) on Deep Learning for Computer Vision for A.Y. 2020-21 (Even Semester), which was held from June 30 to July 04, 2021 in virtual/online mode.

F A C U L T I E S   G U E S T   L E C T U R E S

Mr. Vivian Lobo and Ms. Nancy Nadar conducted an Awareness Session on NPTEL and COURSERA for St. John Technical and Educational Campus (SJTEC) NSS students on January 21, 2021.
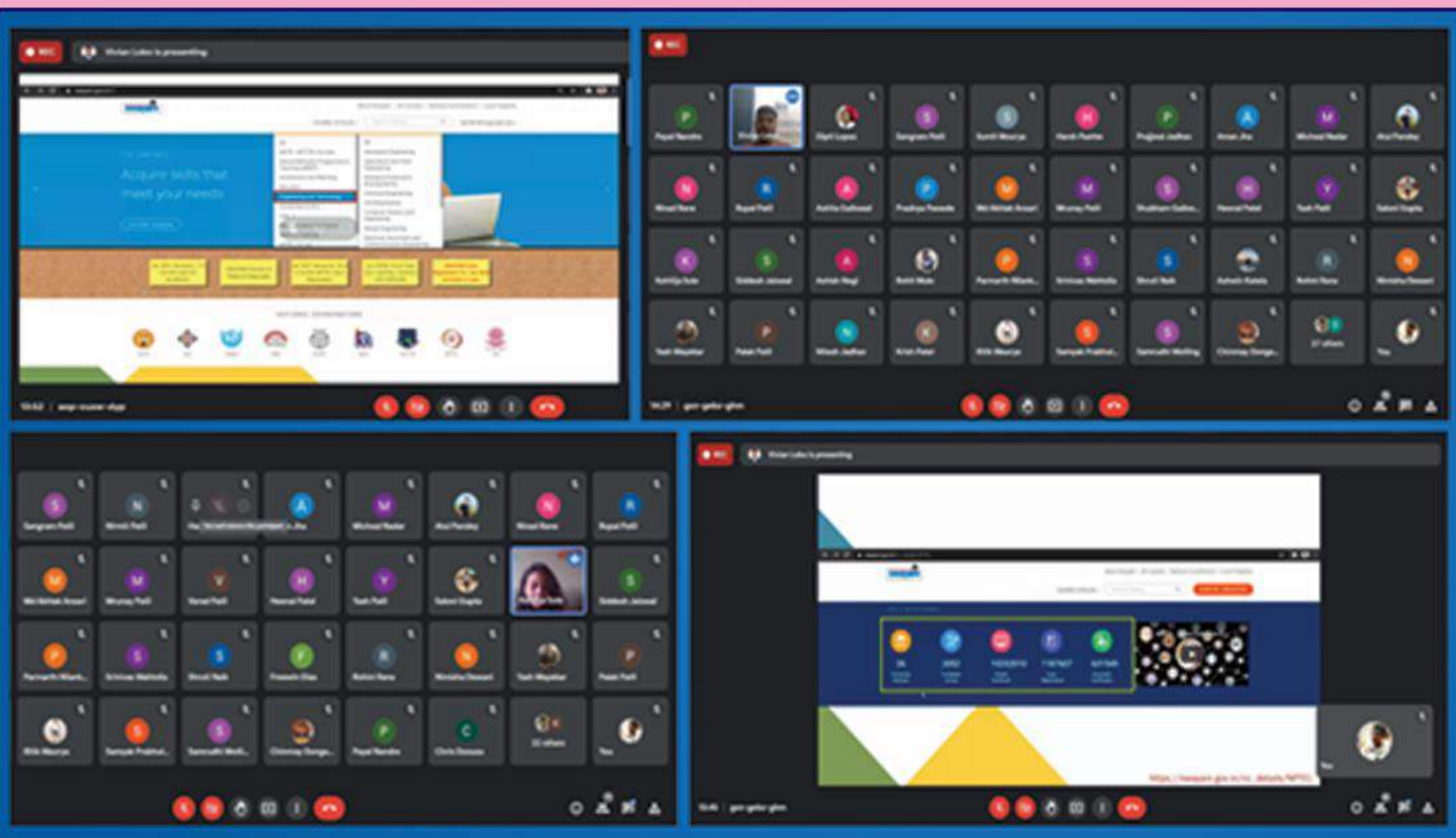
Mr. Vivian Lobo and Ms. Nancy Nadar conducted an Awareness Session on NPTEL and COURSERA in St. John College of Engineering and Management, Palghar for F.E. Student Induction Programme on 12th and 26th June 2021.

Mr. Vivian Lobo took a webinar on Technical Paper Presentation in St. John College of Engineering and Management, Palghar organized by ISTE-SJCEM on 15th April 2021
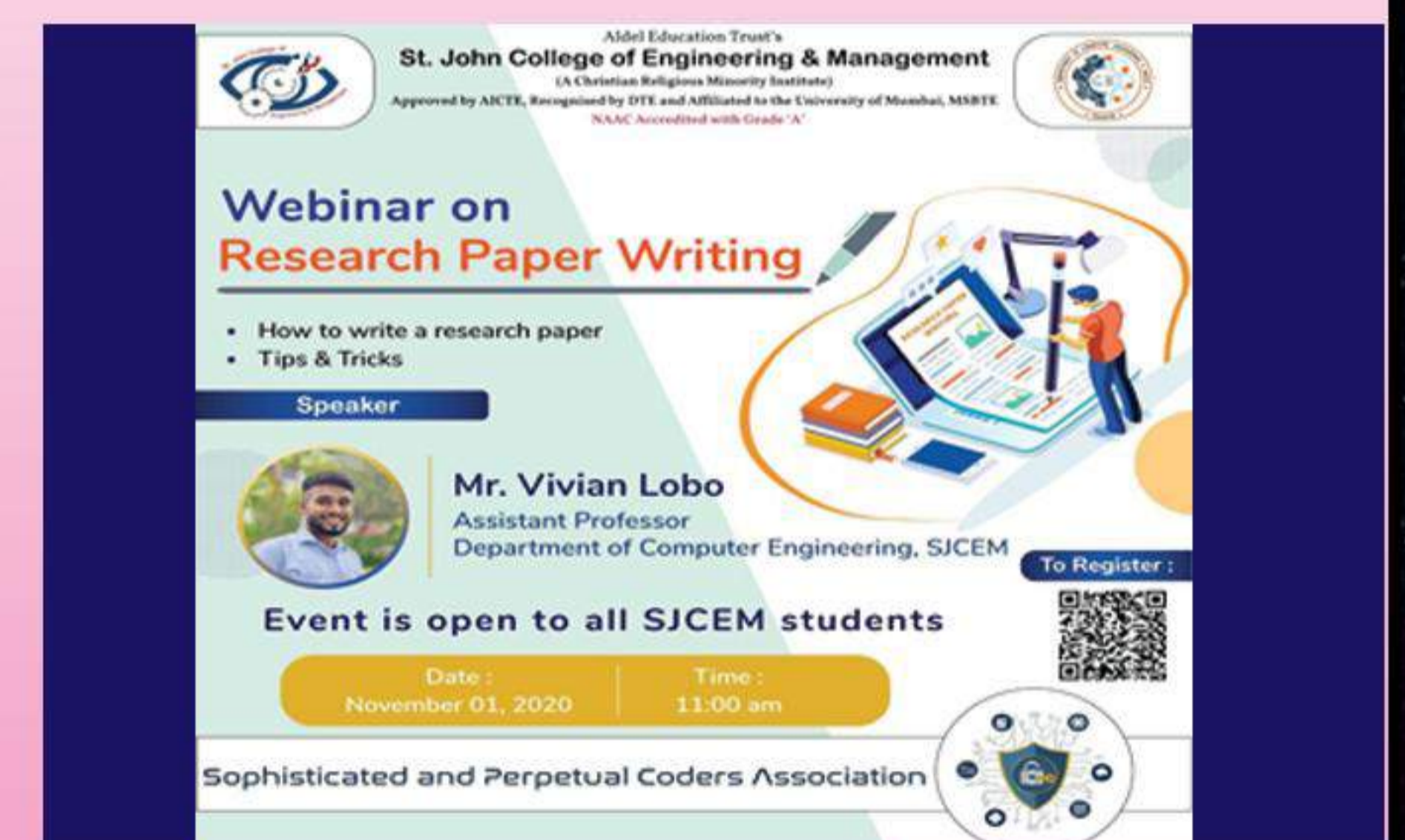
Mr. Vivian Lobo took a webinar on Research Paper Writing in St. John College of Engineering and Management, Palghar organized by SPCA on 01st November 2020

Mrs. Rashmi Bhat conducted an online guest lecture on Scheduling Algorithm for Process Management in Walchand College of Engineering, Sangli for Third year BTech-IT Student on 25th September 2020.

"The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires."
- William Arthur Ward

MEGAHACK 2.0

MEGAHACK 2.0 (24 HOUR HACKATHON) ORGANIZED BY ALDEL EDUCATION TRUST'S ST. JOHN COLLEGE OF ENGINEERING AND MANAGEMENT AND WAS CONDUCTED ON APRIL 09, 2021.

प्रस्तुत | IGNITING YOUNG MINDS......

PRASTUT IGNITING YOUNG MINDS...... (RESEARCH PAPER POSTER PRESENTATION COMPETITION) ORGANIZED BY ALDEL EDUCATION TRUST'S ST. JOHN COLLEGE OF ENGINEERING AND MANAGEMENT IN ASSOCIATION WITH SPCA, ITSA, ISTE, ASSET, AND ACE WAS CONDUCTED ON APRIL 17, 2021 IN ONLINE/VIRTUAL MODE. PLATFORM USED WAS ZOOM AND LIVE-STREAMED ON YOUTUBE VIA STREAMYARD. GUEST OF HONOR WA DR. NAZNEEN ANSARI, ASSOCIATE PROFESSOR, SFIT.

"Intelligence is quickness in seeing things as they are."
- Santayana

St. John College of Engineering & Management

Aldel Education Trust's
ST. JOHN COLLEGE OF ENGINEERING & MANAGEMENT
(A Christian Religious Minority Institute)
Approved by AICTE, Recognised by DTE and Affiliated to the University of Mumbai, MSBTE
NAAC "A" Grade | NBA Accredited

GTU Sem 7 INFORMATION TECHNOLOGY
NEW REVISED 2021-22 SYLLABUS

BLOCK CHAIN TECHNOLOGY

Blockchain
Open Elective - III (3171618)
MCQ's

Mr. Vivian Brian Lobo
(St. John College of Engineering & Management, Palghar)
Mr. Ronald Melwin Laban
Mr. Rupesh Mishra (St. Francis Institute of Technology, Borivali)

Explanatory Diagrams
Detail Coverage of Syllabus.
Multiple Choice Questions.
FREE DOWNLOAD Sample chapter from our Android App.

Congratulations

Mr. Vivian Lobo and Mr. Ronald Laban authored a book on "Blockchain" for Gujarat Technological University | Sem VII | B.E. (Information Technology) | A.Y. 2021-2022.

Mr. Vivian Lobo authored a book on Blockchain for Gujarat Technological University published by Tech Neo.

Budding Entrepreneur

Mozek

"Entrepreneurship" looks challenging, but students from Computer Engineering Mr. Abhishek Bhanushali along with Mr. Kanishk Singh believed "Where there is a will, there is a way" and had some great innovative idea in his mind. They developed a project to help Epilepsy patients. His aim was to detect seizure events from a wrist-worn device. Initial they were seeking help from ED Cell of SJCEM. After a lot of efforts, they got selected for iCreate's Technology Exploration Cell (TEC) at iCreat. It is a fund of upto Rs. 2,00,000 that is given to aspiring Entrepreneurs to take their Tech innovation-based idea to the next level. They are well-kown as "Mozek Healthtech".

Mr. Abhishek Bhanushali
Batch - 2019-20

NSS App Developed by Mr. Prathamesh Ayare

Mr. Prathamesh Ayare has created the first ever Mobile App using Flutter for the National Service Scheme (NSS) for University of Mumbai !

The University of Mumbai has expressed its gratitude through an appreciation letter.

With the app, Prathamesh has simplified Online Registration and given NSS programme officers the opportunities to sign up with just a few taps on their screens.

The hard work he has put in reflects his selflessness towards society.

Name : Mr. Prathamesh Ayare
Department : Computer Engineering
Year : BE

Mr. Prathamesh Ayare developed the first-ever mobile application (NSS App) for Mumbai University NSS cell, which reduced the time of registration from 2 months to 60 minutes.

SIH

Aldel Education Trust's
ST. JOHN COLLEGE OF ENGINEERING & MANAGEMENT
(A Christian Religious Minority Institute)
Approved by AICTE, Recognised by DTE and Affiliated to the University of Mumbai, MS...
NAAC Accredited With Grade A

SMART INDIA HACKATHON 2020

Congratulations!

TEAM TESSERACTPY

The students of SJCEM once again prove their mettle at the Smart India Hackathon. Our team **TESSERACTPY** comprising of **Mr. Hiren Shukla, Mr. Abhishek Yadav, Mr. Adarsh Sharma, Ms. Rohini Singh, Mr. Akshay Adkurkar & Mr. Nitish Singh** has stood **First** at the All India Level!

An Outstanding Achievement of winning SIH for the Second Time!

Special thanks to Mrs. Angelin Florence & Mr. Vivian Lobo for mentoring them.

GATE Qualified

JOHN COLLEGE OF ENGINEERING & MANAGEMENT
(A Christian Religious Minority Institute)
Approved by AICTE, Recognised by DTE and Affiliated to the University of Mumbai, MSBTE
NAAC Accredited With Grade A

DEPARTMENT OF COMPUTER ENGINEERING

Congratulations

Qualified GATE (Computer Science and Information Technology) [CS] with a GATE score of 393 on March 19, 2021.

Mr. Shreyash Singh

NPTEL Certifications

**Aldel Education Trust's**
ST. JOHN COLLEGE OF ENGINEERING & MAN...
(A Christian Religious Minority Institute)
Approved by AICTE, Recognised by DTE and Affiliated to the University of Mumbai, MSBTE
NAAC Accredited With Grade A

NPTEL
Congratulations

JULY TO DECEMBER 2020 EXAMINATIONS

❖ Mrs. Vidya N. Kawtikwar	Introduction to Internet of Things
❖ Mr. Vivian Lobo	Practical Machine Learning with TensorFlow
❖ Ms. Nancy Nadar	Programming in Java

JANUARY TO MARCH 2021 EXAMINATIONS

❖ Mr. Vivian Lobo	Python for Data Science
❖ Ms. Nancy Nadar	Python for Data Science

B.E. Results

ST. JOHN COLLEGE OF ENGINEERING & MANAGEMENT
(A Christian Religious Minority Institute)
Approved by AICTE, Recognised by DTE and Affiliated to the University of Mumbai, MSBTE
NAAC "A" Grade | NBA Accredited

Department of Computer Engineering

Congratulations

Batch of 2020-2021 for securing 100% result in Semester VIII examinations!

"Invention is the talent of youth, as judgment is of age."
— Jonathan Swift
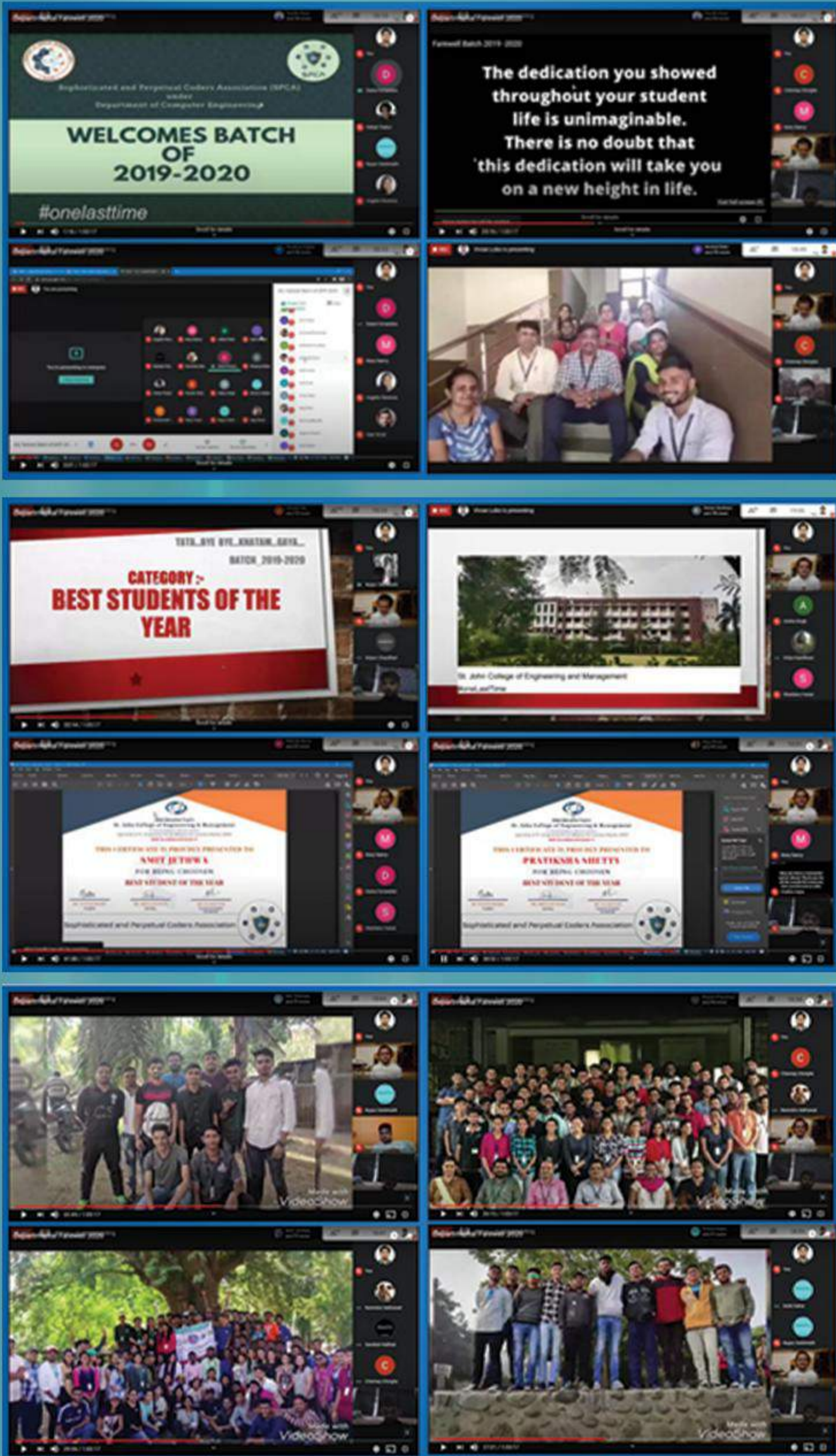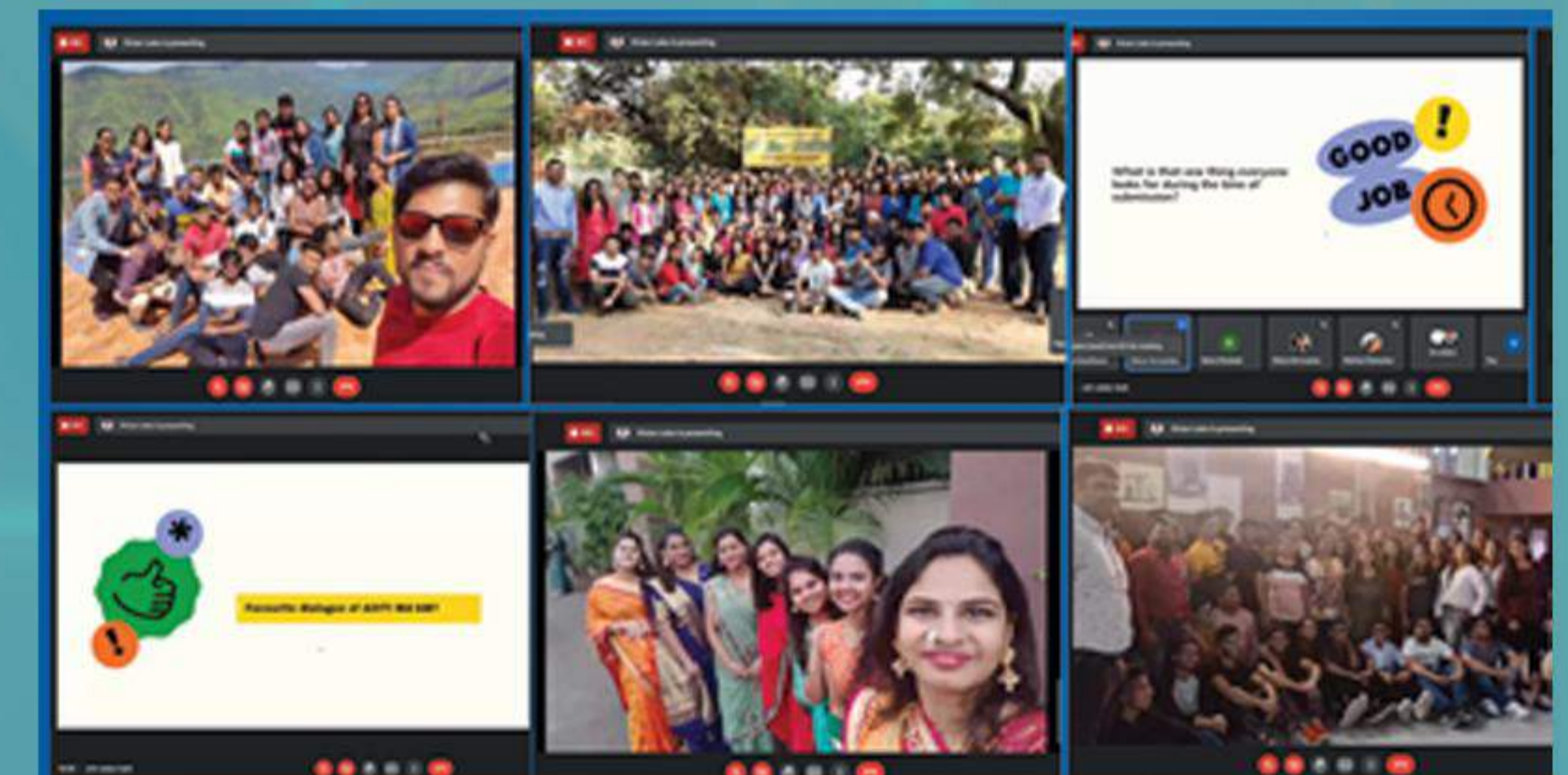
BATCH 2019-20

B.E. Online farewell for Batch 2019-2020 organized by SPCA under Department of Computer Engineering on 18 October 2020
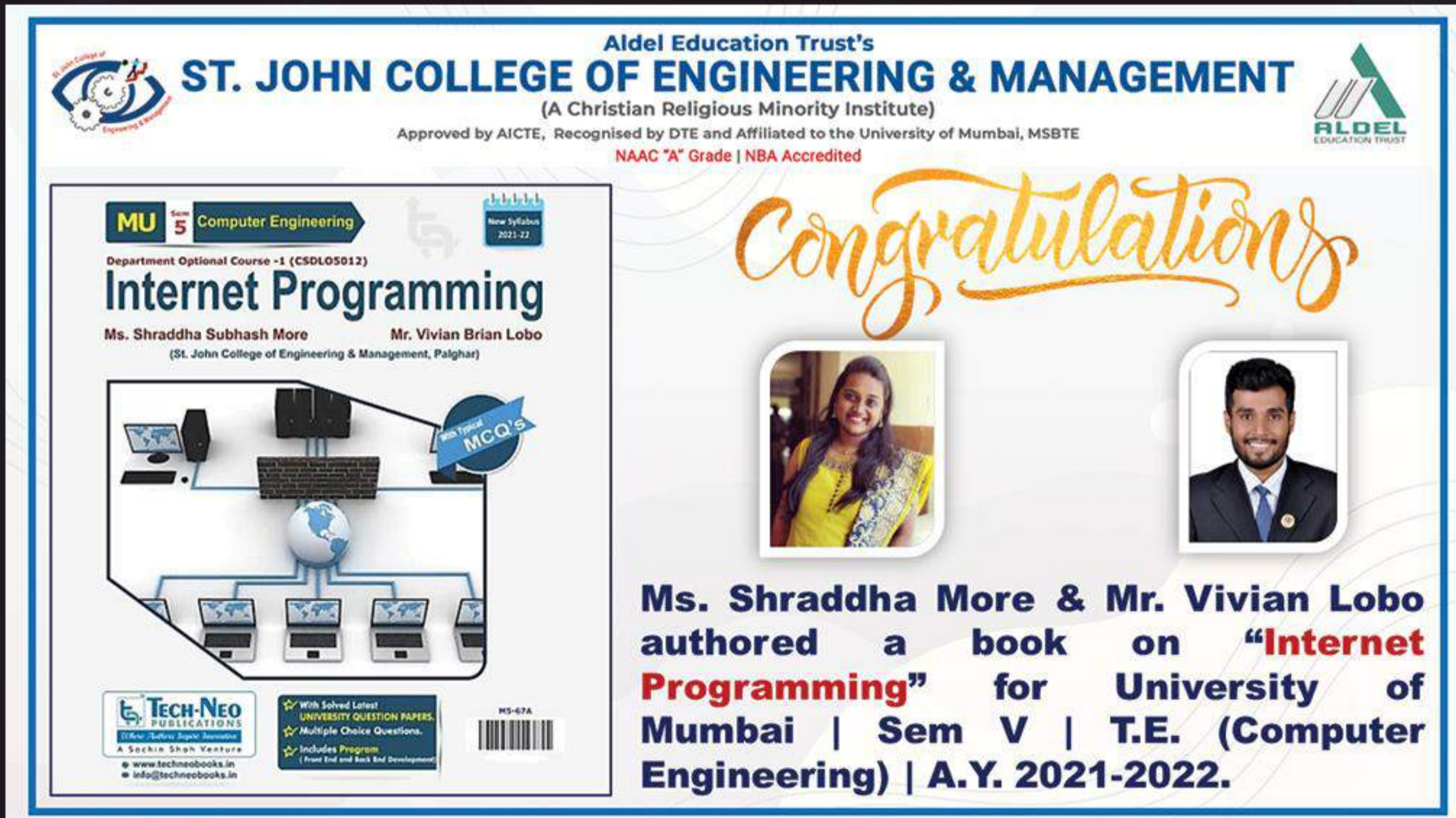
Funded Project

◆ Duration year – 2020-2021
◆ Title of Project - MSRTC Online Booking, Navigation and Tracking Application (MSP430 microcontroller kits)
◆ Name of Funding Agency – Texas Instruments and SINCGRID Pvt. Ltd in association with India Innovation Challenge Design Contest 2019 (IICDC 2019)
◆ Grant Sanctioned (Rs.) – Rs. 3091/-
◆ Faculty Investigator – Mr. Vivian Lobo
◆ Status – Completed

Mr. Vivian Lobo co-authored a book on "Internet Programming" for University of Mumbai | Sem V | T.E. (Computer Engineering) | A.Y. 2021-2022 published by Tech Neo.

BATCH 2020-21

B.E. Online farewell for Batch 2020-2021 organized by SPCA under Department of Computer Engineering on 16 June 2021

"The most beautiful things are not associated with money; they are memories and moments. If you don't celebrate those, they can pass you by."
- Alek Wek

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

1. To offer opportunities that enrich knowledge and boost confidence in extracurricular activities.
2. To provide moral support and a base for nurturing career skills.
3. To disseminate empowerment through the conduction of numerous workshops and seminars.

Inauguration of Sophisticated and Perpetual Coders Association (SPCA) under Department of Computer Engineering held on 14th October 2020.

Technical Poster Competition organized by SPCA on 14th October 2020

SPCA Website

SPCA Instagram handle

Sophisticated and Perpetual Coders Association (SPCA)

HANDS-ON SESSION ON TABLEAU ORGANIZED BY SPCA ALONG WITH MRS. MANALI PATEKAR ON 22ND NOVEMBER 2020

WEBINAR ON RESEARCH PAPER WRITING ORGANIZED BY SPCA ON 01ST NOVEMBER 2020

SPCA GAMEATHON ORGANIZED BY SPCA ON 30TH AND 31ST MARCH 2021

KNOWLEDGE SHARING SESSION ON DATA ENGINEERING ORGANIZED BY SPCA ALONG WITH MS. NANCY NADAR ON 20TH NOVEMBER 2020

SPCA EVENTS

CODE HEIST: A FOUR-WEEK CODING COMPETITION ORGANIZED BY SPCA UNDER DEPARTMENT OF COMPUTER ENGINEERING ON 06TH NOVEMBER 2020

HANDS-ON SESSION ON BLOCKCHAIN AND ITS APPLICATION AND ETHEREUM CRYPTO CURRENCY ORGANIZED BY SPCA IN ASSOCIATION WITH MEGAHACK 2.0 ON 06TH APRIL 2021.

HANDS-ON SESSION ON BUILDING CHATBOTS USING RASA ORGANIZED BY SPCA ON 27TH DECEMBER 2020

HANDS-ON SESSION ON BUILDING TODO REST API USING NODE.JS AND MONGODB ORGANIZED BY SPCA ON 30TH JANUARY 2021.

for the students, of the students, and by the students...

"Any sufficiently advanced technology is indistinguishable from magic."
- Arthur C. Clarke

CSI EVENTS

A three-day hands-on session was organized on *"Data Mining for Beginners"* under CSI from December 4 to 6, 2020

Hands-on Session on IoT using TinkerCad organized by CSI-SJCEM in Association with SPCA on 27th December 2020

Webinar on "Tips and Tricks for Competitive Coding" organized by CSI-SJCEM in Association with MegaHack 2.0 on 04th April 2021

CSI Instagram << Handle

ISTE EVENTS

ISTE Instagram Handle >>

Online Quiz Competition organized by ISTE-SJCEM on 18th March 2021

Webinar on Technical Paper Presentation organized by ISTE-SJCEM on 15th April 2021

A one-day hands-on workshop on "Software Testing" was organized by ISTE-SJCEM on 21st November 2020.

"Controlling complexity is the essence of computer programming."
-- Brian Kernigan

Faculty Achievements

Mr. Sunny Sall

- "Deep Neural Network Based Offloading of Video Surveillance IoT Cloud Computing". Filed Indian Patent on 25/05/2021.
- Paper Setter for Data Structures, Semester III, Computer Engg., End-Semester Examination, University of Mumbai, December 2020.
- Sall S., Bansode R. (2021) Secure Data Aggregation and Data Transmission Using HMAC Protocol in Cluster Base Wireless Sensor Network. In: Balas V.E., Semwal V.B., Khandare A., Patil M. (eds) Intelligent Computing and Networking. Lecture Notes in Networks and Systems, vol 146. Springer, Singapore.

  https://doi.org/10.1007/978-981-15-7421-4_21

Ms. Nancy Nadar

- Successfully completed a NPTEL course on "Programming in Java" in December 2020.
- Successfully completed a NPTEL course on "Python for Data Science" in March 2021.
- Received a Star Professional Certificate in topic "Python", Dated 21-03-2020 (Certificate No STR20PTN00146956)
- Achieved an Innovation Patent by Government of Australia in topic "A Home Aquarium Monitoring System", Dated 14th October 2020 (Patent No 2020102342)
- Achieved a Copyright by Government of India in topic "Classification of Facial Expression using CNN", Dated 17th July 2021 (Registration No L-104141/2021)

Mrs. Angelin Florence A

- Paper Setter for Microprocessor (MP), Semester V,Computer Engg., End-Semester Examination, University of Mumbai, December 2020.
- Invited as an evaluator for Toycathon 2021: An inter-ministerial initiative organized by Ministry of Education's Innovation Cell with support from All India Council for Technical Education, Ministry of Women and Child Development, Ministry of Commerce and Industry, Ministry of MSME, Ministry of Textiles and Ministry of Information and Broadcasting.
- Invited as Judge for an Inter-Collegiate Technical Paper cum Poster Competition (i.e., Prastut | Igniting young Minds...) in virtual mode under ISTE (Student Chapter) on April 17, 2021.
- Invited as Judge for Round 1 for a 24-hour National Level Hackathon (i.e., MegaHack2.0) in virtual mode on April 09, 2021.
- Mentor for SIH 2020.

Mr. Vivian Lobo

- Organized a 24-hour National Level Hackathon (i.e., MegaHack2.0) in virtual mode between April 09 and 10, 2021.
- Invited as a guest speaker for the event "Insights on Technical Paper Presentation" organized by ISTE (Student Chapter) on April 15, 2021.
- Organized an Inter-Collegiate Technical Paper cum Poster Competition (i.e., Prastut | Igniting young Minds...) in virtual mode under ISTE (Student Chapter) on April 17, 2021.
- Appreciation for fostering the ecosystem bridging Government, Academia, and Industry for TI Embedded System Design using MSP430TM MCU MOOC under Texas Instruments and AICTE.
- Invited as an evaluator for Toycathon 2021: An inter-ministerial initiative organized by Ministry of Education's Innovation Cell with support from All India Council for Technical Education, Ministry of Women and Child Development, Ministry of Commerce and Industry, Ministry of MSME, Ministry of Textiles and Ministry of Information and Broadcasting.
- Successfully completed a NPTEL course on "Practical Machine Learning with TensorFlow" in December 2020.
- Successfully completed a NPTEL course on "Python for Data Science" in March 2021.
- Mentor for SIH 2020.
- Successfully cleared Ph.D. Entrance Test (PET) in Information Technology conducted by University of Mumbai in March 2021.

Dr. G. Murugan

- External Examiner for Ph.D. viva voce, Bharathiar University, Coimbatore.
- Indian Patent filed on 13/05/2021 for the topic - "A Cryptosystem for Data Transfer through Smart Selfmap" (Application Reference Number:

  202121021666).
- Indian Patent filed on 28/05/2021 for the topic - "Smartmon: Monitoring smart device status through network traffic" (Application Reference Number: 202121023839).

Mr. Ajay Sirsat

- Paper Reviewer at 2021 International Conference on Communication Information and Computing Technology at Sardar Patel Institute of Technology, Munshi Nagar, Andheri (West), Mumbai.

Mrs. Vidya N. Kawtikwar

- Paper Reviewer at 4th Biennial International Conference on Nascent Technologies in Engineering organised by Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai, (India) in its premises in association with IEEE & IAS on January 15-16, 2021.
- Paper Setter for Theory of Computer Science (TCS), Semester V, Computer Engg., End-Semester Examination, University of Mumbai, December 2020.
- Successfully completed a NPTEL course on "Introduction to Internet of Things" in December 2020.

For more scan this.....

"A good teacher can inspire hope, ignite the imagination, and instil a love of learning."
– Brad Henry

Publications

01 Jayesh Patil, Mandar Prabhu, Dhaval Walavalkar, and Vivian Brian Lobo, "**Road Accident Analysis using Machine Learning,**" *2020 IEEE Pune Section International Conference (PuneCon)*, pp. 108-112, Pune, India, 2020. DOI: 10.1109/PuneCon50868.2020.9362403.

02 Rishabh Bhatnagar and Vivian Brian Lobo, "**Multihop Concurrent Big Data Sharing via Multithreading using Blockchain on a Decentralized Network,**" *2020 2nd International Conference on Advances in Computing, Communication Control and Networking (ICACCCN)*, IEEE, Greater Noida, India, 2020, pp. 885-890. DOI: 10.1109/ICACCCN51052.2020.9362977.

03 Saurav Waghade, Rohini Singh, Piyush Kumbhar, and Angelin Florence A, "**Web Based Healthcare System Using Machine Learning,**" *GIS Science Journal, Scopus Active Journal, U.G.C. CARE Group-II Journal, vol. 8, no. 3*, ISSN: 1869-9391, 2021, pp. 1352-1358. DOI: 20.18001.GSJ.2021.V8I3.21.36808

04 Krutika Kene, Vrushti Raut, Suchita Jogdand, and Aditi Raut, "**Augmented Reality Based Signature Verification,**" *GIS Science Journal, Scopus Active Journal, U.G.C. CARE Group-II Journal, vol. 8, no. 4*, ISSN: 1869-9391, 2021, pp. 106-111. DOI: 20.18001.GSJ.2021.V8I4.21.36883

05 Mohith Lopez, Kartik Shetty, Omkar Patil, and Sana Ansari, "**Covid 19 Detection from Chest X-ray using Deep Learning,**" *GIS Science Journal, Scopus Active Journal, U.G.C. CARE Group-II Journal, vol. 8, no. 4*, ISSN: 1869-9391, 2021, pp. 807-821. DOI: 20.18001.GSJ.2021.V8I4.21.36965

06 Jayesh Patil, Vaibhav Patil, Dhaval Walavalkar, and Vivian Brian Lobo, "**Road Accident Analysis and Hotspot Prediction using Clustering,**" *6th International Conference on Communication and Electronics Systems (ICCES) 2021, IEEE*, pp. 775-779, July 8 to 10, 2021.

07 Akash Vinod Nevtia, Prince Lalit Mitna, Saurabh Gopalprasad Nishad, and Nancy Nadar, "**Visual Acuity Test Using Densenet,**" *GIS Science Journal, Scopus Active Journal, U.G.C. CARE Group-II Journal, vol. 8, no. 4*, ISSN: 1869-9391, 2021, pp.1109-1113. DOI: 20.18001.GSJ.2021.V8I4.21.36995

08 Shreya Mishra, Rishabh Mishra, Vikas Dubey, and Sunny Sall, "**Face And Voice Based Authentication Using Machine Learning,**" *GIS Science Journal, Scopus Active Journal, U.G.C. CARE Group-II Journal, vol. 8, no. 4*, ISSN: 1869-9391, 2021, pp.1446-1451. DOI: 20.18001.GSJ.2021.V8I4.21.37032

09 Ritik Dhedia, Nixon Paliakkara, Deepak Gupta, Vaibhav Sharma, and Vivian Brian Lobo, "**Smart Agri-Farming on Satellite Imageries using Machine Learning,**" *6th International Conference on Communication and Electronics Systems (ICCES) 2021, IEEE*, pp. 1359-1364, July 8 to 10, 2021.

10 Hiren Shukla, Abhishek Yadav, Akshay Adkurkar, and Dr. Rahul Khokale, "**Disputed Content Detection On Social Media Platforms Using Keyword Matching And Tensorflow Lite Model,**" *GIS Science Journal, Scopus Active Journal, U.G.C. CARE Group-II Journal, vol. 8, no. 5, ISSN: 1869-9391, 2021*, pp. 307-313. DOI: 20.18001.GSJ.2021.V8I5.21.37095

11 Devika Babrekar, Darsh Patel, Sachin Patkar, and Vivian Brian Lobo, "**Blockchain- based Digital Locker using BigChainDB and InterPlanetary File System,**" *6th International Conference on Communication and Electronics Systems (ICCES) 2021, IEEE*, pp. 962-968, July 8 to 10, 2021.

12 Prathamesh Ayare, Saket Mishra, Shivam Mishra, and Ajay Sirsat, "**Mobile-based Search Engine for Project Components from Local Shopkeepers using Flutter and Firebase,**" *GIS Science Journal, Scopus Active Journal, U.G.C. CARE Group-II Journal, vol. 8, no. 5*, ISSN: 1869-9391, 2021, pp. 928-934. DOI: 20.18001.GSJ.2021.V8I5.21.37160

For More...
>>

"After all, the ultimate goal of all research is not objectivity, but truth."
- Helene Deutsch

Student Achievements

Final Year
JAYESH PATIL
- MegaHack2.0 Event Head
- President of CSI-Student Chapter
- Marketing Head of Computer Department Events
- Content Writer of NSS and EDC Cell

Final Year
SAURAV WAGHADE
- 2nd Runner Up In Cisco ISTE National Level CODATHON 2020

Third Year
PRATIKSHA LALDAS
- Bronze Trophy In SQL Quiz master 1
- Earned Ninja Badge In Code & Build - Web Development Week Badge By Progate

Second Year
JEET PATIL
- Certificate Of Participation In 2-Day National Event, Elysian 20
- Earned Ninja Badge In Code & Build Web Development

Second Year
AMIT PAL
- Scored 90% In "Online Officers Intelligence Rating Quiz" Conducted By National Cadet Corps (Sd/Sw) Cadets, Ramco Institute Of Technology

Second Year
SWARAJ PATIL
- Participated In Lensathon - India's First Ar Lens Creation Hackathon By Snapchat.

Third Year
KRUTIK PATEL
- Participated In Feynwick, A 3-Hour Long Coding Contest Or ganized By CSI - KJSIEIT Student's Chapter
- Participated In The 4th National Engineering Olympiad (Neo 4.0) Phase 2 Exam
- Certificate Of Appreciation - Megahack 2.0 Team

Second Year
VAISHNAVI PATEL
- Megaleio 2020-3rd (Treasure Hunt)

Second Year
DHEERAJ PANDEY
- Certificate Of Participation In National Engineering Olympiad

Second Year
CHIRAG PATIL
- Certificate Of Appreciation - Megahack 2.0 Team

Second Year
RITIKA RAJAK
- Certificate Of Wining In Quiz By Teachmebro

Third Year
SHREYASH SINGH
- Won 3rd Place In Megahack 2.0 Hackathon Organized By SJCEM, Palghar

Second Year
PARESH CHAWLA
- Earned Gold Badge For Java On Hackerrank

Second Year
DHRUV JHA
- Certificate Of Participation- Cap gemini Tech Challenge In Java Full Stack Edition

Second Year
BHAKTI BAILURKAR
- Certificate Of Appreciation- CSI Technical Team Member.

For More Scan This...

"High achievement always takes place in the framework of high expectation."
- Charles Kettering

Paresh Chawla S.E.
Certificate of Completion - Java Course

Prajwal Upadhyay S.E.
Certificate of Completion – Java Programming: Solving Problems with Software

Chirag Patil S.E.
Certificate of Completion – C Programming For Beginners - Master The C Language

Jayesh Dhuri S.E.
Certification of Completion - "Cyber Security and Ethical Hacking"

Ritika Rajak S.E.
Certificate of Completion - Course on Neural Networks

Jeet Patil S.E.
Certification of Completion - Cyber Security and Ethical Hacking

Sanmeet Singh S.E.
Certificate of Participation - How To Start Bug Bounty Hunting

Lalit Barad S.E.
Certificate of Participation in 2-Day National Event, Elysian'20

Amit Pal S.E.
Certificate of Participation in The Python 3.4.3 Training Organized at Acropolis Institute

Isha Kore S.E.
Certificate of Participation - Knowledge Sharing Session on Data Engineering

Sonia Sharma S.E.
Certificate of Completion - Building A Test-Based Bank in Java

Anuja Patil S.E.
Certificate of Participation - Write Research Paper: Tricks And Tips

Bhakti Bailurkar S.E.
Certificate of Completion - Create A Project Management Tracker

Mayur Kadam T.E.
Certificate of Completion – Full Stack Programming For Complete Beginners in Python

Siddhi Wade T.E.
Certificate of Completion - Python Bootcamp 2020
Certificate of Participation - Encypher 2020: Cyber Security

Pratiksha Laldas T.E.
Certificate of Participation - Prastut | Igniting Young Minds... A Unique 'Research Paper' Cum Poster Presentation
Certificate of Completion - Accenture Nordic Developer Program

Neel Bhatt T.E.
Certificate of Completion - Introduction To Augmented Reality And Arcore
Certificate of Participation - Prastut| Igniting Young Minds... A Unique 'Research Paper' Cum Poster Presentation

Sarvesh Joshi T.E.
Certificate of Participation - ISTE Approved One-Week Online Short-Term Training Programme (STTP) on "Deep Learning For Computer Vision"

Shubham Patil T.E.
Certificate of Participation – How To Write Research Paper Tricks And Tips

Jagdish Mohite T.E.
Certificate of Completion - Cyber Security Fundamentals

Pooja Prajapati B.E.
Certificate of Completion - The Internet Of Things (IOT): 2020 Trends and The Future

Mansi Patil B.E.
Certificate of Completion - Programming For Everybody

Aditi Singh S.E.
Certificate of Participation - Gateway To Cyber Security

Sneha Chauhan S.E.
Certificate of Participation - Megaleio Blind C

For more scan this 👉

"The road to success is not easy to navigate, but with hard work, drive and passion, it's possible to achieve it."
– Tommy Hilfiger

DEPARTMENTAL TOPPERS

B.E.
1. **Shreya Patil** CGPA: 9.44
2. **Bhavna Soni** CGPA: 9.43
3. **Rohini Singh** CGPA: 9.29

T.E.
1. **Shreyash Singh** CGPA: 9.97
2. **Veeraj Rana** CGPA: 9.85
3. **Pratiksha Laldas** CGPA: 9.84

S.E.
1. **Rahil Shaikh** CGPA: 9.83
   Pooja Mhaskar CGPA: 9.83
2. **Purva Vartak** CGPA: 9.79
   Neha Shende CGPA: 9.79
3. **Santosh Indulkar** CGPA: 9.77
   Riddhi Patil CGPA: 9.77

TOP B.E. PROJECTS

1

TITLE: ROAD ACCIDENT ANALYSIS AND HOTSPOT PREDICTION USING CLUSTERING
GUIDE: MR. VIVIAN LOBO
STUDENTS: JAYESH PATIL, VAIBHAV PATIL, DHAVAL WALAVALKAR

Abstract:
Accidents through roadways have been a great threat to developed as well as underdeveloped countries. Road accidents and its safety have been a major concern for the world, and everyone is trying to handle this since years. Road traffic and reckless driving occur in every part of the world. Because of this, many pedestrians are affected too. With no fault, they become victims. Many road accidents occur because of numerous factors like atmospheric changes, sharp curves, and human faults. Injuries caused by road accidents are major but sometimes imperceptible, zlater on affect health too. This study aims to analyse road accidents in one of the popular metropolitan cities, i.e., Bengaluru, Ahmedabad and Mumbai through k-means algorithm and machine learning by scrutinizing accident-prone or hotspot areas and their root causes.
Keywords - Atmospheric changes, hotspots, k-means algorithm, reckless driving.

2

TITLE: DISPUTED CONTENT DETECTION AND INVESTIGATION ON SOCIAL MEDIA PLATFORM
GUIDE: DR. RAHUL KHOKALE
STUDENTS: HIREN SHUKLA, ABHISHEK YADAV, AKSHAY ADKURKAR

Abstract:
Social Media has grown tremendously in the last few years and has an ample of advantages. However, on the other hand it also has certain disadvantages which can cause negative and sometimes disastrous impact on our society. Amongst them one of the major problems in today's social world is Misleading/Obscene/Fake/Disputed content. We all have come across such content one or the other time which we feel is objectionable. So, with an intention to make our nation and social world safer and more peaceful. With the help of machine learning we have designed a solution which blocks such Content. Not only does it block such content but also makes prediction based on the sudden increase of hatred amongst people for the religion, entity, people, race, etc. and by using this information it will block those non-dialectal content to prevent ravage among the Netizens. Our solution will also help Police and Cyber Crime Department to track the Sender/Initial Sender/Origin of such content. And good news is that all this can be done without invading the user's privacy and its end-to-end encryption which will make this mechanism ready to implement in real world apps without any reluctance.
Keywords - Cyber Crime, False Information, Sentiment Analysis, social media.

"There is no substitute for hard work. And there is no substitute for patience and acceptance."
- Cesar Chavez

3

TITLE: DESCRIPTION OF VIDEOS FEEDS USING NEURAL NETWORKS FOR BLIND
GUIDE: MRS. MANALI PATEKAR
STUDENTS: AMEY KHALE, KANISHK SINGH, ROSHAN GUPTA

Abstract:
Description Generation of images has been an interest of researchers in the past few years and has progressed with advancements in neural network technology. Most image captioning systems are able to take in an input image and produce accurate and acceptable captions or descriptions. More recently, researchers have attempted to do the same for videos. Videos are more complex—they contain both video and audio data, have varying numbers of frames, and not all frames are deemed important.

Researchers have worked to solve these issues and have published numerous approaches and neural architectures to tackle these issues and generate good descriptions for videos. Based on one of these architectures and models, we propose an end-to-end system for generating video descriptions in text and speech formats. This system takes in raw video input and outputs descriptions in text format, which is then converted to speech for audio. It is made up of a pre-trained Bi-modal Transformer [3], which has a proposal generator, and a bi-modal decoder. It is able to utilize both audio and visual data in a video feed to generate better descriptions.

This system can be used conveniently by common users to understand the events of a video and has numerous use cases—but more specifically, it is a system for the visually impaired to understand the events in front of them.

Keywords - Activity Recognition, Dense Video Captioning, Machine Learning as a Service, Natural Language Processing

TOP T.E. PROJECTS

1

TITLE: YOGA POSE DETECTION AND CORRECTION USING POSENET AND KNN
GUIDE: MRS. ANGELIN FLORENCE A
STUDENTS: DIWAKAR SHAH, VIDYA RAUTELA

Abstract:
Yoga has a wide variety of asanas and here comes the role of the angle between body parts. Developing strong core muscles are important for human being. The work tested on an education organization that aims to strengthen core muscles by providing yoga-like poses. The technique proposed is almost accurately correct the human pose while performing yoga asanas. This proposed system maintains high accuracy while achieving real-time performance in most cases. The cosine similarity technique is used to consider the variance of the angle with original values. Critical angles come with a critical combination of angles and hence multiple dimensions need to be considered. This system finds the variance between actual and target positions and corrects the user by providing proper guidance with image output in real-time to correct the detected pose. In this project human poses estimation for estimating the Yoga pose of the individual using computer vision technique and Open pose (open-source library) is used.

Keywords - Open pose, Pose net, KNN

2

TITLE: MOVIE RECOMMENDATION SYSTEM USING COLLABORATIVE FILTERING
GUIDE: DR. RAHUL KHOKALE
STUDENTS: NEEL BHATT, PRATIKSHA LALDAS

Abstract:
Collaborative filtering is one of the most effective and adequate technique used in recommendation. The fundamental aim of the recommendation is to provide prediction of the different items in which a user would be interested in based on their preferences. Recommendation systems based on collaborative filtering techniques are able to provide approximately accurate prediction when there is enough data. User based collaborative filtering techniques have been very powerful and success in the past to recommend the items based on user's preferences. But there are also some certain challenges such as scalability and sparsity of data which increases as the number of users and items increases. In a large website, it is difficult to find the interested information in a certain time. But the recommendation system filters out information and items that are best suitable for us. Although there are different recommendation approaches, yet collaborative filtering technique is very popular because of the effectiveness. In this work, movie recommender system has been described, which basically uses item-based technique of collaborative filtering to provide the recommendations of items. The system is implemented in python programming and on Django framework. The results given by the proposed system are better than the existing technique on the basis of optimality and speed.

Keywords - Collaborative, movie, Pearson correlation, recommendation system
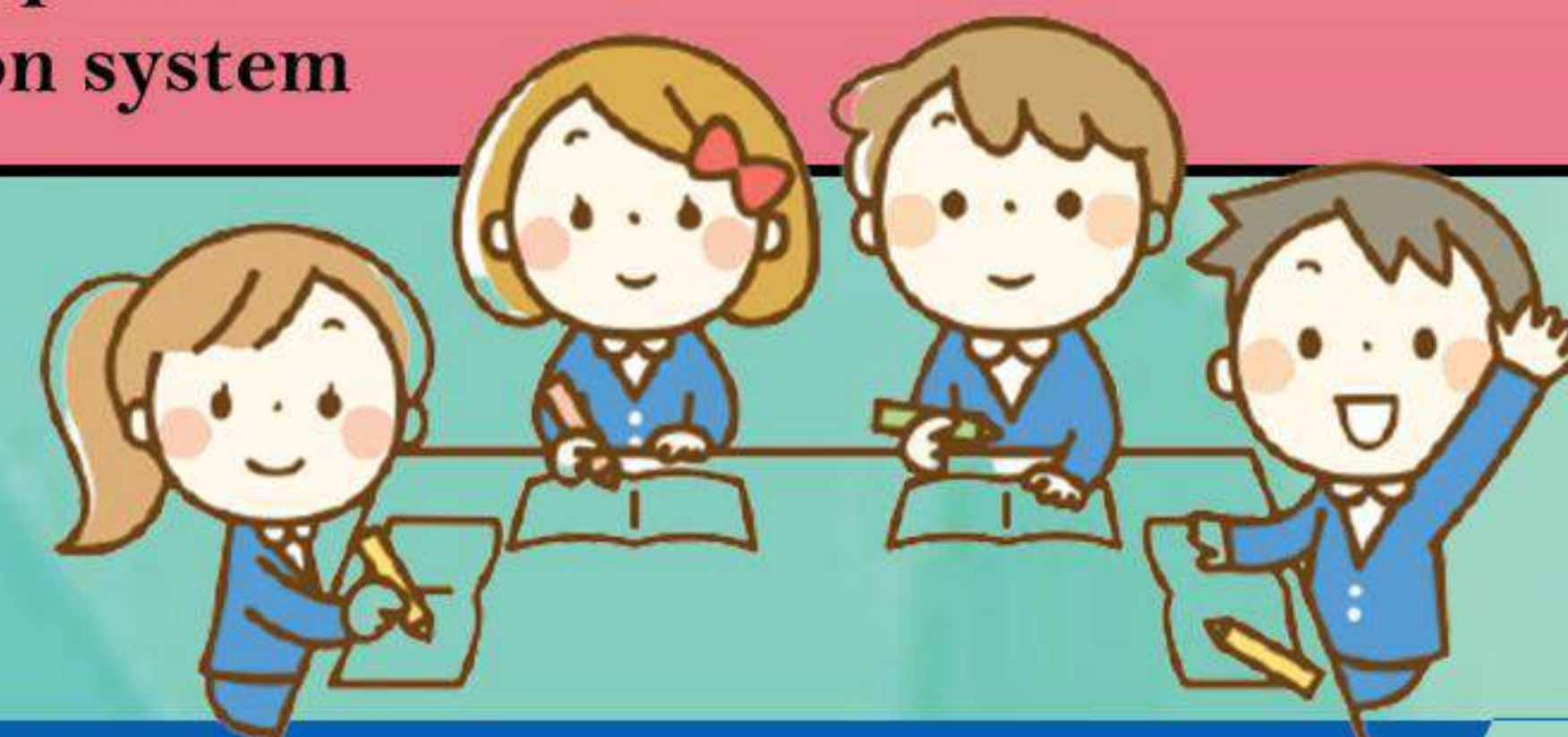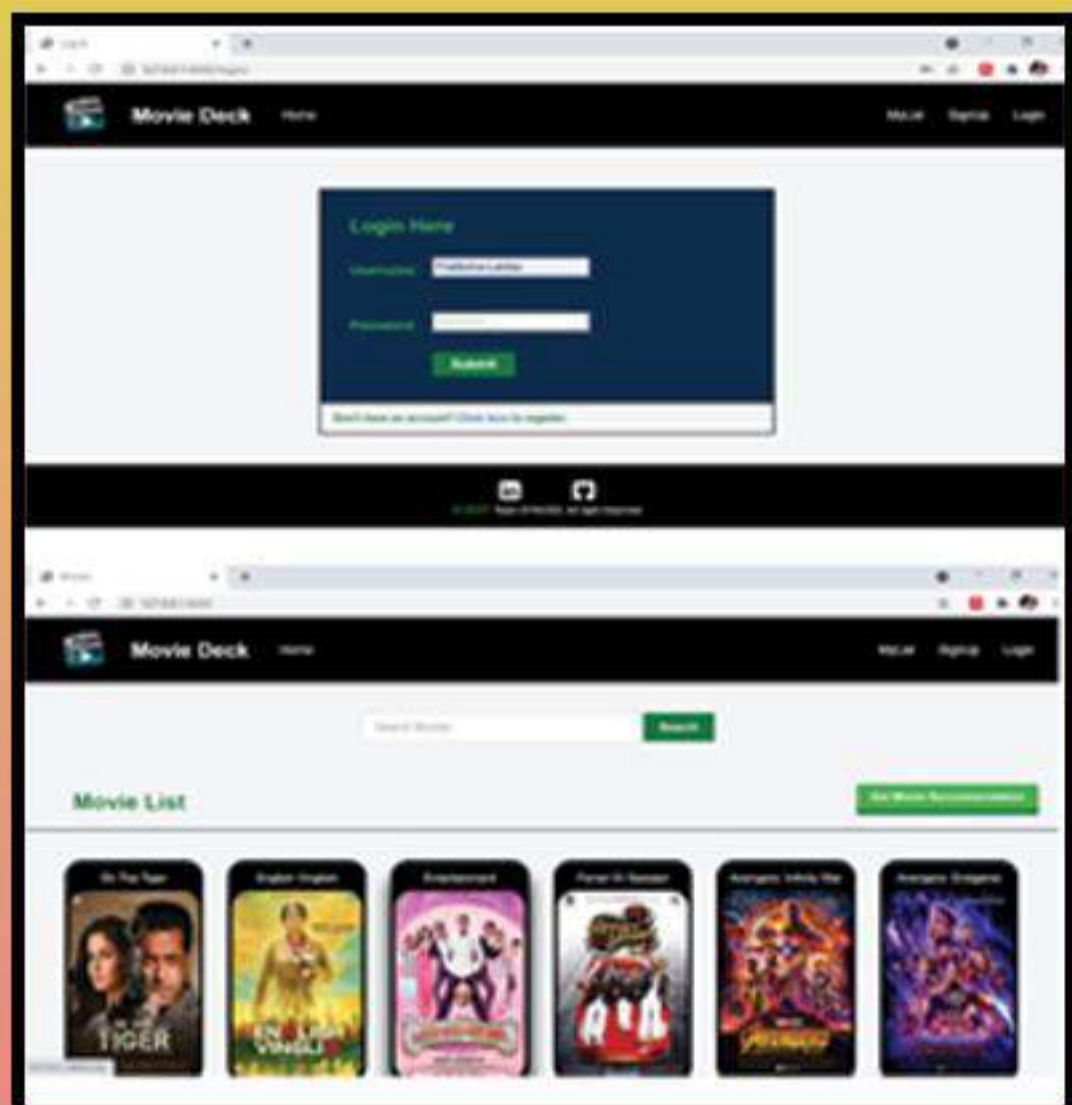
"There are no secrets to success. It is the result of preparation, hard work, and learning from failure."
- Colin Powell

3

TITLE: MACHINE LEARNING PREDICTION MODEL FOR PREDICTING FUTURE RISK OF SUICIDE
GUIDE: MR. VIVIAN LOBO
STUDENTS: ADITYA SINGH, ASHWIN TIWARI, SHREYASH SINGH

Abstract:

Suicides are censorious issue in this modern society. In India, suicide ideation is noticed to be one of the most common trends in youth. With each succeeding year the suicide rates are increasing dynamically in India, the southern and eastern states of India show trends of higher suicide rates. Current methods of suicide ideation detection include clinical visits, online counselling, etc. Our approach is to introduce an automated system which specifically focuses on the rates of suicides in vivid states of India and predict the future count of suicides on the previously observed data trends and also to predict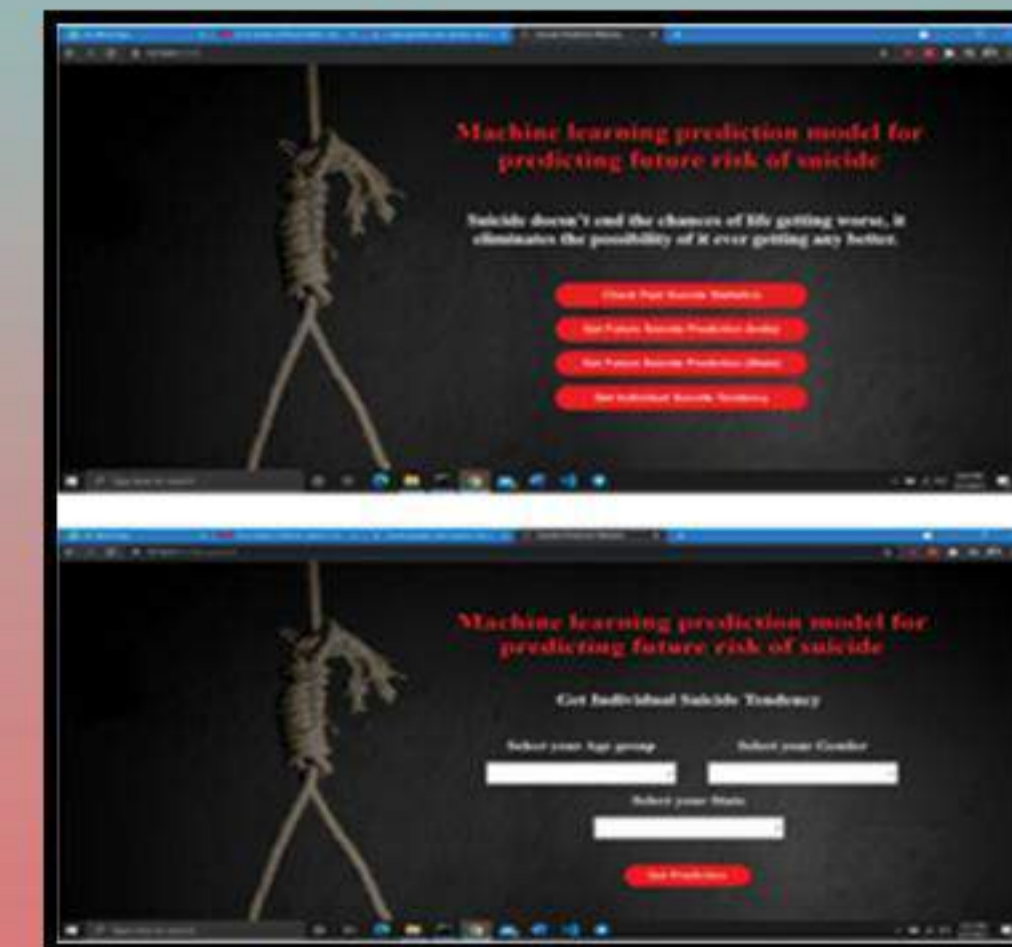 the future risk of suicide based on the parameters available. The machine learning algorithms used in our project are Linear regression and Decision Tree.

Keywords - Algorithms, Decision Tree, Linear Regression, Machine Learning.

TOP S.E. PROJECTS

1

TITLE: SMART BLIND STICK
GUIDE: MR. SUNNY SALL
STUDENTS: RIDDHI PATIL, PRANAY SHIRKE, PRATHAMESH CHAVAN, BAIT CHETAN

Abstract:

Today technology is growing to a greater extent, however there is no cost-effective device for visually impaired people. For a visually impaired person it becomes impossible to do his/her day-to-day activities, therefore Smart Blind stick can help visually impaired people in moving and allowing them to perform their work easily. The smart stick will have sensors embedded with it, thereby it senses the objects/intruder, when any objects or obstacles come in range of an ultrasonic sensor then the person is alerted with a quick response time using a Buzzer. Designing a cost effective and efficient blind stick is the main aim of the project.

2
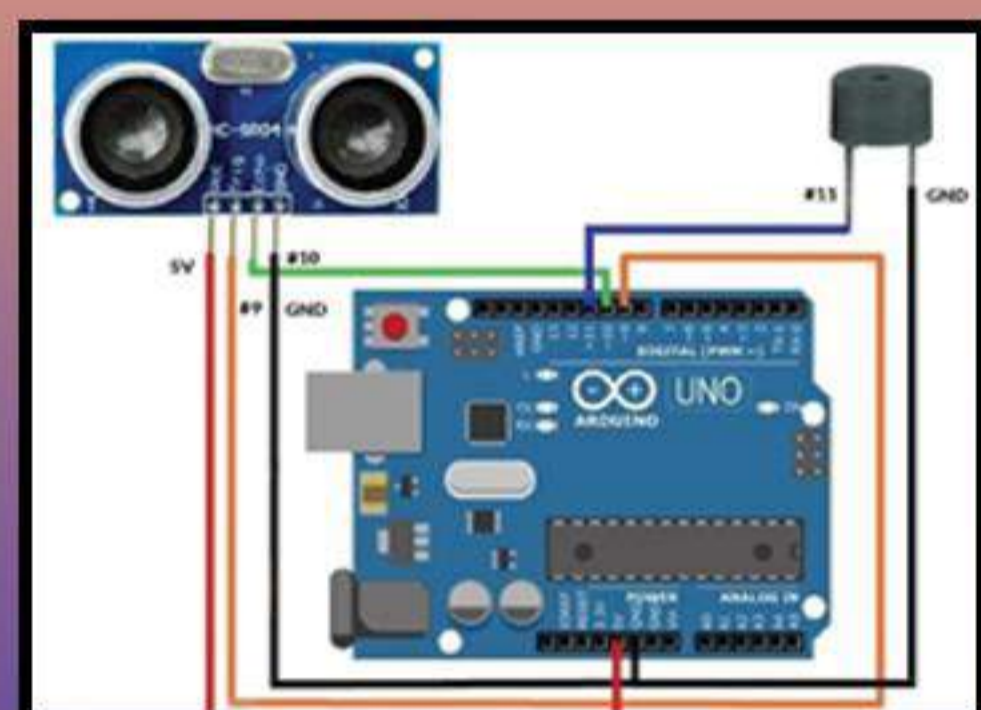
TITLE: AUGMENTED REALITY BASED EDUCATION FOR SCIENCE STUDENTS
GUIDE: MS. SANA ANSARI
STUDENTS: CHINMAY DANDEKAR, OM THAKRE, SAISH PADAVE, SWARNAV DATTA

Abstract:

A learning interactive project is developed to provide a platform for students to interact more in the learning environment compared to conventional learning environment. This project purposes a conceptual model for exploring the prospect of a new form of Virtual Reality (VR) application called Augmented Reality (AR) technology in education domain. AR sets itself apart from VR by allowing integration of 3D virtual objects into real environment in real time thus allowing student to relate with their physical environment and also making learning more interesting. AR learning offers interaction such as screen touching, device flipping, device rotating, etc. to let users experience a new technology learning style. Overall project has less difference in term of materials of learning, changes will be made in term of performances and how represent the materials in AR such as adding multimedia elements and sound. This project will benefits teachers as well as students. It provides the teachers teaching aids and transforms the learning session to be more interactive, attractive and effective. It will assist students in building their creative thinking, improving their comprehension, and changing the paradigm of learning.

3
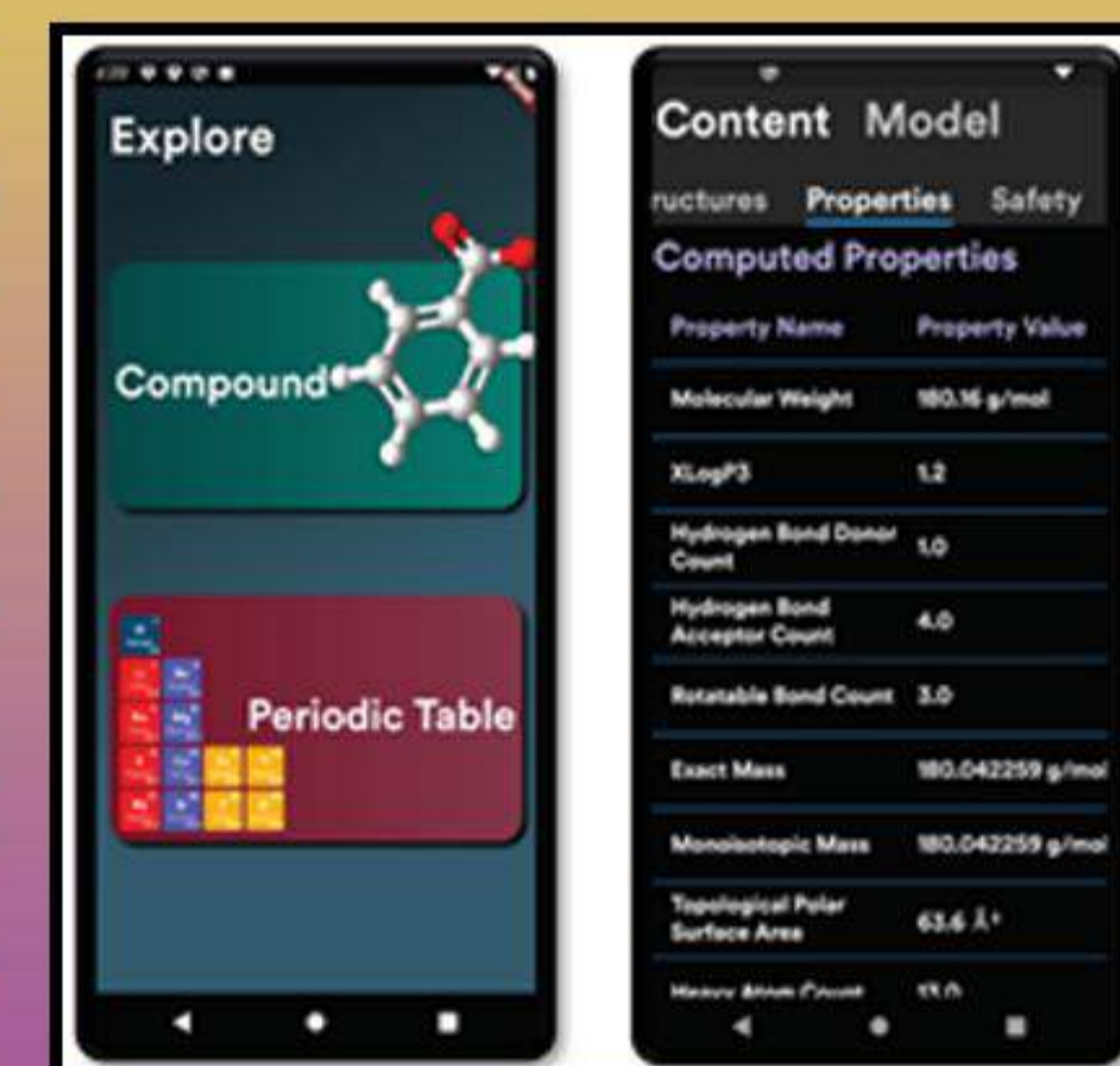
TITLE: ELDERLY CARE SYSTEM
GUIDE: MS. NANCY NADAR
STUDENTS: BHAKTI BAILURKAR, PRADNYA INGALE, SAKSHI SAVE, RUTUJA ABHANG

Abstract:

Elderly care is one of the important issues in the medical field facing all over the world. Currently, the paper-based testing and recording methods are commonly used in various care centres which leads to wastage of manpower as well as it may cause mistakes from different medical staffs in assessment. In a world with an accelerated aging population, there is an increasing interest in developing solutions for the elderly living assistance. This project aims at measuring some of the cognitive function for elderly people by the technological approach. In accordance with several research results, they indicate that game-style learning can be useful to slow down degeneration of mental health. Therefore, an attempt to develop a game-based cognitive measures system on the basis of Mini-Mental State Examination (MMSE) is to examine Cognitive functions. The game-based measures system will motivate elders during examination and reduce mistakes from manpower process. Most importantly, the Web-based management system will cost down efforts in tracking and analysing mental status of elders.

"Talent is cheaper than table salt. What separates the talented individual from the successful one is a lot of hard work."
- Stephen King

Placement Details
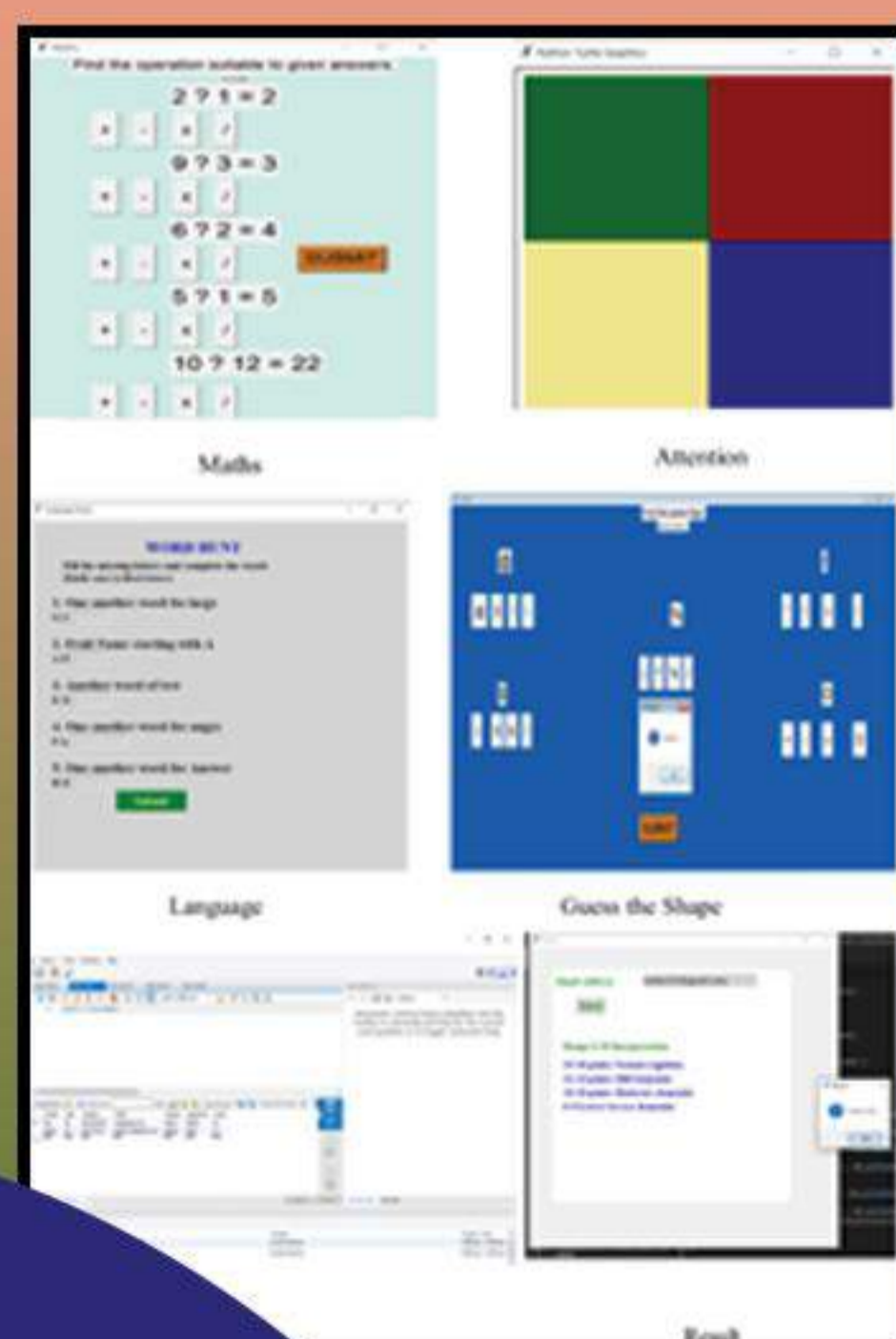
Omkar Patil
BYJU'S, Nashik | 10.00 LPA

Prathamesh Ayare
LTI, Mumbai | 10.00 LPA

Kanishk Singh
Thinkyfy, Mumbai | 10.00 LPA

Ambuj Mishra
TCS, Mumbai | 7.00 LPA

Raj Kushwaha
LTI, Mumbai | 8.00 LPA

Nandini Patil
Accenture, Mumbai | 6.50 LPA

Abhishek Tiwari
TCS, Mumbai | 7.00 LPA

Shreya Patil
LTI, Mumbai | 5.00 LPA

Amey Khale
Contentstack, Virar | 6.00 LPA

Devyani Mandwade
FIS, Mumbai | 5.00 LPA

Devika Babrekar
FIS, Mumbai | 5.00 LPA

Nischay Wade
FIS, Mumbai | 5.00 LPA

Sachin Patkar
FIS, Mumbai | 5.00 LPA

Hiren Shukla
FIS, Mumbai | 5.00 LPA

Saket Deshmukh
LTI, Mumbai | 5.00 LPA

Roshan Gupta
Accenture, Mumbai | 4.50 LPA

Alex Chettiyar
Accenture, Mumbai | 4.50 LPA

Rohini Singh
Accenture, Mumbai | 4.50 LPA

Saurav Waghade
Accenture, Mumbai | 4.50 LPA

Scan here

"If we all did the things we are capable of, we would literally astound ourselves."
- Thomas Edison

T.E — **Jui Patil**
Verzeo (Machine Learning)
1 month

T.E — **Kaif Gour**
Career Dreams Educations
(Web Development)
3 months

T.E — **Saujanya Shetty**
The Spark Found.
(Data Science)
1 month

T.E — **Kaushik Iyer**
Verzeo (Machine learning)
3 months

T.E — **Ishika Wade**
Kreartors Technology
(Web Development)
1 year & 3 months

T.E — **Akanksha Patil**
Azure Skynet Solutions Pvt. Ldt.
Android App Development
10 days

T.E — **Himanshu Kushwaha**
Kreartors Pvt ltd (Web Development)
2 months

T.E — **Nidhi Gharat**
The Spark Found. (Machine Learning)
1 month

T.E — **Diwakar Shah**
Scinotic Solutions Pvt Ltd
Development, Database and Testing
8 months

T.E — **Chirag Sharma**
Scinotic Solutions Pvt Ltd
Development, Database and Testing
8 months

T.E — **Rutuj Gopale**
Synergina Pvt.Ltd. (Graphic Designer)
3 months

B.E — **Suraj Gupta**
Daten & Wissen (Website Development)
1 month

B.E — **Prathamesh Ayare**
Cosmic Web Solution
Cross Platform Mobile App Development
1 year, 2 months

S.E — **Shreyas Sureshkumar**
Krupa Computers
Training on Repairing Computers
1 month

T.E — **Parth Bhatt**
Kyron Technologies pvt. Ltd.
Machine Learning with AI
2 months

T.E — **Sarvesh Joshi**
Smartknower
Cyber security and ethical hacking
2 months

S.E — **Ritika Rajak**
Internmind Campus Ambassador
15 days

For More Scan This...>>

It was a beautiful journey of 4 years at SJCEM. There are so many memories to cherish. I feel blessed that we got such amazing faculties who constantly supported us and stood by us. Our learning never stopped even during pandemic. I am thankful to all of them.
And to the juniors I would say, we always wait for the future to come and once it comes we miss our past. So, enrich your present with your efforts to make your past cherishable and future successful. And not to forget, enjoy the journey. All The Best.

Graduate Engineer Trainee
L & T Infotech
Passout year : 2021

12:00 PM · Sep 1, 2021

49 Retweets   **36** Quote Tweets   **412** Likes

Ms. Shreya Patil

In the final year, concentrate more on aptitude, programming basics and communication skills to get placed in a good company.

Asst System Engineer
Tata Consultancy Services
Passout Year : 2021

12:00 PM · Sep 1, 2021

51 Retweets   **12** Quote Tweets   **230** Likes

Mr. Mandar Prabhu

Start where you are. Use what you have. Do what you can.

Founder & CEO at Bitmanity &
Sr. Product Designer at Bijak
Passout year : 2017

12:00 PM · Sep 1, 2021

63 Retweets   **23** Quote Tweets   **326** Likes

Mr. A. Rehman Deraiya

These four years of engineering were really amazing for me and the memories I made at this place are precious. The only advice I would like to pass on is "Chalte Raho, Ruko Mat". If you get a KT go ahead and clear it, if you get a low pointer; go get up and fix it. Each semester is a new opportunity, and if you're not good at technical skills,work hard to build the skills you want. You are never too late. And don't forget to enjoy this priceless time.
In the end, you need either good pointers plus communication skills or strong technical skills to get the job. So, plan accordingly.
Finally, ask your seniors to solve your confusions and not errors, work on your communications skills as well. They will play an important role in the placement interviews and in life & choose your project members wisely!
With time everything will change and will make sense to you. You just have to keep moving ahead in life.

Application Engineer, Backend
Content Stack India Pvt LTD
Passout Year : 2020

12:00 PM · Sep 1, 2021

56 Retweets   **23** Quote Tweets   **754** Likes

Mr. Altaf Shaikh

According to me, St. John College of Engineering and Management (SJCEM) is one of the best college in mumbai university here every teaching faculty focuses on the development and growth of their students. Every department here is quite friendly, supportive and helpful. I was a part of computer department, and my faculty was awesome. Teaching methodologies were interesting, faculty always stood behind us for any kind of support. Events like megaleio, MegaHack and science fest give us opportunities to acquire and excel our skills. SJCEM help me to realize my hidden talent and encourage me to enhance it. This 4-year journey boosts my confidence to face any challenges in my life and stood at the best place. Thanks to all my staff members and friends to be a part of this amazing journey.

Assistant System Engineer
Tata Consultancy Services
Passout year : 2021

12:00 PM · Sep 1, 2021

96 Retweets   **51** Quote Tweets   **216** Likes

Ms. Rohini Singh

Well... SJCEM was a second home to me. It meant a lot. Right from the first year, SJCEM kept supporting us in honing the skills we had and to use them perfectly with guidance from the faculties. The faculties are like friends to you and support you in every possible way. I would suggest to all readers to expand their knowledge, not to confine yourselves to the limits of the syllabus. Explore every event, fest and take active part which will help you boost confidence. Find your skill and work in that direction so that you enjoy what you are doing. I am grateful to our teaching and non-teaching staff who were always behind me to provide support. These memories I made at SJCEM are indelible!!

Assistant System Engineer
Tata Consultancy Services
Passout year : 2021

12:00 PM · Sep 1, 2021

203 Retweets   **123** Quote Tweets   **923** Likes

Mr. Jayesh Patil

Hello Everyone!
August 1st, 2017 - My first day in St. John College of Engineering and Management. It was a wonderful journey. My advice to you - build a team. Participate in events, come out of your comfort zone. That's how you interact with the world out there. Learning is a never ending process. Don't stick to the syllabus, gain additional knowledge about marketing, finance, management, Interpersonal skills; all of which are key skills. Build a strong resume and a portfolio. To be honest, programming is one of the most important skills nowadays. It helps you to think differently. As the President of Placement and Training Cell, I would suggest that you learn, practice, and apply: a complete cycle that will help you a lot to get your dream job! I have seen that Students lack motivation, not intelligence. So help your friends to achieve their goals. Lastly, believe in your teachers. All the faculties are very supportive and easily approachable. I feel fortunate to be a part of this amazing journey. I would like to thank all my teachers, friends and faculty of SJCEM. Wish you all the very best!

Application Developer
IBM India Pvt. Ltd.
Passout year : 2020

12:00 PM · Sep 1, 2021

42 Retweets   **12** Quote Tweets   **625** Likes

Mr. Smith Jethva

Learn to bridge the gap between 'I can' and 'I could' by availing all the possibilities and opportunities provided to you.

Master's in Computer Science
University of North Carolina at Charlotte
Passout year : 2021

12:00 PM · Sep 1, 2021

56 Retweets   **43** Quote Tweets   **492** Likes

Mr. Akash Nevatia

It was amazing studying at SJCEM and it felt great.

Software Developer
Mphasis
Passout year : 2017

12:00 PM · Sep 1, 2021

10 Retweets   **2** Quote Tweets   **120** Likes

Mr. Mayur Chaudhari

The inspiration, support, and guidance that I received from SJCEM, coupled with hard work on my part turned my dreams into reality.

LTI (LNT infotech)
Passout year : 2021

12:00 PM · Sep 1, 2021

41 Retweets   **5** Quote Tweets   **236** Likes

Mr. Prathamesh Ayare

"If you're offered a seat on a rocket ship, don't ask what seat! Just get on."
- Sheryl Sandberg

Design guide: Design process for a UI/UX project

Mr. Rahul Rane
B.E. (Computer Engineering)

User interface/user experience design is one of the fastest booming industries in the world. User Interface (UI) relates to the look of an interface. It is in fact related to design aspects such as color contrasts, typography, illustrations, and design systems. User Experience (UX) deals with the sense of satisfaction that we have while engaging a particular interface. It is related to the psychological aspects of a design process such as being empathetic towards its users. With the advancement in technologies, people are engaging more in digital interfaces. Designing these screens has been challenging since the need for constant upgrades and features in any web or mobile-based interfaces. So, how do we actually solve and overcome these design challenges?

The following steps can be effective while designing any UI/UX project:

1. Research
Having ideas or problem statements is one of the first and crucial steps of the research process. Any research carried out depends on the ideas needed to be implemented. Any research carried out should be in the context of the target audience of the project. On many occasions, the ideas or opinions of the target audience in the research turn out to be helpful in the further stages of the design process. Feeling empathetic toward the target audience is the key in this step of the design process. There is also a possibility that new ideas or problem statements might be discovered while carrying out the research. Zoom, Google forms, and Survey Monkey can be helpful while carrying out your research.

2. Ideate
The next step is defining and ideating features. Coming up with new features requires a lot of logical thinking, which can be done via brainstorming sessions; including timely and constructive feedback from all designers, developers, managers, and stakeholders is essential as it helps gain more perspectives on the proposed features. The features that are proposed should meet the needs of the users and clients. Tools like Miro and FigJam can be used at this stage.

3. Information Architecture (IA)
It is basically laying out the process and features in an interface for a user to reach his/her ultimate goals. IA in simple terms is nothing but a flowchart of the interaction process. Designing a user-centric IA is important as we don't want our users to get lost or get confused while interacting with the interface. Tools like Miro and FigJam can be used to build IA.

4. Wireframing
This is the stage where the initial designing is done as a low fidelity mockup (a simple sketch of your interfaces using pen and paper) of the proposed interface. Designing a low fidelity mockup is crucial as a designer should be able to make changes effectively. It should be time and cost effective as there could be changes to the design in the later stages of the design process. Thus, designing high fidelity mockups (designed using digital tools) are avoided as it would not be time and cost-effective while making changes in the interface. Tools like Balsamiq are used to design wireframes.

5. Visual Design
This is where the proposed interface starts looking like the final interface, which the users would interact with eventually. Design aspects like typography, color contracts, illustrations, branding are used in this stage. Stakeholders get a look and feel of how the interface would turn out to be in the final stages of the design process. Tools such as Figma, Adobe XD, and Sketch are used to design visual mockups of the interface design.

6. Prototyping
In this process, users will be able to click, swipe, drag, and tap through the designed interface. Prototyping generally helps to decide if the designed interfaces are working with the needs of the user to navigate and achieve certain goals. Prototype designed should be such that the user could easily memorize and familiarize the interaction process. Popular tools used for designing prototypes are Figma, Adobe XD, Sketch, Invision Studio, ProtoPie, Framer, Principle, and many more.

7. Test
Testing helps to gain feedback of users and gain helpful insights to make any changes in bugs or features, which are not working out with the users. Answers like 'I Like', 'I wish', and 'What if' certainly helps designers to make appropriate changes and come up with different approaches to design. User testing, usability testing, and remote tests are carried out in this process. Tools like Crazy Egg, HotJar, Treejack, and Google analytics are used.

8. Handoff
Here, the designer has to hand off all the elements used in the designing process to the developers. Elements like design system used, SVG, branding images and the entire design files are passed on to the developers. For a handoff to be successful, a good designer–developer collaboration and understanding of its respective domains is vital.

Though the design process seems pretty linear, it is usually implemented in a non-linear fashion. Non-linear fashion means that example prototyping and ideate processes can be carried out together to test out any new ideas. These processes can be carried out simultaneously to obtain the best outcomes and test new ideas efficiently.

RISC-V: The road to a faster, more efficient chip

Mr. Swaraj Patil
S.E.(Computer Engineering)

RISC-V is an open-source instruction set architecture (ISA) processor chip that has been designed by the University of California, Berkeley to bring a new level of freedom to digital design. The brain of the chip, compiler, and peripheral works together in the same chip to achieve greater code portability and high performance. The RISC-V architecture is not tightly coupled with other components such as libraries, operating systems, and applications. As per the sources, RISC-V isn't aimed at serving only high-performance requirements. It is a flexible architecture that can be used by all sizes of companies. A single-board computer (SBC) powered by RISC-V could be implemented as small as a DTE module in an FPGA (Field-Programmable Gate Array) or as big as a full-fledged application processor.

Sometimes, to deliver performance gains, vendors have chosen to enhance the central processor (CPU) with low-level hardware modifications or other CPU-specific techniques. Such changes, however, often have a negative impact on system performance, especially when taking advantage of newer hardware features such as PCI Express (PCIe), NVMe, and IEEE 802.3bz. Making the CPU faster is unnecessary to build a superior solution. But the current state-of-the-art in terms of CPU design has run its course. It comes as no surprise that vendors are looking for other ways to improve performance. This technology will accompany a generation or more of engineers for their entire careers.

Automate your coding with GitHub Copilot

Mr. Om Thakre
S.E. (Computer Engineering)

GitHub Copilot—artificial intelligence (AI) in conjunction with a programmer is designed to speed up software development by suggesting functional lines that a developer can adapt to the coding style of AI. AI and machine learning models have been trained on billions of lines of code available on GitHub. It describes itself as "The AI equivalent of pair programming, where two developers work together on a single computer."

What is GitHub Copilot?
The machine learning developer tool offers assistance for software developers to identify and fix bugs. A lot of its functionality is geared towards improving the project management of projects and teams. GitHub claims that it gets smarter and better at identifying and solving problems over time. It will automate jobs like copy–pasting, finding parts of the text in a bug report that needs to be changed, suggesting how to fix a bug, and even fixing the problem automatically. GitHub Copilot can even tell you why a particular section of the code is failing at runtime. It will also look out for potential issues that might stop the progress of the project. For example, if a particular branch isn't getting 'green' status in terms of commit activity.

What does it do?
GitHub Copilot uses the context of comments and code to suggest individual lines and entire functions. It is powered by OpenAI Codex—an AI system based on public Internet text. It drives a deep neural network language model called Codex, which is trained on GitHub's public code repositories. By combining AI and a skilled developer's understanding, the software developed will be useful to all coders.

How does it work?
AI analyzes the code and suggests different solutions that might solve the code in more efficient ways. These solutions are created by AI and implemented to the code. As soon as you copy and paste a solution, it disappears and your changes to the code are implemented on GitHub as the real ones. When you revisit the code later, AI detects your solution and detects the next solution as well and suggests it to you. It is able to analyze large amounts of code, including programs written by other programmers.

Where can I find it?
GitHub Copilot was unveiled in June 2021 by an AI-driven pair of programmers and will go beyond standard code compilation, and other helpers like Intellisense and Intellicode will be available in Visual Studio Code.

In conclusion, as more and more developers prefer using machine learning in their projects using AI, software development has been one of the fastest developing trends in this field. To complement this development and make AI more useful for software development, we will see the evolution of AI in automation and automating tasks. Moreover, the future of AI will be explored to make it more useful and efficient for developer operations and software development.

## A future technology: Server-driven user interface

Mr. Dharmavir Yadav
B.E. (Computer Engineering)

Nowadays, no one wants to go to a store. Online services are offered to the public for shopping, net banking, paying insurance premiums, paying bills, and much more. Many vendors are trying to expand their businesses as much as possible, which has resulted in a high demand for mobile applications.
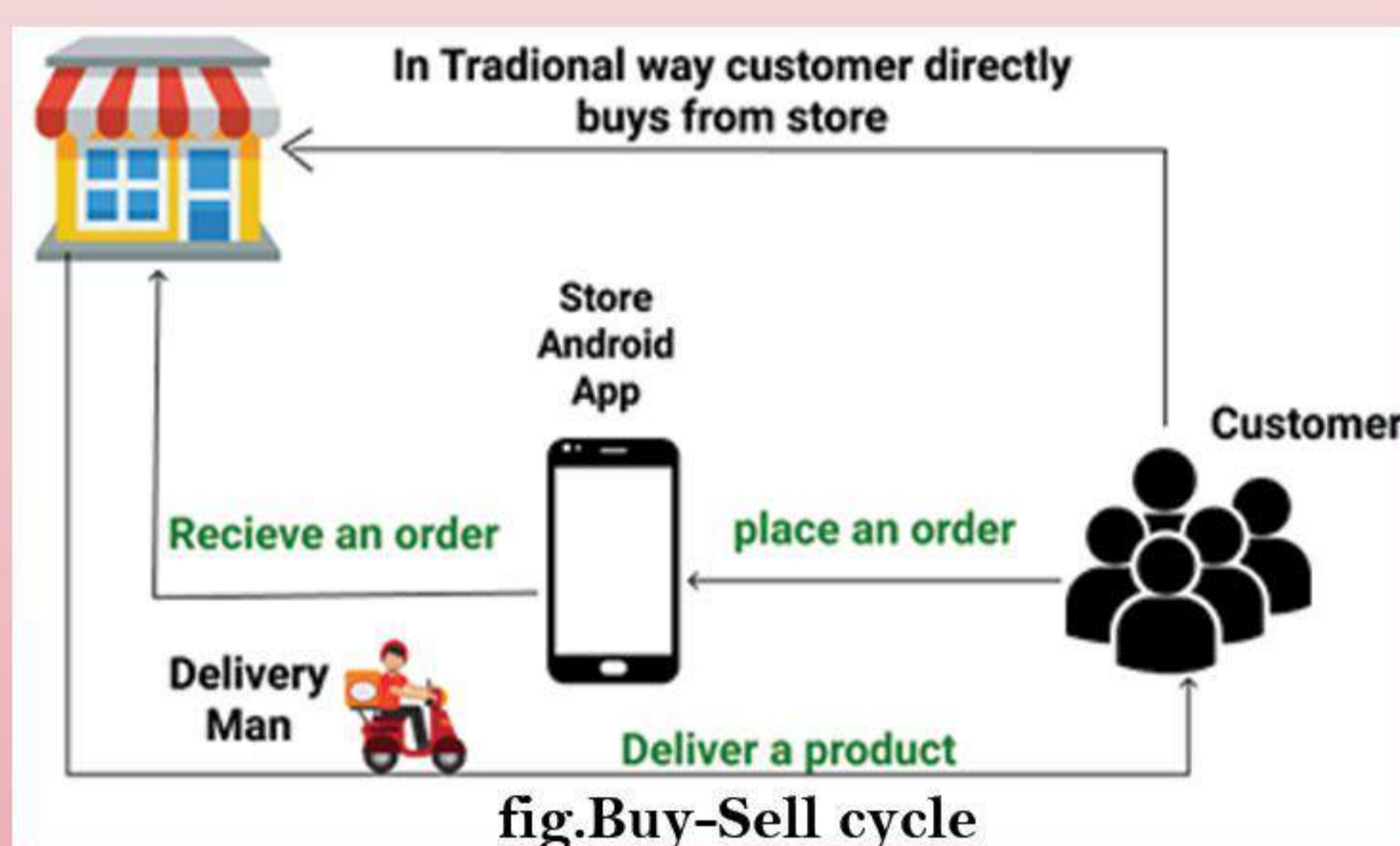
Developing an Android application is a process that take a considerable amount of time, and making small changes is a tedious task.

fig.Buy-Sell cycle

Due to the competition, vendors want to give different offers for users in different regions, along with different layouts. These changes are noticeable on online platforms like Flipkart, Amazon, and Zomato.

fig.Steps to develop an Android Application
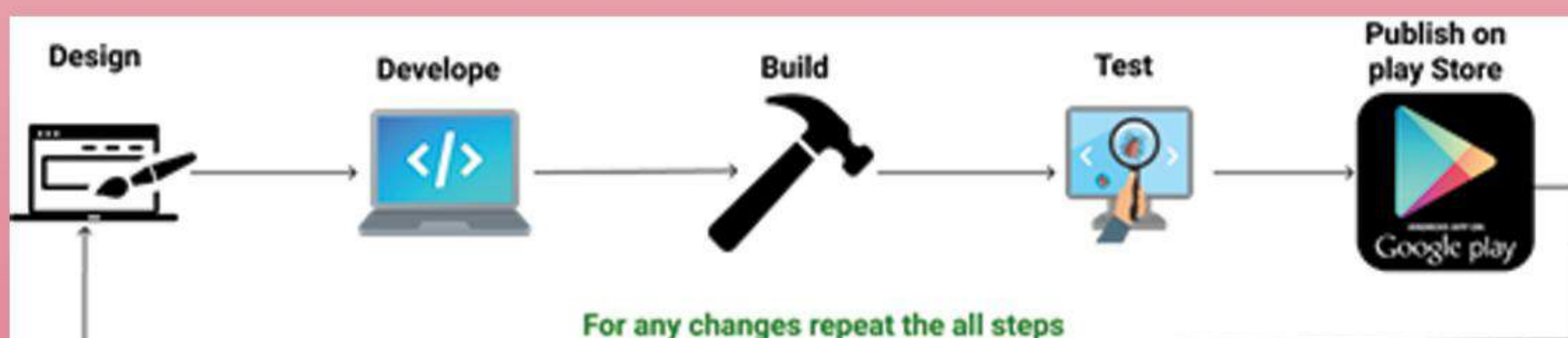
Companies are using server-driven UI to cater to this need as it is possible to change the display of the layout without affecting the functionality of the application. It makes the server responsible for displaying and controlling the views at the frontend. It is also called as backend-driven UI. In simple words, it helps to update the layout without a new update of an application.

fig.Working of a Server-driven UI
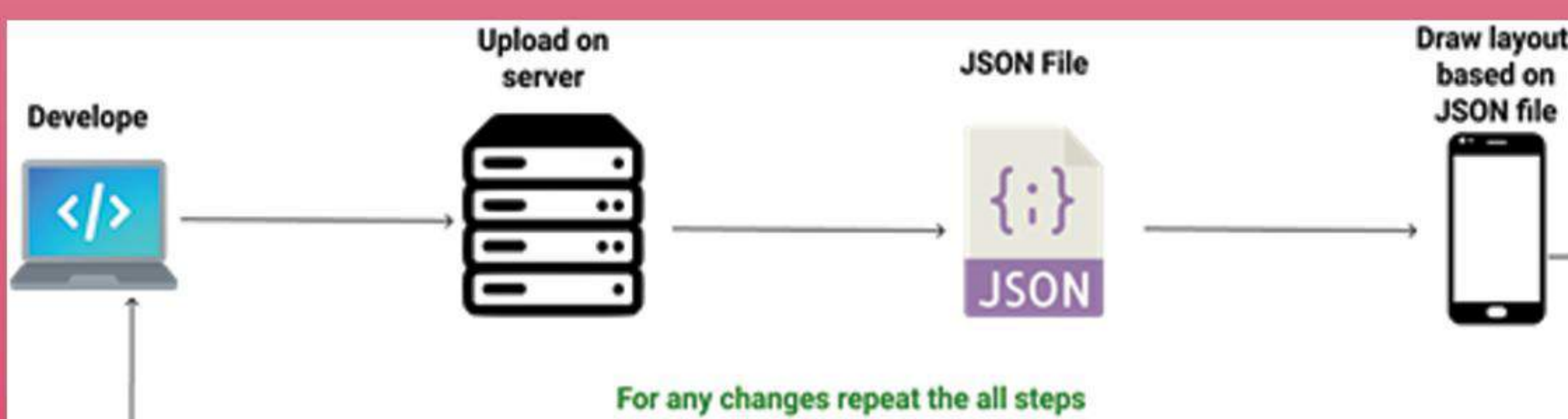
Server-driven UI works on new generated methods and packages, which offer freedom to design UIs without following traditional methods. These methods are capable of creating a UI from backend on request during run time.
There are many libraries out there:
1.Epoxy from Airbnb
2.Litho from Facebook
3.Proteus from Flipkart
4.Graywater from Tumblr

Python for Everyday Life

Mr. Vivian Lobo
Assistant Professor
Dept. of Computer Engineering

For every software engineer or a "to be" engineer, the greatest fear that prevailed was "how to code". As the traditional way of coding in programming languages like C, C++, Java, C#, etc. included lengthy lines of code, complex syntax and semantics, the not-so-friendly user interface (UI), amongst others, Python created a paradigm shift in the field of programming. Nowadays, Python is not only restricted in the fields of Computer/IT, but it has made a remarkable progress in the fields of Mechanical, EXTC, Electrical engineering, amongst others. Python is an easy to learn, understand, and powerful programming language. It possesses efficient high-level data structures and a simple but effective approach to object-oriented programming unlike Java or C++. Python's sophisticated syntax and dynamic typing—together with its interpreted nature—make it an ideal language for scripting and rapid application development in many areas on most platforms.

Python programming has removed monotonous or redundant tasks, and its thriving ecosystem has saved ones time and money while performing day-to-day tasks. Nobody wants to carry out boring and time-consuming tasks, i.e., days have 24 hours and one needs to gouge out most of this time for oneself—automating boring tasks gives back time to focus on what one really likes to do. A lot of applications can be developed effortlessly at work or spare time using Python. One such application that is developed is the Indian flag using Python programming. The output of which is shown below.
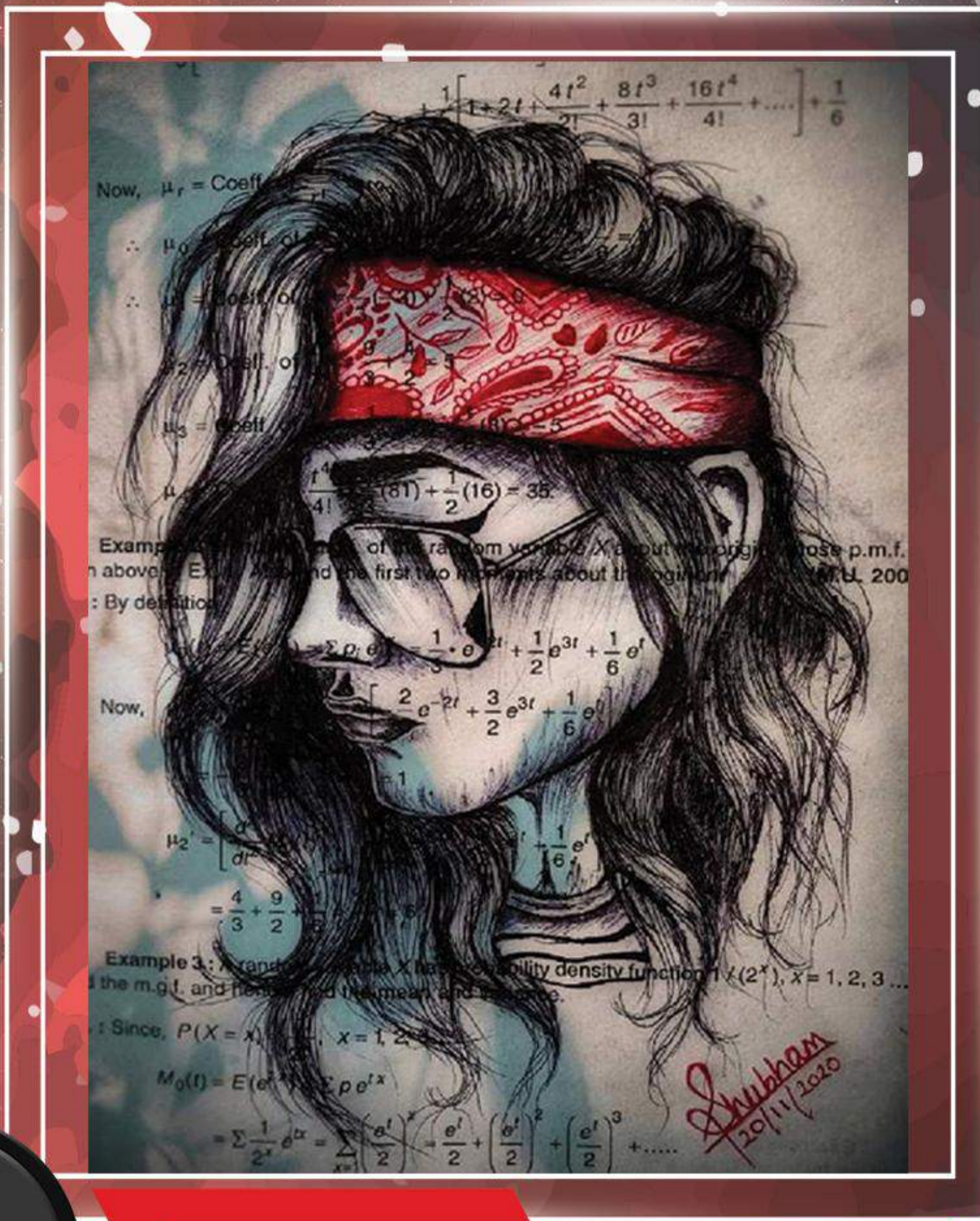

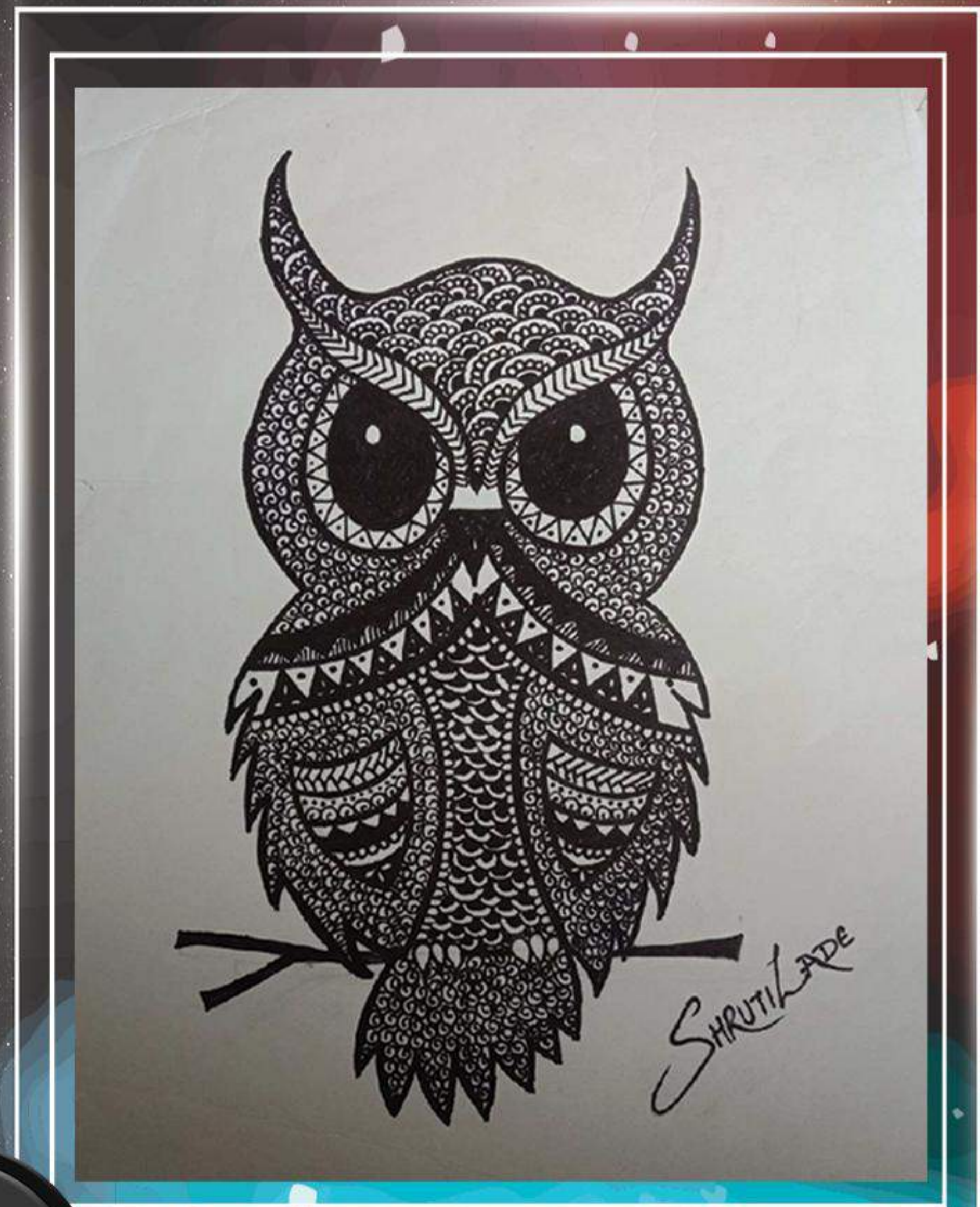To see how the tri-color is developed using Python, you need to scan this QR code.
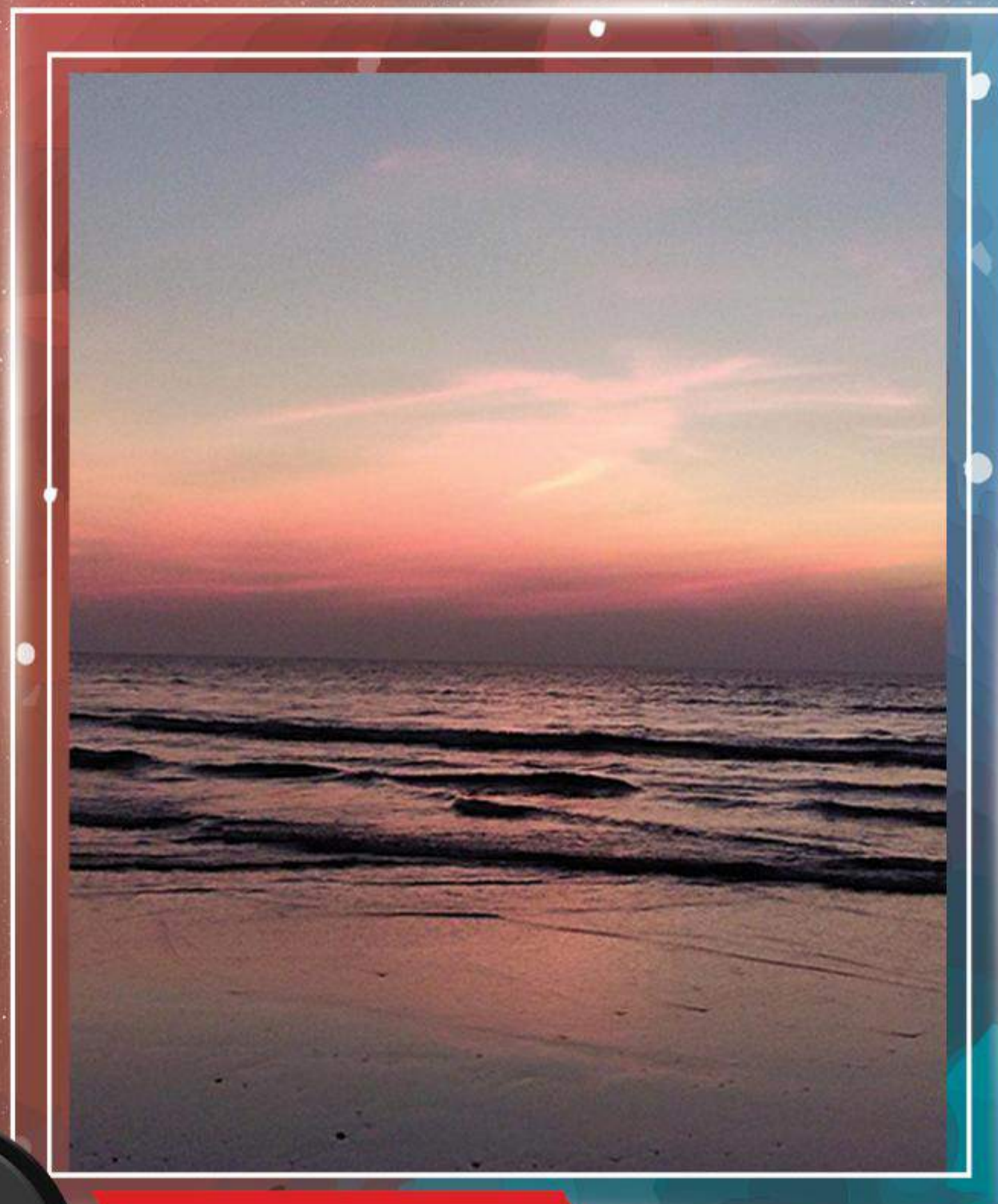

For More Scan This...

"It ain't what you write, it's the way you write it."
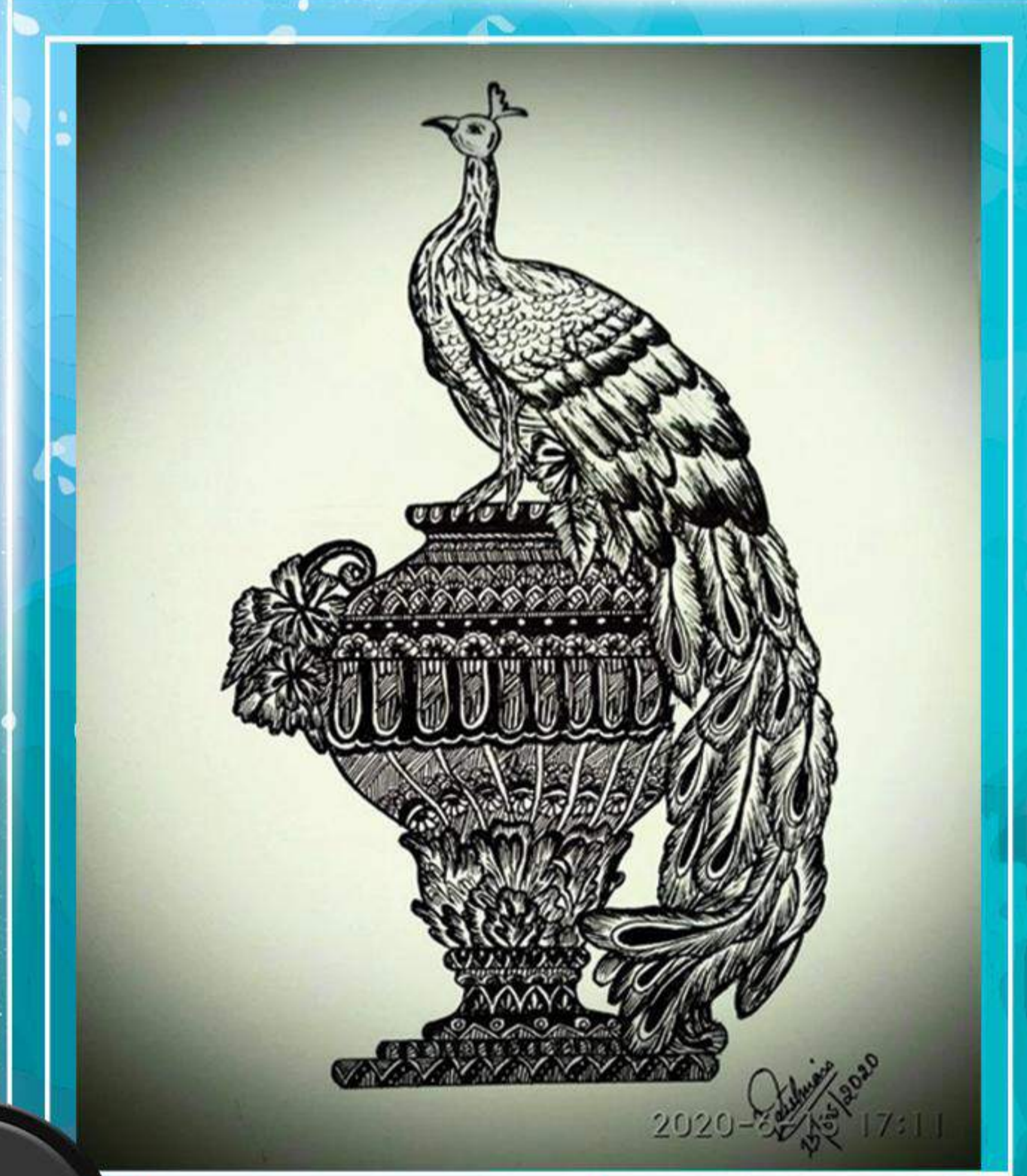— Jack Kerouac

T.E — Mr. Shubham Patil
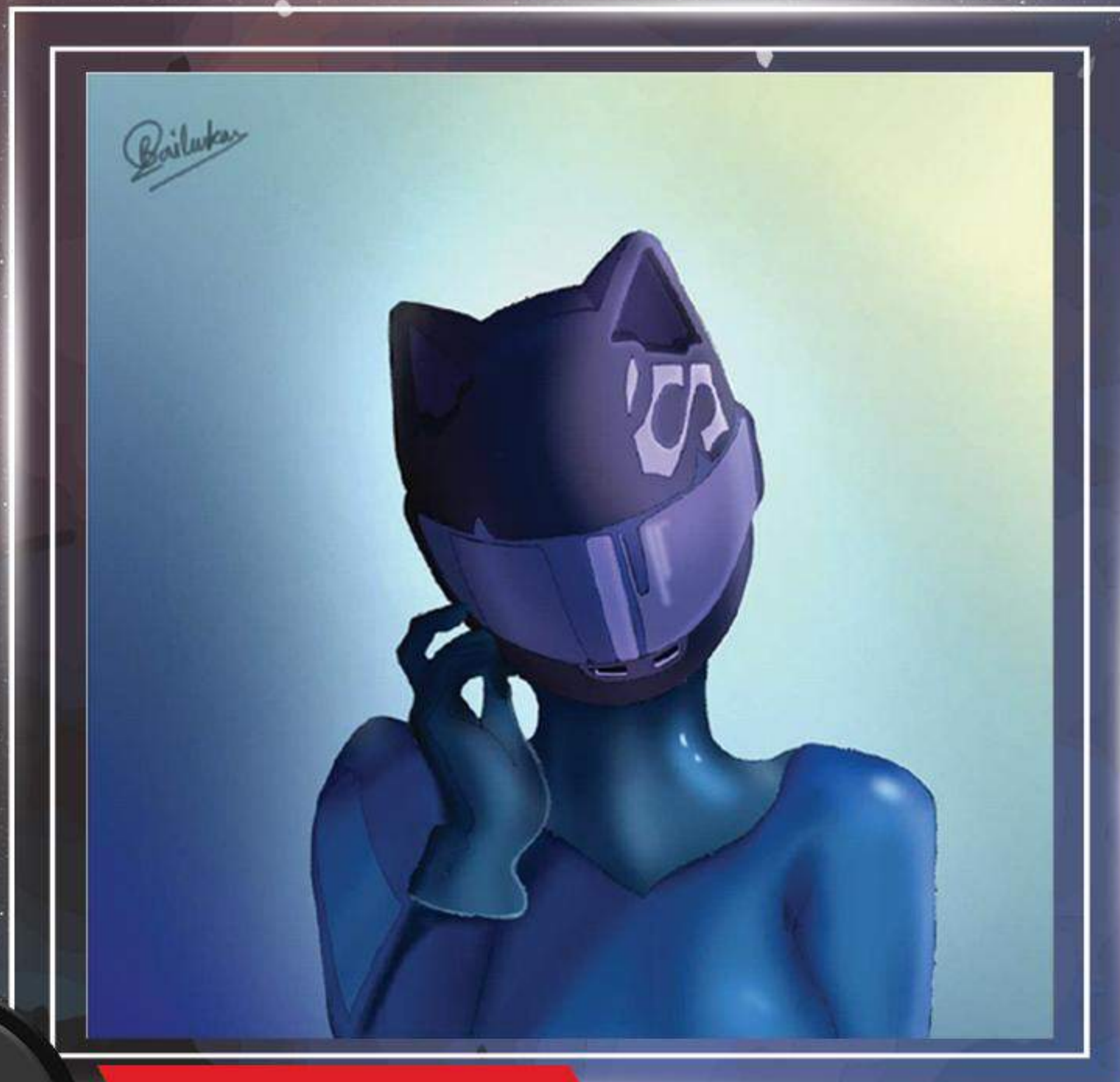

T.E — Ms. Shruti Lade

Assistant Prof. — Mr. Vivian Lobo

T.E — Ms. Vaishnavi Patel

S.E — Ms. Bhakti Bailurkar

Assistant Prof. — Mr. Vivian Lobo

"Art cannot be modern. Art is primordially eternal."
- Egon Schiele
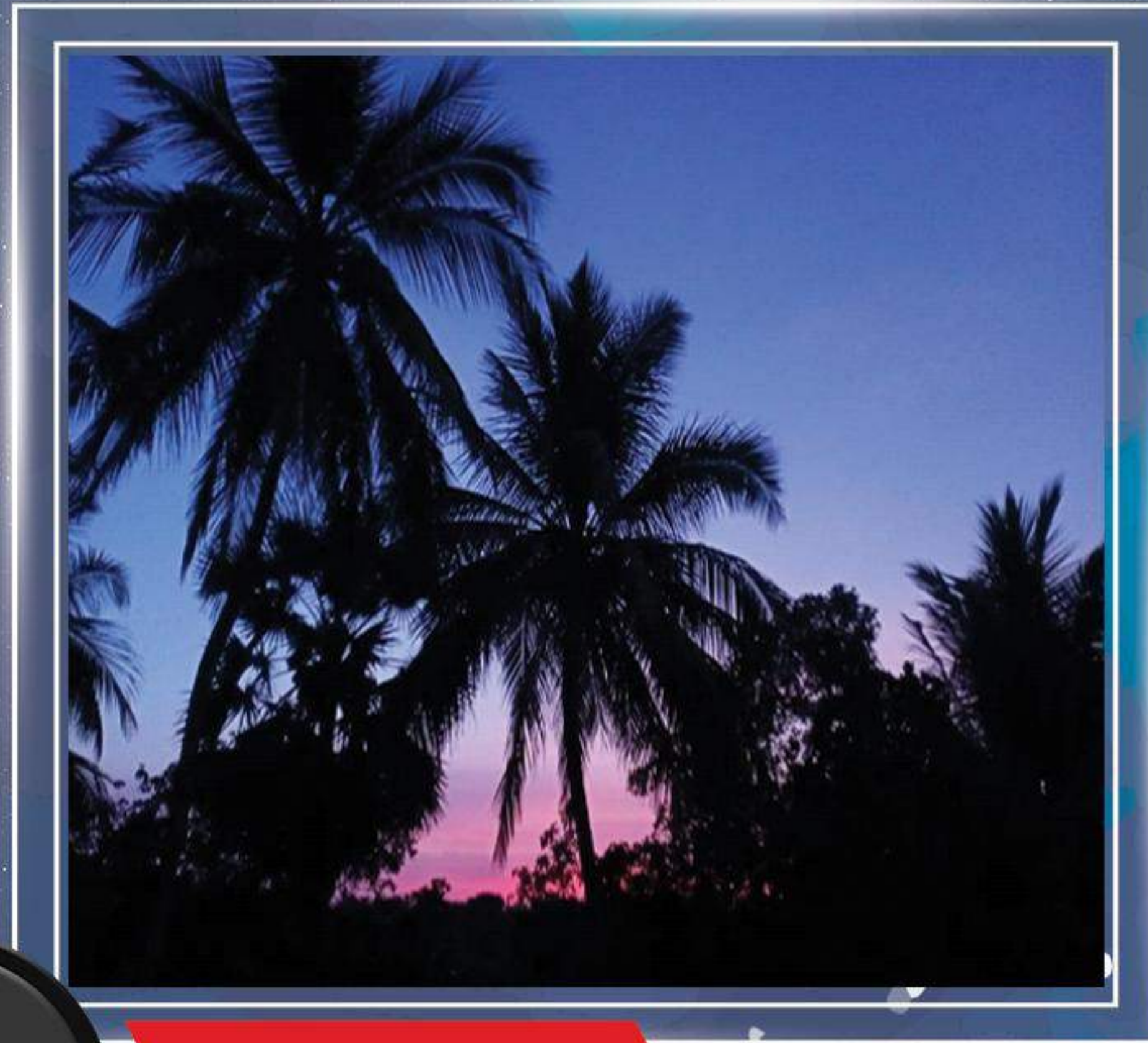
Assistant Prof.

Mrs. Rashmi Bhat

T.E

Mr. Krutik Patel

T.E

Ms. Tanaya Patil

For More Artworks
Scan This...

T.E

Ms. Sannidhi Shetty
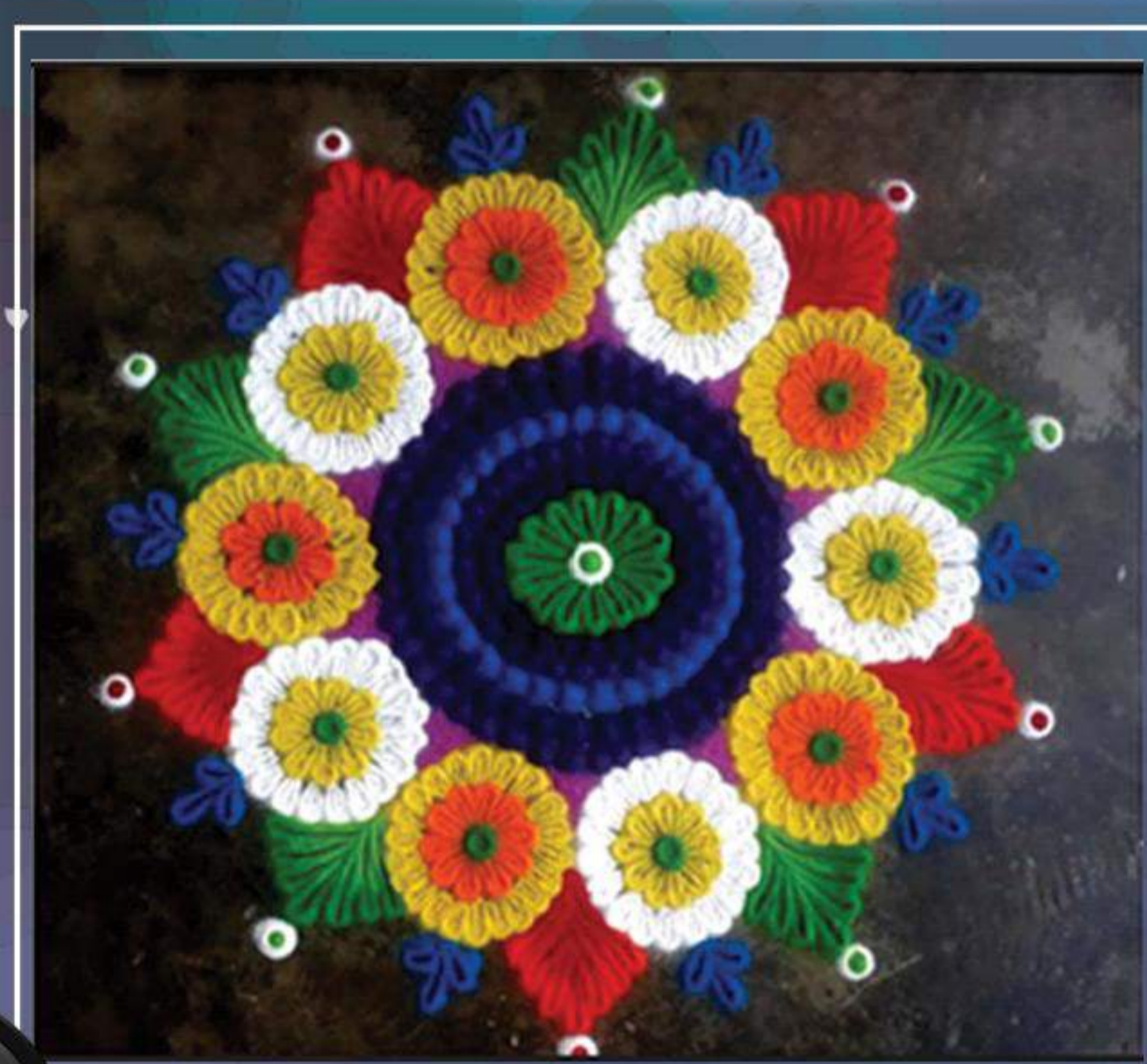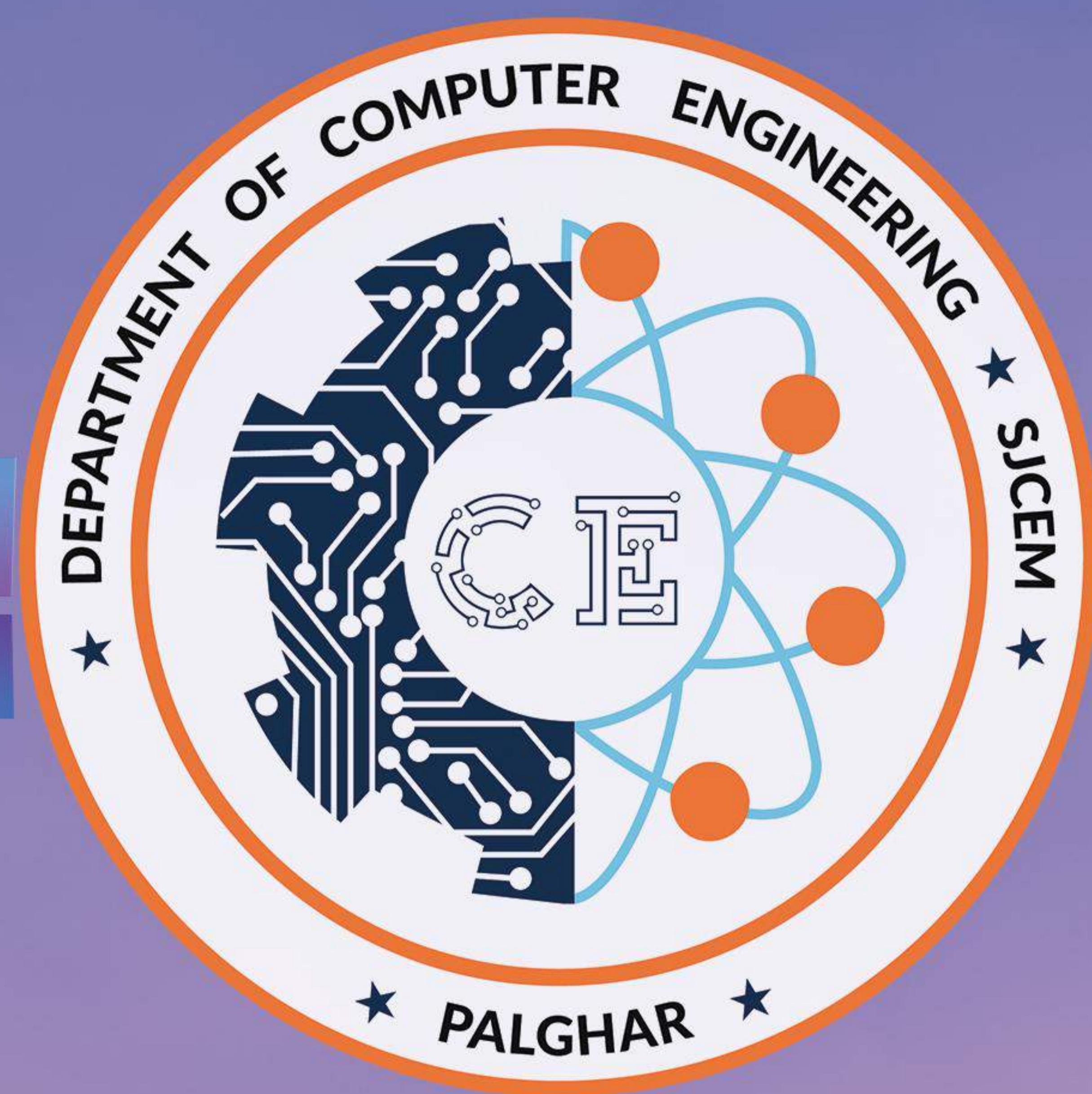

T.E

Ms. Juilee Kini

T.E

Mr. Harshkumar Patel

"Art evokes the mystery without which the world would not exist."
- Rene Magritte

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