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inline with trends

Parshvanath Charitable Trust's

A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE

(Affiliated to Mumbai University, Approved by AICTE, DTE and Govt of Maharashtra)

DEPARTMENT OF COMPUTER ENGINEERING

NBA Accredited

From the
Principal's Desk

Computing software and systems are becoming increasingly integral to our lives, revolutionizing virtually everything from the way we live, work and communicate. Computer Engineering is one of the most flourishing disciplines in recent times and is now also a key enabler for discovery and innovation in most other fields, making it an incredibly relevant course of study. With increased demand among recruiters, this domain has become the preferred line of study among students as well.

I whole heartedly welcome and congratulate you for choosing Computer Engineering Department in A.P. Shah Institute of Technology for continuing your educational journey. The department was launched keeping in view the dynamic nature of the IT industry and the ever increasing demand for quality and well-trained IT professionals. Right from its inception in 2014, the department has been offering excellent infrastructural facilities with a variety of computing platforms to motivate students to meet the burgeoning demands of IT industry.

The teaching processes are executed by highly qualified and experienced teachers who make good use of smart classroom facilities and Moodle software, thereby ensuring deep understanding of concepts through demonstrations and hands-on practice sessions executed under their keen supervision. Highly calm and supportive environment of institution develops a spirit of belongingness among staff and students resulting in a small community full of innovative ideas. I am very happy that the Department of Computer Engineering have compiled a newsletter. This is another platform for them to express and share their innovative ideas. Let us stride ahead as a family.

Dr. Uttam D Kolekar
PhD (Electronics and Telecommunication Engineering)

Vision

To become nationally reputed department producing universally competent engineers, to benefit sustained growth of an individual and the society at large.

Mission

1. To provide learning ambience for students and faculties through infrastructure, expertise and training.
2. To develop technically competent professionals with strong foundations, capable of adapting with the changing technologies for developing world class softwares.
3. To inculcate professional, social and ethical values in students by providing opportunities to solve environmental and social problems.

PREFACE

Dear Readers,

It is a matter of pride as well as pleasure to present before our readers this volume of Computer Engineering Department's Newsletter. The name "Opcode", very aptly sums up the vision of our Department. Opcode when decoded mirrors the success story of our Department. It reflects upon the commendable contribution made by all members of COMPUTER family in their fields of expertise as well as for the overall growth of the college. Opcode resembles the in house media echoing departmental activities. It will be circulated among all faculty members and students. Thereby Opcode will ignite and keep us powered to attain our vision.

Events in Opcode is a look back through all the activities of the Department in the academic year 2019-2020.In this period, we have organized a number of seminars and training programmes for our students. The department has also selected members for the departmental council, which goes by the name Computer Engineering Students Association (CMSA). Performance highlights our results which is constantly on the upward trajectory as well as the top- notch rankers in University and other competitive examinations. Achievements reflects upon the persistent and committed efforts made by faculty and students in taking the Department one step ahead. Students have proved their mettle by actively participating and winning prizes in technical, extra-curricular and sports activities. Faculty have also made quality publications in this period. Through Innovation, Opcode also provides a platform for our faculty and students to share their ideas and knowledge.

I would like to extend my sincere gratitude to our Chairman Mr.Chirag Shah, Trustee Mrs.Pooja Shah, other members of the Management, Principal Dr.Uttam Kolekar, Dean Academics Prof.Atul Deshpande, Dean Administration Dr.Sameer Naniwadekar for their ongoing support in all endeavours.I would like to congratulate and thank my faculty team for their every bit of service for the department and do expect the same in times to come. Congratulations to the members of editorial board and the students who combinedly helped in materializing this issue of 'Opcode'.

Prof. Sachin H Malave
Head of the Department

The Opcode Team

Editor-in-Chief:
Prof. Sachin H Malave

Magazine Co-ordinator:
Prof. Ramya RB
Mrs. P. S. Farkade

Designer and Content Editor:
Prof. Ramya.R.B
Mrs. P. S. Farkade

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APRIL
2019
VOLUME 2
ISSUE 1

EVENTS

IEEE EVENTS

Oath taking Ceremony
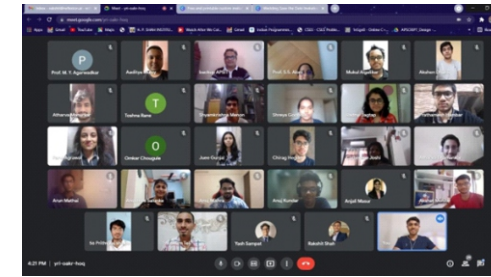
IEEE APSIT SB hosted Oath Taking Ceremony for the newly appointed IEEE APSIT Executive Committee for the Year 2020-21 on June 25 2021. 25 IEEE members along with Prof.Kiran Deshpande , Prof.S.S Aloni and Dr.Mugdha Agarwadkar as guests attended the Oath Taking Ceremony on Google Meet platform. The Oath taking was administered by the Aaditya Muley (SB Chair), Rakshit Shah (SB Vice Chair) & Mukul Aigalikar (SB Secretary) .

PODCAST

IEEE APSIT SB conducted a podcast on July 10,2021 at 15:00 hours. The first honorary guest was Dr. Akshay S Dinesh. The podcast was hosted by our SB's technical team lead, Arun Mathai. The podcast started with discussion on their experiences with technology like chatbots etc. and later on various interesting topics including open-source technology, AWS, coding and many more topics. The guest speaker also shared his knowledge about left to right, right to left thinking, healthcare accesses and talked about how he always had a keen interest in learning programming languages. The podcast concluded with an elaborate discussion on secure job trends, and how as a community we can encourage more people to think more freely and be able to contribute to the masses. The guest also tackled the questions from the viewers efficiently. The podcast was attended by 29 participants.

One Day Online Workshop "App Development using Flutter"

The IEEE SFIT in collaboration with APSIT SB organized an interactive session on Flutter on 12 September 2021 from 3.00 to 5.00 p.m. 210 participants attended the Session. The session was hosted by Preksha Prakash from IEEE SFIT SB and Chirag Hegde from IEEE APSIT SB. The speaker for the session was Mr. Aditya Thakur who is a Flutter developer and Speaker at Flutter Global Summit'21 .The speaker explained why one should use Flutter and what are the advantages and disadvantages of using Flutter as a framework over other Frameworks and basics of Widgets and Dart Programming Language . He also demonstrated how to use packages and plugins, how to make network calls and also shared resources to learn Flutter.
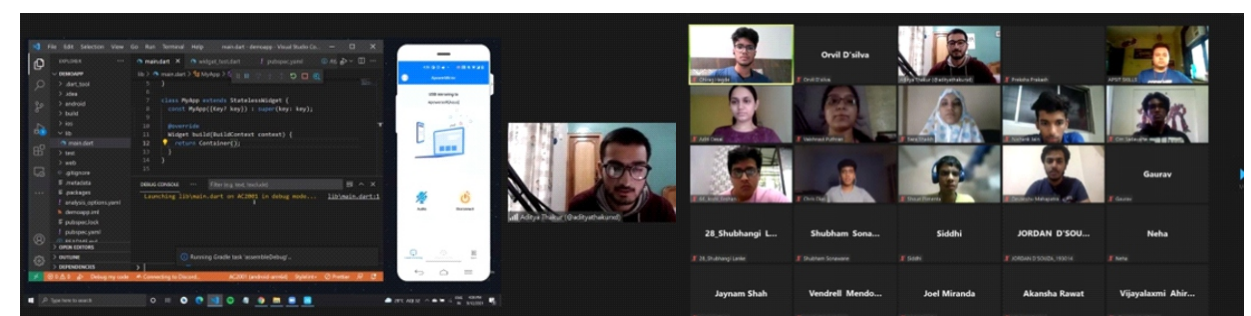
PEOs

- PEO-1: Graduate shall be competent to gain employment in global industry or pursue higher studies in premier universities.

- PEO-2: Graduate shall apply core competence in problem solving, analysis, Synthesis, Innovation to solve engineering problems in the global environment.

- PEO-3: Graduate shall demonstrate knowledge and skills learned in database management, data structures, Analysis of algorithms, Programming, Machine learning and allied technologies in the successful development of products, projects and processes.

- PEO 4: Graduate shall demonstrate leadership skills, professional ethics, Communication skills, interpersonal skills to work as effective team member in the professional practice.

- PEO 5: Graduate shall apply life skills and lifelong learning to lead a successful individual life and a responsible citizen to contribute towards development of society and country.

PSO

- To provide learning ambience for students and faculties through infrastructure, expertise and atraining.
- To develop technically competent professionals with strong foundations, capable of adapting with the changing technologies for developing world class softwares.
- To inculcate professional, social and ethical values in students by providing opportunities to solve environmental and social problems.

One Day Online Workshop "UI/UX DESIGNING"

The IEEE SFIT in collaboration with APSIT SB organized an progressive and interactive online session on "UI/UX DESIGNING" on 19 September 2021 from 3.00 to 5.00 p.m through zoom platform . 140 participants attended the session. The session was hosted by Preksha Prakash from IEEE SFIT SB and Chirag Hegde from IEEE APSIT SB. Session's Speaker was Mr. Pankhil Mistry who is a leading designer at Learnsignal . Mr. Pankhil Mistry had also previously worked in ed-tech space with upGrad .
Mr. Pankhil Mistry started the session with explaining what is Product Designing, UI & UX Designing, the difference between them, the importance of it in different professional fields and also how Product designing processes designers use to blend user needs with business goals to help brand make consistently successful products. He then elaborated how a UX

designer focuses on all aspects of a product including design, usability, function and even branding and marketing. Mr. Pankhil also named some resources for designing like Sketch, Axure RP, web flow and Figma. He mainly stressed on Figma and why is it one of the best tools for Designing, reasons being such as it is accessible on all types of computers, its free, developer handoff is seamless amongst couple other reasons. He further mentioned how Figma can be used for creating interactive prototypes ,designing mocks, build design systems,
visual designing, etc. and then he demonstrated its usage on a very well-known platform 'Instagram' as well.
Chirag Hegde from IEEE APSIT SB gave the Vote of Thanks and the event was closed at 5:15 p.m.
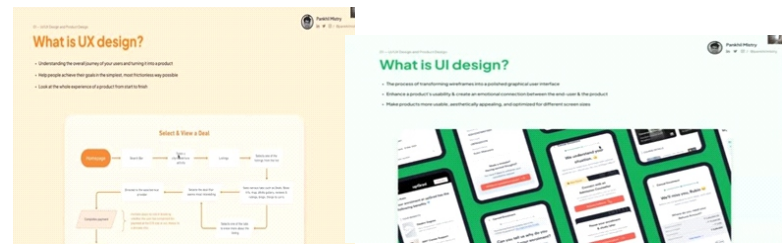
"OpenCV"- Workshop

The IEEE SFIT in collaboration with APSIT SB organized an interactive session on OpenCV on 26 September 2021. 78 participants attended the session.It was hosted by Steven Mathew Samuel from IEEE SFIT SB. The speaker was Mr. Varun Yerram who is a Research Intern at Chubu University, Japan and Deep Learning Intern at RethinkUX
The following Topics were explained by the speaker
- Introduction to Computer Vision
- Understanding Image and colour models
- Basic functionalities of OpenCV
- Drawing and writing texts on image
- Contours - Detection and Analysis
- Edge and corner detection
- Face Detection

The speaker also showcased some of his projects: -
1. Project Air Painting
This application allows you to track an object's movement, using which the user can draw on the screen by moving the object around. It also contains a hold feature, in which by showing another object you stop the camera from painting. It is useful in painting disconnected drawings. You can select colours and brush sizes according to your choice, by bringing the object's pointer on the palette.

2. AI SUDOKU Solver
GUI based Smart Sudoku Solver that tries to extract a sudoku puzzle from a photo and solve it
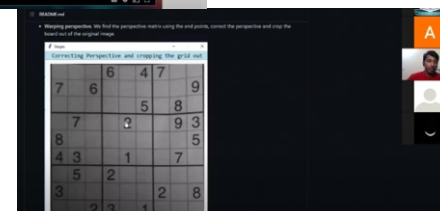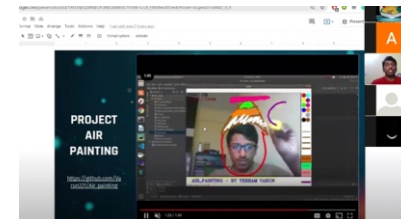
HEAL - FEEL, a health awareness program on occasion of World Heart Day

The department of IEEE WIE AG SJCE in collaboration with IEEE WIE AG APSIT has organized a webinar on HEAL - FEEL, a health awareness program on the occasion of *World Heart Day* on 29th September 2021, Wednesday between 6:00 PM to 7:00 PM through the Cisco WebEx meeting platform. The lecture in this webinar was given by Dr. Sridevi (B S.M.S, MSc CCRA, M.D(SIDDHA), CPK), Asst Siddha Medical

Officer, Govt. of Tamil Nadu. She's one of the members of the state medical officer association. The speaker tried to increase public awareness of cardiovascular diseases, including their prevention and their global impact. The speaker also shed light on ways to keep your heart healthy and how physical activity improves cardiovascular health.
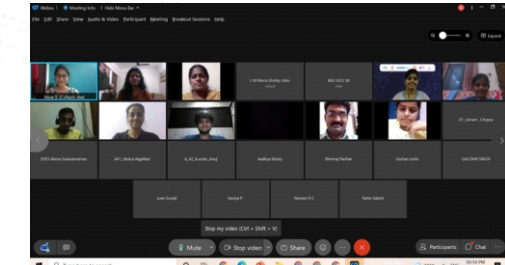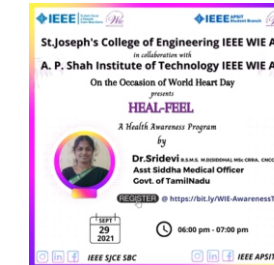
Breast Cancer Awareness

Techfest IIT Bombay , in association with IEEE WIE AG APSIT presented an Online Expert Session on Breast Cancer Awareness, organized by a professional speaker Ms. Anjali Sharma from Yes To Life NGO on 8th October 2021, Friday between 3:00 PM to 4:00 PM through the Zoom meeting platform. The speaker spread awareness

on how breast cancer progresses into stages, what are their signs and symptoms. A live demo was presented by the speaker on doing a breast self-exam. The speaker also shed light on ways to bring down risk factors by changing the lifestyle, diet and by eliminating stress.33 participants attended the session.
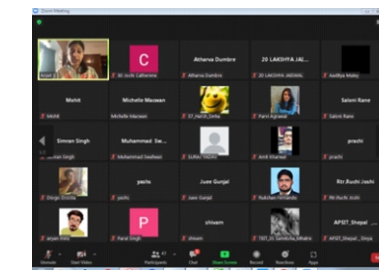
IEEE Hacktoberfest Report

The Introduction to Open Source and Hacktoberfest event was conducted by IEEE APSIT SB and hosted at 11:20 am on an online platform i.e., YouTube. The hosts of the events were Swapnil Joshi and Rohan Waghode. The event was opened by Swapnil who greeted everyone and introduced the speaker to the online audience. The speaker also introduced himself to the crowd. He acquainted the public with the open source and gave a brief insight about the Hacktoberfest event held on 9th October. The various programs involved in the open source were clarified like Google summer of

code, Linux Foundation mentorship, Outreach, and MLH fellowship. The queries about GitHub and the basic difference between git and GitHub were also described by the speaker. Hands-on demonstration of GitHub and a showcase of abundant free resources to learn git and coding were also displayed. Lastly, the Q &A session unburdened the queries of the audience, and an inspiring vote of thanks was given by Rohan Waghode, who concluded the meeting with 11 participants at around 1 pm.
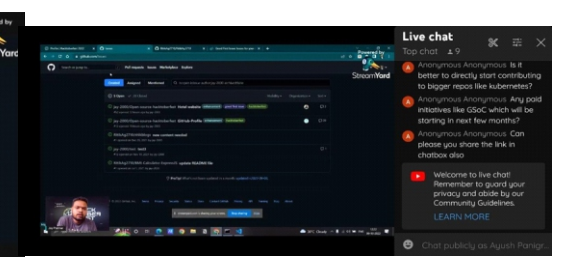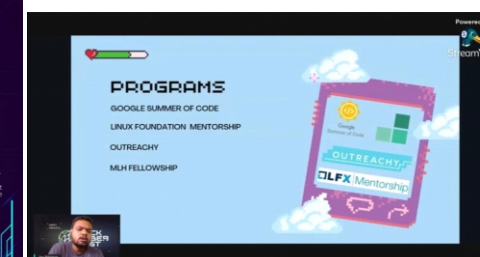
Technical Talk on "DESIGNING CYBER PHYSICAL SYSTEM FOR IoT APPLICATION"

IEEE APSIT kicked off its roster of events for the academic year 2022-23 in a grand manner, with a technical seminar on the topic "Designing Cyber Physical System for IoT Application". The event was held on 20th of July 2022 from 3.00 p.m to 4.30 p.m, in seminar hall 008 of APSIT. The esteemed speakers for the same were Dr. Ashwini Gajarushi and Dr. Sachin Paramane. Dr. Gajarushi is the senior technical officer, TIH-IoT at IIT Bombay; while Dr. Paramane serves as the Chief Technology Officer at TIH-IoT at IIT Bombay.

Dr. Gajarushi started by reminiscing about life during lockdown, and how technology aided humans during this time. She emphasized on how engineers of the past have created the technology we use today, and thus the students of today will create technology humans will use ten years hence. The importance of students today learning technology thus established, ma'am then moved on to the core topic of IoT. She defined the Internet of Things for the uninitiated, and visualised the IoT system. Using interesting presentation slides, she explained in detail the involvement of IoT for cyber physical systems as well as embedded systems. She then spoke at length about battery-less systems, and provided sensors as a solution for energy harvesting in the same.

Dr. Paramane introduced the audience to Technology and Innovation Hub (TIH) of IIT Bombay. He showed how the programs of TIH-IoT are mapped to TRLs (Technology Readiness Level), thus showing the value of the programs with respect to career and knowledge. He then gave information about the various fellowships offered to budding innovators and entrepreneurs, including the CHANAKYA fellowship, Entrepreneurs in Residence (EIR) program and AYANSH start-up and spin-off program. Dr. Gajarushi also explained the courses offered by TIH -IoT, and encouraged the students in the audience to sign up for the same. The audience consisted of 60 students from all branches who were quite active and interactive during the talk.Post session both dignitaries had a meeting with APSIT Dean Academics and HoDs to discuss further tie-ups and establishing a centre of excellence for IoT at APSIT.


Prof. Nahid, welcoming the guests

Dr. Ashwini Gajarushi interacting with students

Technical Talk banner

From Left to Right, Prof. Sachin Malve (HoD Comp, APSIT), Prof. Atul Deshpande (Dean Academics, APSIT), Dr. Ashwini Gajarushi (Senior Technical Officer, TIH-IoT, IIT Bombay), Dr. Sachin Paramane (CTO, TIH-IoT, IIT Bombay), Prof. (Dr.) Kiran Deshpande (HoD IT, APSIT), Prof. Selvin Furtado (EXTC, APSIT)
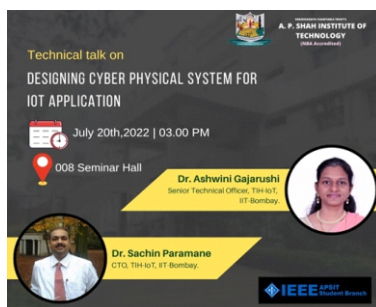
Project Based Learning on Advanced Java

An exclusive training on ADVANCE JAVA under PBL for TE & BE students was conducted from 27th December, 2021 to 1st January, 2022. Mr. RamKumar K. , JNIT Solutions, was invited as resource person from industry. TE & BE students were present for the Training. The expert covered all the topics under Advance JAVA and assigned different projects for various groups of students. Prof. Jaya Gupta coordinated the training program under the guidance of Academic dean Prof A.M. Deshpande, Administrative Dean Dr. Sameer Nanivadekar and Principal Dr. Uttam Kolekar.
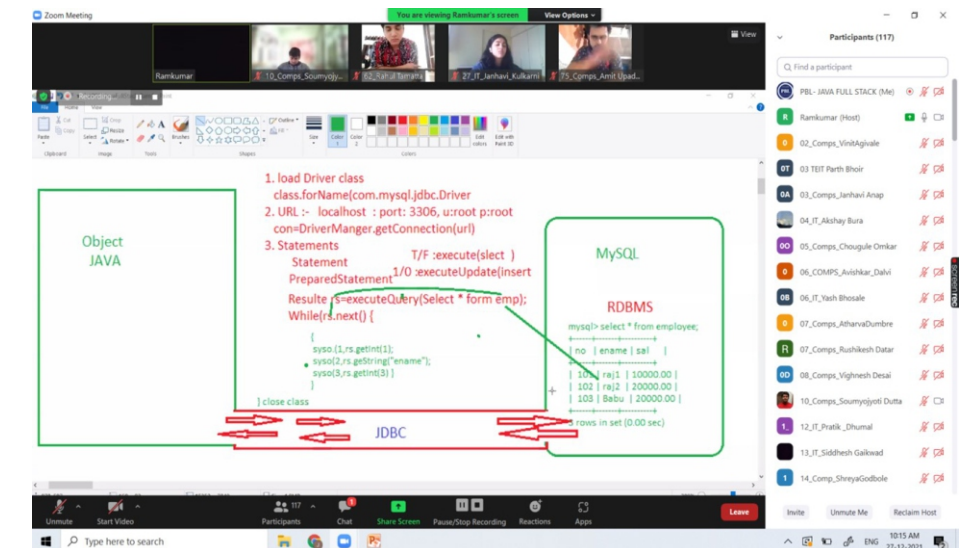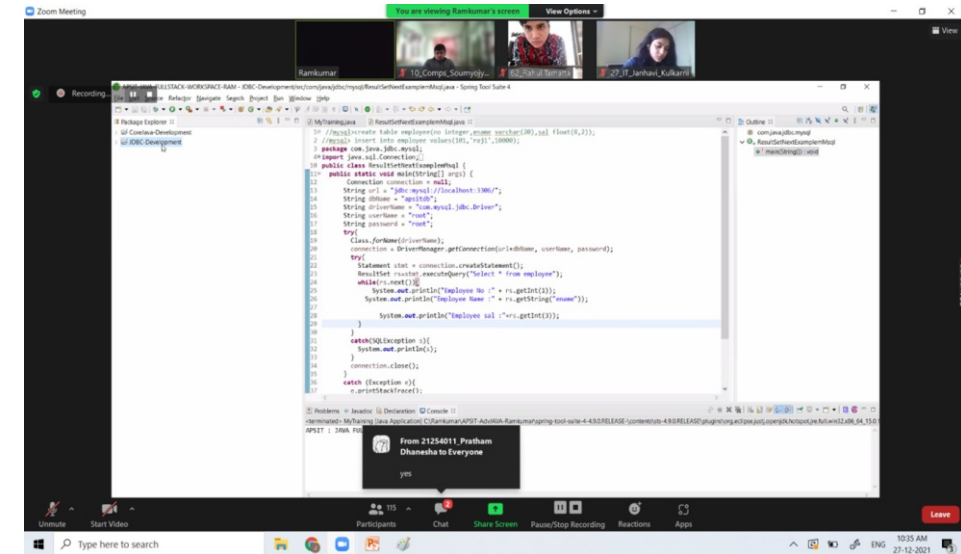
EXPERT TALK : Roadmap to Higher Studies

An Expert Webinar was held on Wednesday, 02nd March 2022 at 10.00 am for SE Division A,B & C students .In this Webinar, we had Mrunal Jadhav (Graduate Research Assistant) and Ashwin Shenolikar (Student Assistant at VT Innovation Campus) our Ex-Students of our A. P. Shah Institute of Technology College.

The webinar mainly focused on:
1. Profile building for masters
2. Financial Planning
3. University selection
4. Application Process

The webinar was a great success with lots of informative content about Higher Education studies which the students can take in their near future after they complete their B. Tech/B.E. Degrees, whether it may be in the

Research field or Professional field like M. Tech/M.E. etc. They also gave students a brief idea on Level of Education in Different Universities, how to tackle difficulties in higher studies like language barriers in universities which are there in abroad states, the Culture of the country where they are pursuing their higher education, what are skills that as students need to develop in order to opt the good Scholarships and Internships.

The great number of students who participated in the webinar had many fascinating questions and remarks about the Webinar. Finally, Prof. Jaya Gupta concluded the meeting by taking some Snapshots of the participants who were present and thanking everyone.
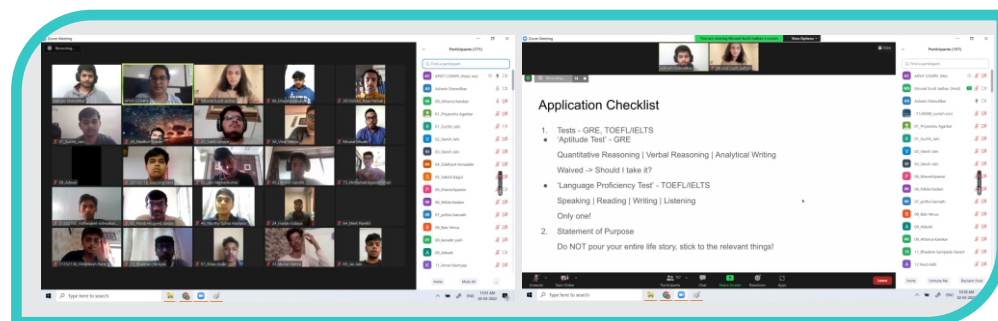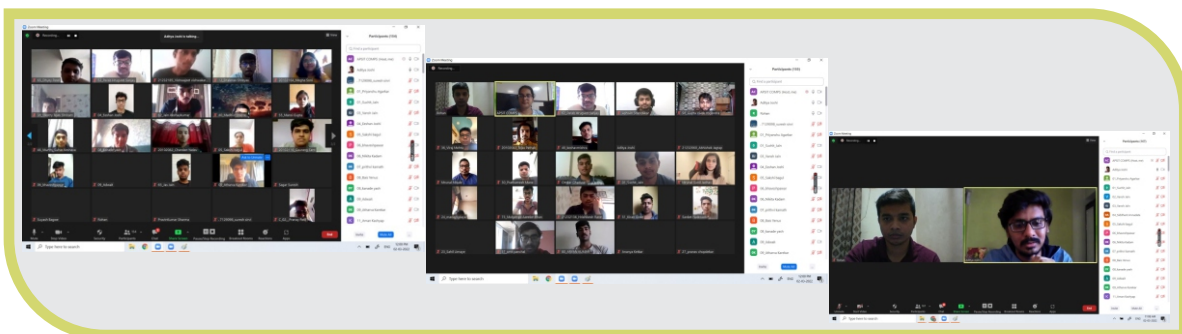

EXPERT TALK : Roadmap to Industry

An Expert Webinar was held on Wednesday, 02nd March 2022 at 10.00 am for SE Division A,B & C students In this Webinar, we had Aditya Joshi and Rohan Dhere our Ex-Students of our A. P. Shah Institute of Technology College.

Prof. Jaya Gupta from A. P. Shah Institute of Technology moderated the event and gave a welcome address to everyone. The webinar started with a huge success with a lot of informative content about student's Current Academics Education like how to manage busy schedules, how to work and improve on their skills, maintain their academic performances, how to build connections with good and skilled people through Popular Professional social platforms like LinkedIn and how to maintain and upgrade their profiles on LinkedIn for much job opportunities during the time of placements and shortly, etc.

They gave a brief idea on how to select academic Mini-Projects, develop their skills through these projects, what to do on the time of interviews, what are the various rounds carried out during the interviews, and how the students get filtered out in every process of the Interview stages and gave all-over information to get a great success towards our future. Many students who attended the webinar had many interesting questions and comments about the webinar. Last but not the least, Prof. Jaya Gupta concluded the meeting by taking snapshots of the participants who were present and thanking everyone.

The webinar mainly focused on:
1. SE to BE project selection
2. Aptitude training
3. Guidelines for Interview
4. Industry Environment

EXPERT TALK : Roadmap to Cyber Security

The Department of Computer Science organized a guest lecture on "Roadmap to Cyber Security" on 12th April 2022 for the TE students of A.P Shah Institute of Technology. Prof. Jaya Gupta, introduced the Chief Guest Mr Chandraveer Kumar, Cyber Security Consultant in BIG 4.

The Chief Guest delivered a keynote address on Cyber Security. He detailed the job opportunities available in cyber security in the IT industry and public sectors. He also encouraged the students to acquire CEH (Certified Ethical Hacker) Certification, which according to him, will brighten the career prospects of the student.

"Cyber security is a process that's designed to protect network and devices from external threats Businesses typically employ cyber security professionals to protect their confidential information, maintain employee productivity, and enhance customer confidence in products and services".

The chief guest provided undergraduates with an insight from a professional point of view on flow of work , communication skills, problems and challenges ,creating solution, analysing the software and developing report . He addressed queries such as certification required to enter in this domain.

3 Days Workshop on Outcome Based Education

An exclusive 3 days workshop on Outcome based Education for the faculty of Computer Department was conducted from 14th December, 2021 to 16th December, 2021. Mr. Pravin A., Associate Prof., Department of Computer Engineering conducted the sessions.

Faculties were trained on setting the course outcomes using blooms taxonomy, mapping of course outcomes with program outcomes, assessment tools, attainment process, course gap etc. Overall it was a very informative session.

Convocation Ceremony

The convocation ceremony of 2017-2021n batch was organized on 27th March 2022

The convocation ceremony of 2016-2020 batch was conducted on 25th June 2022

Departmental Societies/Student Chapters

Lead, Serve and Inspire @ APSIT
Involvement in student associations and chapters causes student leadership development. It creates a sense of responsibility, independence, satisfaction and more positive attitude to life.

Computer Engineering Students Association

CMESA is an integral part of the educational mission of the department. As the center of the department community life, CMESA complements the academic experience through an extensive variety of cultural, educational, social, and recreational programs. These programs provide the opportunity to balance course work and free time as cooperative factors in education

President : Mr. Rakshit Shah

The President shall have the general responsibility for coordinating the activities of CMESA and for directing and overseeing the publicizing of the affairs of the Student Body. He shall preside at all Student Council meetings.

Vice President : Miss. Janhavi Anap

The Vice-President shall share the duties and responsibilities of the President and coordinate the activities of CMESA.

Secretary : Mr. Aryan Kumar

The Secretary shall be responsible for recording the minutes and acting as official timekeeper of all CMESA meetings. The Secretary shall maintain the permanent records of the Student Council and he/she will assist the President and Vice-President. She shall preside at Student Council meetings in the absence of the President and Vice-President.

Treasurer : Miss. Janhavi Silaskar

The Treasurer shall be the custodian of the Student Association's funds. He/She shall keep all financial records, disburse funds, and present monthly and annual accounts of financial status of the Student Association .

The department congratulates the members of CMESA 2019-20 , President Mr.Aditya Joshi , Vice-President Mr.Anmol Majithia, Secretary Mr.Ashwin Shenolikar and Treasurer Ms.Sanika Chavan for their efforts and successful completion of term.

PERFORMANCE

ACADEMIC PERFORMANCE

When it comes to displaying results the students perform exceptionally well.
As evident our results are constantly on the upward trajectory. We are very proud of the achievements of our pupils. This has been possible because of the smart teaching methodologies and the time intensive planning and effort put in by our students and faculties

Students who secured above 9 pointer in the Semester III, Semester V and Semester VII examinations held in November 2021.

SE

RANK	NAME OF STUDENT	CREDIT
1	Bhoir Saurabh Purushottam	10
1	Chaudhari Hardik Narendra	10
1	Chaudhari Swamini Umakant	10
1	Chitnis Komal Mahesh	10
1	Chopdekar Pranav Vinayak	10
1	Choudhari Tanvi Deepak	10
1	Chougule Mahek Chiraguddin	10
1	Dhumal Vaishnavi Shankar	10
1	Fale Aniruddha Supriy	10
1	Gupta Mansi Ramchandra	10
1	Gupta Shreyas Rajesh	10
1	Guttula Karthik Kiran Venkat	10
1	Jagtap Abhishek Bharat	10
1	Jain Akshaykumar Fatechand	10
1	Jain Bhavesh Santilal	10
1	Joshi Eeshan Sunil	10
1	Ketkar Ananya Manoj	10
1	Khan Mohamad Azeeiim	10
1	Kollannur Arun Mathai Shaju	10
1	Kothari Vaishnavi Anil	10
1	Kulkarni Anushree Prasad	10
1	Kumar Shivangi Arabind	10
1	Mahajan Amey Subhash	10
1	Mehta Janvi Rajesh	10
1	Menon Anupama Rajesh	10
1	Mohite Mitali Manojkumar	10
1	Mojidra Shubham Vijay	10
1	Nara Amit Gopal	10
1	Nirmal Ajay Arvind	10
1	Kulkarni Anushree Prasad	10
1	Kumar Shivangi Arabind	10
1	Mahajan Amey Subhash	10
1	Mehta Janvi Rajesh	10
1	Menon Anupama Rajesh	10
1	Mohite Mitali Manojkumar	10
1	Panikar Somiya Sudeep	10

55 WITH PERFECT 10!
55 students from SE computers secured perfect 10 pointer in Semester III

RANK	NAME OF STUDENT	CREDIT
1	Patil Aastha Satish	10
1	Saini Harmit Avtar	10
1	Salunke Anushree Bharat	10
1	Savla Vandan Deepak	10
1	Sawant Mokshada Abhijeet	10
1	Sharma Abhay Manoj	10
1	Sheikh Sana Salim	10
1	Shirwalkar Sarvesh Raghunath	10
1	Singh Siddharth Ajaykumar	10
1	Guttula Karthik Kiran Venkat	10
1	Soni Megha Haresh	10
1	Sule Chaitali Sachin	10
1	Suroshi Himali Laxman	10
1	Thakare Sakshi Dinesh	10
1	Tiwari Abhishek Avdhesh	10
1	Vishwakarma Vishwajeet	10
1	Yadav Saurabh Subhash	10
1	Yadav Sejal Sugriv	10
1	Jain Pushkar Jayantilal	10
1	Jain Rishi Hiralal	10
1	Kharat Janavi Rajesh	10
1	Pote Rahul Laxman	10
1	Shah Manthan Rakesh	10
2	Chavan Saujanya Nandkumar	9.96
2	Dung Nikita Vishnu	9.96
2	Gandhi Dhruvil Nikhil	9.96
2	Mangaonkar Yash Mahesh	9.96
2	Misale Mrunal Mahendra	9.96
2	Mohitepatil Jay Tushar	9.96
2	Narkhede Namrata Subhash	9.96
2	Shetty Shravya Divakar	9.96
2	Devalapura Manya Krishna	9.96
2	Naikwadi Sanket Bhagwan	9.96
3	Agarkar Priyanshu Tushar	9.91

ACADEMIC PERFORMANCE

SE

RANK	NAME OF STUDENT	CREDIT
3	Bais Venus Vinod	9.91
3	Bhadane Sampada Vasant	9.91
3	Bhosale Vidul Vijay	9.91
3	Chaudhari Meghavati Prashant	9.91
3	Dagli Karan Hitendra	9.91
3	Deshpande Vedang Prasanna	9.91
3	Gadodia Saharsh Sunil	9.91
3	Karekar Atharva Ajit	9.91
3	Kumbhar Chetan Mallikarjun	9.91
3	Patro Bismita Basant	9.91
3	Sawant Siddhesh Prakash	9.91
3	Upadhyay Deepa Tushar	9.91
3	Vidwans Shriya Shrikant	9.91

TE

RANK	NAME OF STUDENT	CREDIT
1	Narkar Riddhi Jagdish	10
2	Heniya Nidhi Rajesh	9.74
2	Jain Rutuja Rakesh	9.74
2	Singh Nidhi Kaushlendra	9.74
3	Shah Meet Kamlesh	9.61

55 WITH PERFECT 10!
55 students from SE computers secured perfect 10 pointer in Semester III

BE

RANK	NAME OF STUDENT	CREDIT
1	Parth Umesh Vora	9.88
2	Mansi Nilesh Shah	9.85
2	Sejal Sunil Khedekar	9.85
2	Rakshita Ravikanth Tantry	9.85
2	Aditi Kiran Haspe	9.85
3	Aaditya Rahul Muley	9.73

RESULT ANALYSIS

ACADEMIC YEAR	% OF STUDENTS PROMOTED FROM			
	FE	SE	TE	BE
2018-19	95.31	86.84	100	95.58
2019-20	90.32	83.33	88	100
2020-21	99.47	100	98.43	100

Higher Studies

Sr. No.	Name of student	Name of institution joined	Name of program admitted to
1	Nidhi Vanjare	McMaster University	Systems and Technology - Automation Smart Systems MEng program
2	Aryan Singh	University of California,Riverside	MS Program in Computer Engineering
3	Harvinder Laliya	Syracuse University	Master of Science(Computer Engineering)
4	Amruta Koshe	McMaster University	Systems and Technology - Automation Smart Systems MEng program
5	Anjali Masur	University of Southern California	Master of Science(Computer Science)
6	Dhruvin Kamani	University of Central Florida	Computer Science MS
7	Yash Mehta	San Diego State University	Masters in Computer Science
8	Vansh Shah	University of Maryland, Baltimore County	Masters in Computer Science
9	Atharva Dumbre	New Jersey Institute of Technology	Masters of Science in Computer Science
10	Atharva Ranade	Clemson University	MS program in Computer Science
11	Siddharth Nair	UCD Dublin	MSc Computer Science
12	Aaditya Muley	Arizona State University	Software Engineering (MS) program

Placement Details

Sr. No.	Name of the student placed	Name of the Employer
1	Sayali Bangale	Virtusa Pvt. LTD./Capgemini/TCS
2	Royston Rodrigues	Virtusa Pvt. LTD./Capgemini/Birlasoft/IBM
3	Harshita Jain	Capgemini/ TCS
4	Sejal Khedekar	Virtusa Pvt. LTD./TCS
5	Jash Doshi	Virtusa Pvt. LTD.
6	Shrenik Jangada	Virtusa Pvt. LTD./Capgemini/TCS
7	Kevin khimasia	Virtusa Pvt. LTD./Hexaware Technologies/TCS
8	Kaushal Attal	Virtusa Pvt. LTD.
9	Rakshita Tantry	Goldman Sachs
10	Nikita Sarode	LTI
11	Vatsal Mehta	Husys Consulting Ltd.
12	Ashay Gogri	Accolite/ Gocomet
13	Anjali Anil Masur	EY India's
14	Shyamkrishna Jayaraj Menon	EY India's
15	Darshan Ashok Jundare	EY India's
16	Omkar Mukesh Thavai	Birlasoft
17	Vaibhav Jitendra Shukla	Birlasoft
18	Mansi Nilesh Shah	TCS/ NSEIT
19	Jeel Jitendra Jain	Birlasoft
20	Saumil Jitendra Padwal	Capgemini
21	Lavleen Roshanlal Jain	Capgemini
22	Aditi Kiran Haspe	Capgemini
23	Parth Vora	Capgemini/NSEIT
24	Aryan Ajay Singh	Capgemini
25	Manasi Jadhav	NSEIT
26	Chinmay Marathe	Capgemini
27	Aiswarya Rajendra More	TCS
28	Isha Rushikesh Phadkar	TCS
29	Mirza Zulfiqar Ali Jaffer Ali	Zensar/NeoSOFT Technologies
30	Shivam Chhabra	J P MORGAN
31	Khush Shah	Infosys
32	Yashi Rathod	Media .NET
33	Parth Shah	QSpiders
34	Vikas Prajapati	QSpiders
35	Apoorva Talesara	QSpiders
36	Moksha shah	QSpiders/ NEC

Student Paper Publication

- Aishwarya More, Moksha Shah, Preksha Vora and Shweta Patil published a paper titled "Predicting Instagram Influencers Engagement Rates using Machine Learning" in the 3rd International Conference on Internet of Things (ICIoT) conducted during 5th to 7th April 2022 organised by the School of Computing. The paper is indexed in SCOPUS, DBLP, EI Compendex Japanese Science and Technology Agency (JST), Norwegian Register for Scientific Journals and Series.

- Sayali Bangale and Aditi Haspe published a paper titled "Recipe Recommendation System using Content-Based Filtering" in the First edition of International Conference on Computational Intelligence and Innovative Technologies (ICCIIT – 2022) will be held on 16th and 17th April 2022 at IICMR, Pune. The paper is indexed in Elsevier SSRN Conference Proceedings.

- Aryan Singh, Chinmay Marathe, Dhruvin Kamani and Yash Sampat published paper titled "APT- Your Personal Trainer" in the International journal for Research in engineering application and management conducted during 2nd week of April, 2022, ISSN: 2454-9150.

- Mansi Shah, Apoorva Talesara, Isha Phadkar and Zoha Shaikh published a paper titled "Chatbot" in the International Journal of Current Engineering and Scientific Research, Final Week of March 2022, ISSN: 2394-0697.

- Jash Doshi, Ashay Gogri, Vansh Shah and Yash Mehta published a paper titled "Controlling computer by hand gestures" in the UGC approved journal IJARESM-2022, ISSN:24556211.

- Manasi Jadhav, Rasika Mhabdi and Ruchika Kale published a paper titled "Crop and fertilizer recommendation system" in the UGC approved journal International Journal for Research in Engineering Application & Management (IJREAM)2022, ISSN : 2454-9150

- Anjali Masur, Sejal Khedekar, Dhruvin Kamani, Harshita Jain published a paper titled

"Automated Text Summarization using NLP" in the UGC approved Journal IJREAM-2022, ISSN : 2454-9150

- Mirza Zulfiqar, Rathod Yashi, Jain Vandan and Jain Jeel published a paper titled "Movie Recommendation System Using Rest API and Sentiment Analysis" in the UGC approved Journal IJREAM-2022, ISSN : 2454-9150.

- Nidhi Vanjare, Rakshita Tantry, Nikita Sarode and Amrutha Koshe published a paper titled "Real-Time Citizen Problem Detection from Twitter Data Using Naive Bayes Classifier" in ICCIIT 2022 Conference. The paper is indexed in Elsevier SSRN Conference Proceedings.

- Yash Jain and Anushka Jain published a paper titled "Menu Recommendation System using Content based filtering" in the UGC approved Journal IJREAM-2022, ISSN : 2454-9150.

- Anuj Mishra and Ishan Sathe published a paper titled "E-waste Management System using Blockchain" in the UGC approved Journal IJREAM-2022, ISSN : 2454-9150.

- Saumil Padwal, Mayur Pawar, Vaibhav Shukla and Vikas Prajapati published a paper titled "Hardware Monitoring Suit" in the journal IJRASET, indexed with cross-refer DOI-10.22214 ISSN:2321-9653.

- Vedant Mhatre, Vatsal Mehta and Aaditya Muley published a paper titled "Emergency healthcare support system" in the UGC approved Journal IJREAM-2022, ISSN : 2454-9150.

- Shyamkrishna Menon, Atharva Ranade, Omkar Thavai and Siddharth Nair published a paper titled "Image Captioning" in the UGC approved Journal IJREAM-2022, ISSN : 2454-9150.

- Kaushal Attal, Yash Jain, Darshan Jundare and Riddhi Chitre published a paper titled "Exam Hall, Class room monitoring using YOLO" in the UGC approved journal IJRAR, ISSN:2348-1269

- Harvinder Singh, Royston Rodrigues, Lavleen Jain and Parth Vora published a paper titled "Network Monitoring and Diagnoistic Suite" in the journal

IJRASET, ISSN : 2321-9653

- Tanisha Singh, Shivam chhabra. and Abhishek Singh published a paper titled Crop weed detection in the journal IJISRT, ISSN: 2456-2165

- Anuj Mishra published a paper titled "Study on Blockchain-Based Healthcare Insurance Claim System" in the 2021 IEEE Asian Conference on Innovation in Technology (ASIANCON) held on 27-29 Aug. 2021 at Pune, Electronic ISBN:978-1-7281-8402-9.

- Shubham Mojidra, Siddharth Singh, Sarvesh Shirwalkar and Harmit Saini published a paper titled "PDF Note-taking system and editor with Python" in the UGC approved journal IJREAM-2022, ISSN : 2454-9150.

- Catherene Joshi, Shah Poojan Anil, Shah Rakshit Rajesh and Jain Rutuja Rakesh published a paper titled "Linear Regression vs LSTM for Time Series Data" in the 2022 IEEE World Conference on Applied Intelligence and Computing (AIC2022).

- Hetvi Jiten Gala, Muzammil Arif Siddique, Nilesh Kumar Mehta published a paper titled "Food Recommendation System" in the UGC approved Journal IJREAM-2022, ISSN : 2454-9150.

- Dutta Soumyojyoti Jyotirmoy, Dalvi Avishkar Sudharma, Gore Vedang Nilesh and Narkar Riddhi Jagdish published a paper titled "Handwritten Text Recognition using CRNN" in the UGC approved Journal IJREAM-2022, ISSN : 2454-9150.

- Shubh Shah, Abhishek Mishra, Imran Sheikh, Aashish Yadav, Bhavin Kalasariya and Sumedh Sawant published a paper titled " Career Guidance Chatbot"in the UGC approved Journal IJREAM-2022, ISSN : 2454-9150.

INTERNSHIP DETAILS OF STUDENTS

Course	Semester	No. of Certified Students	Total Certified Students
2020-2021(EVEN)			
CISCO	SE	27	27
	TE		
2021-2022(ODD)			
CYBERSECURITY	SE	34	97
NETWORKING	SE	02	
LINUX AUTOMATION	TE	29	
AWS CLOUD	TE	01	
AI-ML and DATA ANALYTICS	BE	31	

2021-2022(EVEN)			
CYBERSECURITY	SE	96	
LINUX AUTOMATION	SE	53	
CLOUD	TE	02	97
AI - ML	TE	12	
DATA ANALYTICS	TE	11	

ACHIEVEMENTS

FACULTY ACHIEVEMENTS

We believe that the quality of our research is second to none!
Faculties play an important role in shaping the future and image of an institution. It is the effort of the faculty which makes an institution recognized with all his or her teaching excellence and research orientation. Our teachers are the pillars of strength. They have encouraged and helped students develop a well groomed personality. Our faculties are also actively involved in research and their highly cited papers are proof to this.

STTP/FDP/WORKSHOPS/SEMINAR ATTENDED

1. Prof. R. K. Ambekar
   - Attended One-day National Level Industry-Institute Symposium at TCET on 10th July 2021.
   - Completed NPTEL- Accreditation and Outcome based Learning.
   - Attended 2 Days International Certified Career Coach (ICCC) Foundation workshop, Mindler on 25th June and 26th June 2021.

2. Prof. P. P. Adivarekar
   - Attended 6 Days ISTE approved hands on Faculty Development Program on "Deep Learning and its applications" at Xavier Institute of engineering from 05-07-2021 to 10-07-2021.
   - Attended IIT Bombay Spoken tutorial FDP on "Android app using Kotlin" organized by Vasantdada Patil Pratishthan's College of Engineering & Visual Arts from 05/07/2021 to 10/07/2021.
   - Completed Palo Alto networks certified cyber security entry level technician certification.

3. Prof. S. S. Aloni
   - Attended 5 Days ISTE Approved STTP on 'Data Science with Python' organized by D. Y. Patil college of Engineering & Technology at Kolhapur Maharashtra on 10/05/2021 to 04/05/2021.
   - Attended 6 Days Faculty Development Program on "AI & Data Science - The Future of Tomorrow!" MCT's Rajiv Gandhi Institute of Technology at Mumbai 29th July to 31st July 2021 and 5th August to 7th August 2021.
   - Attended 3 Days FDP on "Research tools for Data Science" at Marathwada Mitra-gaon Mandal's Institute of Technology, Lohgaon from 29th March to 31st March 2021.

4. Prof. A. J. Kotangale
   - Completed Oracle Cloud Infrastructure Foundations I
   - Attended One month Certification on "Google Cloud Platform Foundation (GCPF)" from 8-9-2021 to 6-10-2021.
   - Completed Oracle Cloud Infrastructure Foundations I
   - Completed Certification of appreciation "APSIT SKILLS MENTOR CERTIFICATION"

5. Prof. Merlin Priya
   - Attended 3 Days FDP on "Research tools for Data Science" at Marathwada Mitra gaon Mandal's Institute of Technology at Lohgaon 29th to 31st March 2021.
   - Attended 21 Days Learning Python for "Data Analysis And Visualization" Organized by Udemy from 11th April.

6. Prof. Ramya RB
   - Attended 10 Days FDP on "Deep Learning and Parallel Architectures" organized by EICT IIT Roorkee from 23/08/2021 to 03/09/2021.
   - Attended 3 Days FDP on "Research tools for Data Science" at Marathwada Mitra gaon Mandal's Institute of Technology, Lohgaon from 29th March to 31st March 2021.
   - Completed NVIDIA Deep Learning certification.
   - Attended 8 weeks NPTEL FDP on "Python for Data Science" from Jan 2022 - Feb 2022.
   - Attended 12 weeks NPTEL FDP on "Data Analytics with Python" from January 2022 to April 2022.

7. Prof. M. A. Jain
   - Attended 5 Days AICTE Training and Learning (ATAL) Academy Online Elementary FDP IOT "A Journey from Sensor to Server" at A.P Shah Institute of Technology, Thane from 4th January 2022 to 8th January 2022.

8. Prof. Sachin Takmare
   - Attended AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Electric Vehicle: Design to Product Development" at A P Shah Institute of Technology, Thane.
   - Participated and completed successfully AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Immersive Virtual Reality" at Kolhapur Institute of Technology, Kolhapur.

9. Prof. Bharati Khemani
   - Attended 5 Days ATAL Academy Online Elementary FDP on "Artificial Intelligence using Python" at Government Polytechnic from 15/11/2021 to 19/11/2021.
   - Attended 5 Days ATAL Academy Online Elementary FDP on "Exploring Machine Learning and Deep Learning Algorithms for Natural Language Processing (NLP) Applications" from 22/11/2021 to 26/11/2021.

10. Prof. Kadambari Deherkar
    - Attended 8 weeks NPTEL FDP on Data Mining from Feb 2022 to Apr 2022.
    - Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022to 11th June 2022.

11. Prof. Vishakha Chaudhari
    - Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022to 11th June 2022.

CONFERENCE CHAIRED

Prof. Sukhada Aloni has presented paper on Innovation and Emerging Trends in Engineering, Science and Management.

Prof. Bharti Khemani and Prof. Sachin Malave has published paper in Conference on Computational Intelligence and Innovative Technologies (ICCIIT – 2022).

Prof. Sofiya Mujawar has published paper in "COVID-19 Detection from Chest X-ray images using feature fusion and deep learning "at the 2nd International Conference on Research outlook, Innovations and Research Trends (ICROIT-2022) held on January 22nd and 23r, 2022 & "COVID-19 Detection from Chest X-ray images using feature fusion and deep learning "at the 2nd International Conference on Research outlook, Innovations and Research Trends (ICROIT-2022) held on January 22nd and 23rd, 2022.

Prof. Sofiya Mujawar has published a paper on E-Waste Management System using Blockchain in IJREAM 2022 & Published a paper on Menu Recommendation System Utilizing Content-Based Filtering Techniques in IJREAM,2022.

Prof. Ramya R. B. has published paper titled "Real-Time Citizen Problem Detection from Twitter Data Using Naive Bayes Classifier".

FACULTY ACHIEVEMENTS

12. Prof. Shraddha Shinde
➢ Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022to 11th June 2022.

13. Prof. Babita Gawate
➢ Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022 to 11th June 2022.

14. Prof. Shamika Mule
➢ Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022 to 11th June 2022.

15. Prof. Varsha Wangikar
➢ Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022 to 11th June 2022.

16. Prof. Tanvi Kapdi
➢ Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022 to 11th June 2022.

17. Prof. Shamika Mule
➢ Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022 to 11th June 2022.

18. Prof. Pranali Patil
➢ Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022 to 11th June 2022.

19. Prof. Rushikesh Nikam
➢ Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022 to 11th June 2022.

20. Prof. Deepak Khachane
➢ Attended 6 Days FDP on "Cybersecurity and Artificial Intelligence" at Thakur College of Engineering and Technology from 6th June 2022 to 11th June 2022.

21. Prof. Deepali Kayande
➢ Completed 7.5 hours Aws Essentials (2019) Certification organized by Udemy Feb 2022.
➢ Completed 16 hours Certification on "The complete Presentation and Public Speaking/Speech Course" organized by Udemy Feb 2022.

FACULTY PUBLICATIONS

1. Dr. Rahul. K. Ambekar
➢ Published a paper titled, "Movie Recommendation System Using Rest API And Sentiment Analysis" in journal IJREAM-22 UGC APPROVED ISSN:2454-9150 DOI:10.35291/2454-9150.2022.0130
➢ Published a paper titled, "Career Guidance Chatbot" in journal IJREAM-22 UGC APPROVED ISSN:2454-9150.

2. Dr. Pravin P. Adivarekar
➢ Published a paper titled "Covid-19 Temperature Dependence Analysis Using Levenberg-Marquardt Algorithm" in Scopus indexed journal Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/ Journal of Tianjin University Science and Technology DOI:10.17605/OSF.IO/8ZCMB.
➢ Published a paper titled, "Hardware Monitoring Suite" in journal IJREAM-22 UGC APPROVED ISSN:2454-9150.
➢ Published a paper titled, "Automated Text Summarization using NLP" IJREAM-22 UGC APPROVED ISSN:2454-9150.

3. Prof. Sukhada S. Aloni
➢ Published a paper titled, "Covid-19 Temperature Dependence Analysis Using Levenberg-Marquardt Algorithm" Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/ Journal of Tianjin University Science and Technology DOI:10.17605/OSF.IO/8ZCMB in Scopus indexed journal.
➢ Published a titled, "MIZA Chatbot" in journal Internation Journal of Current Engineering and Scientific Research, Final Week of March 2022 DOI: 10.21276/ijcesr
➢ Published a paper titled, "APT-Your personal trainer" in journal IJREAM-22 UGC APPROVED ISSN:2454-9150 DOI:10.35291/2454-9150.2022.0106
➢ Published a paper titled "PDF Note-taking system and editor with Python" in journal IJREAM-22 UGC APPROVED ISSN:2454-9150 DOI: 10.35291/2454-9150.2022.0165

4. Prof. Archana J. Kotangale
➢ Published a paper titled "E-waste Management System using Blockchain" in journal IJREAM-22 UGC APPROVED ISSN:2454-9150 DOI: 10.35291/2454-9150.2022.0127
➢ Published a paper titled "Menu Recommendation System Using Content based filtering" in journal IJREAM-22 UGC APPROVED ISSN:2454-9150 DOI : 10.35291/2454-9150.2022.0113

5. Prof. Amol R. Kalugade
➢ Published a paper titled "Crop and fertilizer recommendation system" in journal IJREAM-22 UGC APPROVED ISSN:2454-9150 DOI : 10.35291/2454-9150.2022.0092

FACULTY ACHIEVEMENTS

6. Prof. Mayuri A. Jain
➢ Published a paper titled "Covid-19 Temperature Dependence Analysis Using Levenberg-Marquardt Algorithm" in Scopus indexed journal Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/ Journal of Tianjin University Science and Technology. DOI:10.17605/OSF.IO/8ZCMB

7. Prof. Merlin Priya
➢ Published paper titled "Controlling Computer by Hand Gestures" in journal (IJARESM) IJREAM-22 UGC APPROVED ISSN:2454-9150
➢ Published a paper titled "Covid-19 Temperature Dependence Analysis Using Levenberg-Marquardt Algorithm" in Scopus indexed journal Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/ Journal of Tianjin University Science and Technology DOI:10.17605/OSF.IO/8ZCMB

8. Prof. Sofiya S. Mujawar
➢ Published a paper titled "A Statistical Perspective for Empirical Analysis of Bio-Inspired Algorithms for Medical Disease" in Conference IEEE ESCI-2022.
➢ Published a paper titled "COVID-19 Detection from Chest X-ray Images using Feature Fusion and Deep Learning Detection." In journal ICROIRT-2022.
➢ Published a paper titled "Image Captioning" in International Journal for Research in Engineering Application & Management (IJREAM) DOI: 10.35291/2454-9150.2022.0100

9. Prof. Ramya RB
➢ Published a paper titled "Real-Time Citizen Problem Detection From Twitter Data Using Naive Bayes Classifier" in Conference ICCIIT 2022 by Vanjare, Nidhi and Sarodi, Nikita and Tantry, Rakshita and Koshe, Amruta and RB, Ramya, (April 30, 2022).
➢ Published a paper titled "Covid-19 Temperature Dependence Analysis Using Levenberg-Marquardt Algorithm" in Scopus indexed journal Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/ Journal of Tianjin University Science and Technology DOI:10.17605/OSF.IO/8ZCMB

10. Prof. Sachin B. Takmare
➢ Published a paper titled "Exam Hall, Class room monitoring using YOLO" in journal IJRAR,2022 UGC and ISSN Approved ISSN:2348-1269 DOI: E-ISSN 2348-1269,P-ISSN 2349-5138
➢ Published a paper titled "Network Monitoring and Diagnostic Suite" in journal IJRASET,2022 DOI: 10.22214/ijraset.2022.41154

11. Prof. Jaya D. Gupta
➢ Published a paper titled "AI And Web-Based Interactive College Enquiry Chatbot" in Conference (2021 13th International Conference on Electronics, Computers and Artificial Intelligence (ECAI)) DOI:10.1109/ECAI52376.2021.9515065
➢ Published a paper titled "JARVIS: A PC Voice Assistant" in journal (International Journal of Advance Study and Research Work (2581-5997)/ Volume 4/Issue 7/July 2021) DOI: 10.5281/zenodo.5323068

12. Prof. Bharti J. Khemani
➢ Published a paper titled "CNN Model Using Sequential API For Face Mask Detection" in journal Elsevier SSRN Conference Proceedings UGC Care Journal ISSN:2349-5162, Vol.8, Issue 10
➢ Published a paper titled "Use of A Precious Commodity- 'TIME For Building Skills by Teachers for Online Teaching During Pandemic by using Decision Tree and SVM Algorithm of Machine Learning" in journal link.springer.com › chapter › 10 DOI: 10.1007/978-981-19-1142-2_44
➢ Published a paper titled "Recipe Recommendation System using Content-Based Filtering" in Elsevier Journal http://dx.doi.org/10.2139/ssrn.4102283

13. Prof. Rushikesh R. Nikam
➢ Published a paper titled "Linear Regression vs LSTM for Time Series Data" in Conference © 2022 IEEE|DOI: 10.1109/AIC55036.2022.9848887 2022 IEEE World Conference on Applied Intelligence and Computing (AIC2022)
➢ Published a paper titled "Food Recommendation System" in journal IJREAM-22 UGC APPROVED ISSN:2454-9150 DOI : 10.35291/2454 9150.2022.0154

14. Prof. Deepali Kayande
➢ Published a paper titled "Handwritten Text Recognition using CRNN" in journal IJREAM V08 I02 86001 DOI: 10.35291/2454-9150.2022.0161

STUDENT ACHIEVEMENTS

Global Certification

Sr. No.	Course Name	Organized By	Number of Certifications
1	Getting Started with Deep Learning	NVIDIA	28
2	Getting Started with Deepstream for Video Analytics on Jetson Nano	NVIDIA	1
3	Building Transforme-Based Natural Language Processing Applications	NVIDIA	1
4	Cybersecurity Entry Level-Technician	PALO ALTO Networks	5
5	Juniper Networks Certified Associate Junos(Jncia-Junos)	JUNIPER	2
6	Database Foundations	ORACLE ACADEMY	190
7	Java Fundamentals	ORACLE ACADEMY	49
8	Java Programming	ORACLE ACADEMY	141

SPORTS & CULTURAL ACHIEVEMENTS

Name of the award medal	Team / Individual	Name of the student
Skin Canvas	Individual	Somiya Panikar
CSGO	Team	Shubham Mojidra
		Aniruddha Fale
		Siddharth Singh
		Sarvesh Shirwalkar
		Jainam Gala
Valorant	Team	Shubham Mojidra
		Aniruddha Fale
		Siddharth Singh
		Sarvesh Shirwalkar
		Jainam Gala
BGMI	Team	Arpit Akhilesh Chauhan
		Mohamad Azeeiim Shabaaz K
		Shubham pravin jain
COD	Team	Saharsh Gadodia
		Harsh Mali
		Soujanya Chavan
		Azieem Khan
		Abhay Mane
Dance	Duet	Aditi Sangle
Fashion Show	Group	Ishani Sharma

INNOVATION

Chess(Girls)	Anjali Divekar	Winner
Chess(Boys)	Subodh Gaikwad	Runnerup
TT(Girls) Doubles	Aishwarya More	Runnerup
TT(Boys)Singles	Zenil Gosher	Winner
TT(Boys)Doubles Winner	Zenil Gosher and Poojan Shah	
Carrom (Girls)Doub	Sejal Yadav and Ma Gupta	Runnerup
Carrom (Boys) Singles	Hariharan Iyer	Runnerup
Carrom (Boys) Doubles	Hariharan Iyer and Azeeim Shabaaz	Runnerup
100meters(Girls)	Pratiksha	Winner
Kabbadi(Girls)	Pratiksha Sanas Somiya Panikar Pooja Tumma Sanskruti Shinde Himali Suroshi Sakshi bagul Pragya Tripathi Subs Aditi Raut Aishwarya More Kanchi Patil Shreya Godbole	Runnerup
Box Cricket(Girls)	Nidhi Heniya(captai Aditi R Hetvi G Nikita D Nikita K Jeel I Pratiksha Sa Subs Sampada Shivangi Tanvi	Winners
Relay(Girls)	Shravya Shetty Pratiksha Sanas Sejal Yadav Sana Shaikh	Runner up

Innovative young minds on fire
Writing a technical article that can be published in a magazine, conference or journal is a challenging undertaking. Witness our dreamers thinkers and doers trying to share their knowledge of a technology, project or software they are excited about.

Ransomware attack: Goodwill
Catherene Joshi, BE Computer

On 25th May 2022, SpiceJet, an Indian budget airline, faced a ransomware attack that resulted in the delay of flights. Some of their systems faced a ransomware attack the previous night that led to the slowing down of the entire process. This resulted in a slight halt in the otherwise smoothly running procedure. Somewhere around January, a massive ransomware attack impacted Bernalillo County, New Mexico. The incident closed most government buildings and affected education in the area. It had also affected county prisons, as surveillance cameras and automatic doors were disabled and inmates remained trapped.

One such variant is the GoodWill Ransomware.

According to a report from a digital risk monitoring firm CloudSEK, a new kind of ransomware was detected in India around March 2022. Goodwill is a kind of Ransomware that forces victims to post videos about them doing good deeds on Social Media. If you refuse to comply, the file may be lost forever or spread to the farthest corners of the web.

GoodWill ransomware works like any other ransomware It encrypts important files such as databases, videos, documents, etc., and can only be recovered with the help of the decryption key. The only difference is that they are more interested in helping underprivileged people, rather than threatening victims for financial gain.

The victims had to perform three socially driven activities in exchange for the keys to gain access back. They either had to donate new clothes to the homeless, take the less fortunate kids to either of the fast food chains, provide financial assistance to anyone who needs urgent medical attention but cannot afford it, at a nearby hospital, etc. They had to record the action and post it on social media. The ransomware then asks the victims to write a note on social media on how Goodwill transformed the victim into a better human.

Ransomware attacks can seriously impact an organization's ability to operate. While one can debate the nature and the intent behind the GoodWill ransomware: 'Charity or Forced Charity', it does not change the fact that it is a serious cybercrime.

Impact and Mitigation

Having backups is always good practice but remember that even if your organization is ready and your backups are working, the attacker still has access to the sensitive information that could reveal business strategies and intellectual property. This personal information can be used in tandem with social engineering and identity theft. To make matters worse, it can take several hours to recover an affected system. Organizations that are not ready or whose backups may have been compromised during an attack can take days or weeks to return to full operational capacity. That is, profits are reduced or lost altogether during recovery. There is no

guarantee that even after paying the ransom, the treated actor will act in good faith.

Thus, it becomes very crucial to prevent your system or your organization from getting compromised by random ransomware attacks. Apart from conducting regular audit checks and red team exercises, ensure that your staff and members know about cyber attacks and their security and perform periodic assessment tests. Ensure none of them clicks on unsafe links or opens suspicious email attachments

Ransomware attack: Goodwill

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Now speaking quantitatively, approximately 40 exabytes of data is generated monthly by an average smartphone user. one exabyte is one billion gigabytes or one million terabytes. Now considering 5 billion smartphone users, this is the amount of data generated per minute on the internet – 2.1 million snaps on snapchat, 3.8 million search queries on google, 1 million Facebook logins, 4.5 million YouTube videos watched, 188 million emails sent. As you can understand this is a huge amount of data, it must be clear by now what is big data and why it has become a part of every major software company out there.

All of this data stored is not useless, apart from keeping track of authentication of users and store their data on servers, big data can be used for analytical purposes. The massive volumes of data can be used to address business problems you wouldn't have been able to tackle before. Before analyzing the data, we should understand how this huge amount of data is stored. There are various frameworks available for this purpose like Cassandra, Hadoop, spark etc.

We cannot store big data in traditional relational databases, extracting from the source, transforming the data to fit into a schema and then to store it takes time and it is a bottle neck. We need fast writes on cheap hardware, for this we store schema-less as first (often referred as unstructured data) on a distributed file system. This file system splits the huge data into blocks (typically around 128 MB) and distributes them in the cluster nodes. For example, Hadoop uses a distributed file system known has Hadoop distributed file system (HDFS) to store big data. A huge file is broken down into smaller files and stored in various machines(nodes), also copies are made of smaller files and stored in different machines(nodes) so that data is not lost in case of a machine failure.

Having understood the storage part of big data now we need to understand of what use is this data to us or rather to the organizations who are storing this data. After the data is collected it can be used for analytical purposes to discover trends. This data can help to predict a lot of things like from predicting a what a customer might buy next based on previous purchases to predicting upcoming disasters! In 2012 during hurricane sandy in the east coast of the United States, big data was used to get a better understanding of the storm's effect on the coastline and necessary measures were taken. It could predict the hurricane's landfall 5 days in advance which wasn't possible earlier. This shows how valuable big data can be if it is accurately processed and analyzed. Big data is also used in the aviation industry where airplanes generate enormous amount of data which is 1000s of gigabytes of data for transatlantic flights. The aviation analytics systems then use all this data to analyze fuel efficiency, passenger and cargo weights, and weather conditions which can then help in optimizing safety and improve energy consumption efficiency.

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In a nutshell, big data is the enormous amounts of data that is generated and stored by various organizations. This data can be very useful when processed and analyzed properly. Without big data in today's world organizations like Instagram, Facebook, Gmail etc. will cease to exist. Absence of big data will also have a major negative impact on industries like aviation, e-commerce, disaster management etc.

Being a NCC cadet......

Sejal Yadav, SE Computer

Flying camp Where we had the opportunity to fly Virus SW -80 a advanced trainer aircraft with full controls. Also saw various fighter aircrafts.

The National Cadet Corps is the Indian military cadet corps with its head Quarters at New Delhi. It is open to school and college students on voluntary basis. The Cadets are given basic military training in small arms and parades. NCC not only provide you an opportunity to develop character, discipline, leadership, secular outlook, spirit of adventure and ideals of selfless service amongst the youth of the country, but also NCC provide a student Cadet, a suitable environment to take up a career in the ARMED FORCES. Being in AIR Wing NCC we also are given Flying training, aeromodelling, etc. I recently had my Flying camp in which I was the co-pilot. We have best pilot competitions also in the AIVSC(All India Vayusainik camp) which is a national level camp. I am competing for AIVSC crossed my state level-IGC (inter-group camp) with a gold in aeromodelling event. AIR NCC not only provides a career in Indian Air Force but also gives a good exposure to meet officers and learn from them.

Areomodelling consist of static, remote control and control line

Firing activities, skeet shooting, etc were done on daily basis in camps. We have our camps in Air Force station mostly but places differ. With dedication, efforts, and my college's support I made my way here. Being in NCC is whole new experience getting to learn many values and imbibe them.

NAME: CADET SEJAL YADAV
REG NO: MAH/21/SW/F/712305
UNIT: MAH AIR SQN NCC

4G vs WIFI

Pranav Vinayak Chopdekar (SE Computer)

Before comparing them, let's get to know each one of them individually.

4G, also known as the Fourth generation wireless system is a packet-switched wireless system with wide area coverage and high throughput. It is designed to be cost-effective and to provide high spectral efficiency. A WIFI, on the other hand, is simply an internet connection that's shared with multiple devices in a home or business via a wireless router. The router is connected to your internet modem which acts as a hub to broadcast the internet signal to all the devices that are wifi enabled.4g uses orthogonal frequency division multiplexing(OFDM), Ultra-wide radio band(UWB), and millimeter wireless. The data transmission rate of 20 mbps is generally employed and mobile speed is up to 200km/hr.

WIFI uses broadband which is a transmission of wide bandwidth data over a high-speed internet connection. It reaches minimum speeds of 25mbps and 3 Mbps upload speeds. Broadband provides high-speed access to the internet with the help of multiple technologies such as fiber optics, wireless, cable, DSL, and satellite. Wireless mobile communications systems, are also uniquely identified as "generation designations. Being introduced in the early 1980s. First- generation (1G) systems were marked by analog frequency modulation and were used primarily for voice communications. Second-generation (2G) wireless communications systems, which made their appearance in the late 1980s, were also used mostly for voice transmission and reception.

In November 2008, the International Telecommunication Union-Radio communications sector specified a set of requirements for 4G standards, named the International Mobile Telecommunications Advanced specification, setting peak speed requirements for 4G service at 100 megabits per second for high mobility communication such as from trains and cars and 1 gigabit per second for low mobility communication such as pedestrians and stationary users whereas WIFI was fictitious and initially discharged to customers in 1997 once a committee referred to as 802.11 was created. This LED to the creation of IEEE802.11, which refers to a collection of standards that outline communication for wireless native space networks (WLANs). Wi-Fi uses radio waves to transmit knowledge from your wireless router to your Wi-Fi-enabled devices like your TV, smartphone, pill, and laptop. as a result of they impart with one another over airwaves, your devices, and private info will become liable to hackers, cyber-attacks and alternative threats.

Usage of wifi leads to better speed, lower cost, and longer battery life whereas 4G assures portability, flexibility, and ease of connectivity So in the end, both mediums have their advantages and disadvantages but we all can accept the fact that these two mediums as a whole have made a huge impact on society. The only difference that makes the change would be related to the consistency and efficiency provided by both mediums. So which would it be for you, a consistently transmitting high internet speed WIFI or the rather the widely spread portable 4G?

"Big Data and it's need in today's world"

Aniruddha Fale (SE Computer)

First of all, the question arises what is big data? Let us start from the basics. Almost everyone of us uses a smartphone in today's world, we use apps like Gmail for work and social media apps like Instagram and snapchat. Consider Instagram for example, we can view our archives (stories and posts that we made since the beginning of the timeline that is when the account was created). All this data is stored on the servers of Instagram. Now consider millions of users and all their data stored on a machine. It is not possible for traditional database management systems to manage amount of data this huge. This is where big data comes in, put simply, big data is larger, more complex data sets, especially from new data sources. These data sets are so voluminous that traditional data processing software just can't manage them.

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Differential privacy while sharing Sensitive data

Somesh Fengade (TE Computer)

When the data is shared publically across various companies there might be a lot of private user data involved. To share the data and at the same time keep the privacy of the data attributes we use differential privacy. Differential privacy is the mathematical definition of privacy.
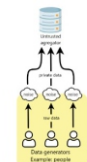
Differential privacy (DP) is a system for publicly sharing information about a dataset by describing the patterns of groups within the dataset while withholding information about individuals in the dataset. (Source Wikipedia)
There are two types of differential privacy:
• local differential privacy
• Global differential

Source: Datacamp data privacy and anonymization in python

Source: DataCamp data privacy and anonymization in python

Epsilon differential privacy
epsilon is the measure of privacy

Source datacamp

We can manage differential privacy by using epsilon differential privacy. Where the epsilon is the privacy measure. The lower the epsilon is higher the privacy is. As we increase the epsilon value the privacy differential increases exponentially. The epsilon values between 0 to 1 are considered highly private. the values between 2 to 10 for epsilon are considered better to have than nothing. And the values above 10

are almost sharing the exact data exposing user privacy.

A system of epsilon = 1 is 8000 times more private than epsilon = 10
K anonymity

Source datacamp

Let's see What difference the differential privacy does?
suppose we have to share the data from one organization to another one but at the same time, we want to keep the user data private. Let's assume that here we are sharing some variable floating value across the different organizations.
The resulting histogram of non-private and private histograms looks like the following.
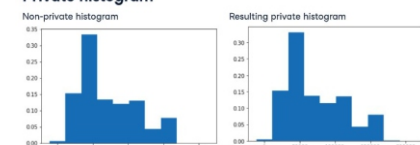
Source datacamp

Here you'll notice that the histogram looks almost similar (the X-axis values) but at the same time, we have privatized the y-axis parameter.
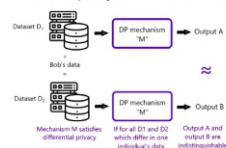
Why do the organizations such as Apple uses differential privacy?
It enables Apple to learn about the user community without learning about individuals in the community. Differential privacy transforms the information shared with Apple before it ever leaves the user's device such that Apple can never reproduce the true data.

Privacy budget of organization:
Different organizations have set different privacy budgets. You can think of the privacy budget as the measure of which extinct the organization collects the data from

the user. While collecting the data organization uses this privacy budget.
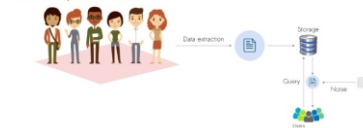
Source datacamp

If the third-party queries the data 2 times with epsilon as 1 from the data curator the third party collects the data actually of epsilon of value 4. Where the data collected from each query can be aggregated to reduce the privacy of the user.
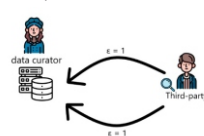
Source datacamp

Then what is private enough?
• Apple was using the epsilon budget of 14 per day in 2017
• For emoji suggestions, today apple uses the privacy budget of epsilon of 4 and submits one contribution per day. (source:https://www.apple.com/privacy/docs/Differential_Privacy_Overview.pdf)

Top emoji used by English users collected by Apple:
Sources:
1.Data Privacy and Anonymization in Python by DataCamp:
What's private, and why do we care? Python
Here is an example of What's private, and why do we care?
campus.datacamp.com
2.Wikipedia article on differential privacy:
Differential privacy Wikipedia
Differential privacy (DP) is a system for publicly sharing information about a dataset by describing patterns of…
3.Apple differential privacy overview:
https://www.apple.com/privacy/docs/Differential_Privacy_Overview.pdf

Real Business of Amazon

Pratik Agnihotri (TE Computer)

Amazon, the everything store" is one of the biggest lies to hide that truth from you which can change your life. The company started by selling books. No one thought that one day the company will be the biggest danger to everyone in the world. Some of us think that Amazon is a tech company and some of them to date think that it is an E-commerce company. But the reality is much bigger. Jeff Bezos, the founder of Amazon, and other important people of Amazon are doing something which can control the life of many normal people like us. Which is very dangerous.

After 2001, crash Amazon realizes they need very powerful tech infrastructure. Two men named "Crisp Income" and "Benjamin Black" took a documented plan of an idea to Jeff Bezos. And boom Amazon Web Services gets started. At that time AWS would be so powerful that it would control the biggest amount of internet.

The interesting thing is that 50.4% of the revenue of Amazon is given by the online store and only 12.5% of the revenue is given by AWS. But AWS is the most profitable venture of Amazon. There are many web service companies like AWS, but the thing which makes amazon the biggest player is the Amazon Ecosystem. Amazon's ecosystem is mainly these 3 things
• AWS Operating Model
• Alexa "A Network"

• Integrated Network

AWS Operating Model:
AWS has multiple computers known as tech servers which with help of cloud-based service, provide unlimited storage and computing power. Also, many tools to build their program. "Netflix" uses the AWS server to stream its movies and shows. It means that all the movies and shows are stored on the AWS server. And the great thing is recommendations are also done by machine learning of AWS. "Slack" a business audio call and video provider uses the AWS server. This means all the data of every business under slack are stored at AWS. But why company uses AWS? The answer is operational leverage.
Building a server like AWS is not so easy that any company can do. It is expensive and complex. That is the reason why one-third of websites on the internet use AWS.

Alexa:
You may think that such a complex device and also so small. That's where you lose. Alexa only has a speaker, microphone, and 900 MHz transmitters and receiver. Only Alexa cannot compute your command. So what it does do? The answer is that every command you give to Alexa is heard by the microphone transmitted to the AWS server to process and then the response to it is given by the speaker. And the most important thing is all command you give gets stored in the AWS web
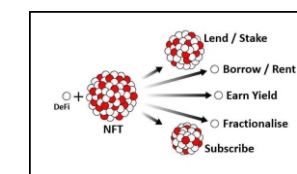
server. With the help of this, it makes it easy for Amazon to make customer profiling. With Amazon come to know what kind of music you like, what kind of taste you have in movies and shows, and also what you want to buy. One of the interesting things is that if another Alexa is in a radius of 500m it gets connected and forms a SideWalk Network. That is why in a few years when their multiple Alexa in a region, Amazon would come to know your location with their apps faster and more accurately than anyone.

Integrated Network:
We all know about the Ecosystem of Amazon. They make more and more people join as Prime Members, by giving them free delivery, and next-day delivery, but the thing they make delivery charges so high that to make saving you take 179 Rs prime membership of Amazon which you do not use completely. All the shows and movies are launched festive season so to see that you will buy prime membership and use that completely you will make an order in the Amazon shopping app even when you don't need that stuff. On both sides, there is only one winner Amazon.

And in this way you lose your money, and time on the things that are not worth it and that you never wanted or needed.

Unlocking NFT Finance

Hrithika Kucheriya (TE Computer)

While 2021 has seen the explosion of NFT collections, 2022 will probably begin to see their cost being leveraged to deliver economic solutions. something similar is occurring inside the world of Play-to-Earn games with the advent of GameFi. In this article, we will discover how some platforms are operating on DeFi-based ideas for unlocking the capacity of NFTs beyond just simply HODLing. Welcome to the arena of NFT Finance.

Like it or not, NFT has arisen in some discussion or the other in your social circle – from Thanksgiving dinners to Christmas events to Zoom calls. some of you could have received messages from long-lost pals – "hello, how are you? long time. Heard you're into cryptos. So what

the heck is an NFT?". Merriam-Webster selected vaccine as word of the year for 2021. Meta came in 10th. If not for COVID, NFT would possibly have additionally been up there.
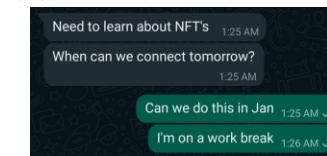
In case you're an "NFT Bro," you would possibly have gotten such text from someone you know

Everybody from mega-companies (Pepsi, Nike, Visa, Adidas, Time, and many others.) to art institutions (Christie's, Sotheby's, Artnet, etc.) to celebrities (Snoop Dogg, Reese Witherspoon, Stephen Curry, Jimmy Fallon, etc.) to tech leaders (Tobias Lütke, Dylan field, Mark Cuban, Dom Hofmann, Justin Kan, etc.) is dipping their feet into NFTs. moreover, many exquisite artists (Beeple, Pak, Damien Hirst, etc.) have also made their foray into this area.

Whilst there are numerous categories of NFTs, pfp (profile picture) kind NFT collections were in the maximum recognition, with a few collections like CryptoPunks and Bored Ape Yacht club trading for millions of dollars for personal pieces. NFTs have also gone directly to create their very own subcultures, trends, memes, or even an NFT lingo. Pfp collections have spawned massive communities of dedicated HODLers (now no longer a typo).

Last week I joined the Generative masks network for a photoshoot in Decentraland

After spending a massive amount of time discovering diverse NFT communities and collections, I recently began to discover NFT utilities other than collectibles and aesthetics, pondering whether NFT use-cases stretched further than just simply as exclusive club access. For any person looking from the sidelines, this is a natural query that might come to mind.

Newfound attention on Web3 and metaverses, Web2 v/s Web3 debates, fear Of missing Out (FOMO), and an ever-developing attention economy have all brought about a frenzy around NFTs. And this has created critiques across the spectrum. On one side, there's the promise of utopia, even as on the alternative aspect, there's the cult of doomers. So is there a technique to the madness? As with most instances, the truth probably lies somewhere in the middle.

In this article, we will discover how some platforms are operating on DeFi-based ideas for unlocking the capability of NFTs beyond simply HODLing. Welcome to the planet of NFT Finance.

IQ Protocol:

IQ is a lending and borrowing protocol being constructed on BSC (Binance smart Chain) and Polygon (formerly, Matic) and will provide the primary collateral-less NFT rental solution. The protocol is being developed through PARSIQ, a data and workflow automation platform that connects blockchain activity to standard Web2 programs in real-time.

IQ is modeled around two founding concepts — lifetime value (LTV) and Rentability – that are implemented via "renting pools" where the NFT owners can deposit their assets (much like, say, Uniswap pools).

Upcoming NFT Renting Pools at IQ Protocol

while a borrower rents an NFT, IQ Protocol will mint an expirable version (or iNFT) with a purpose to offer the borrower the same privileges and services as afforded by means of the original authentic NFT. however, the iNFT will include a predefined LTV, which determines how much and how long the borrower has access to those privileges.

As soon as the expiry duration is over, the original NFT will be automatically returned to the owner by smart contracts. because the borrower receives an expirable version rather than the real NFT, there's a constrained threat of default, thereby minimizing counterparty risk.

What sets IQ aside from different NFT renting platforms is that it's going to permit for collateral-less borrowing of NFTs. usually, platforms require collateral more than the value of the NFT itself. not only does this impose an economic barrier for the borrower, but it could also result in the owner dropping the NFT (in exchange for the collateral) if the borrower defaults.

IQ Protocol, alternatively, will permit users to borrow costly NFTs at an affordable rate by only paying the renting charge, in order to try the assets over a quick duration first before committing to complete ownership. The platform will go live in Q1 2022.

Distribution	Percentage	IQT Tokens	Terms / Usage
Foundation	50%	500,000,000	Liquidity Mining Incentives, Staking Rewards, Ecosystem Grants, Foundation Reserves
Pre-Sales	17.5%	175,000,000	6 months cliff + 18-24 months vesting
Team/Advisors	15%	150,000,000	6 months cliff + 30 months vesting
Market Development	12.5%	125,000,000	N/A
Airdrops & Rewards	5%	50,000,000	N/A

Planned token distribution (source: https://blog.iq.space/iq-protocol-whitelist-program-185277037e8a)

The LTV and Rentability components can be extended as a modular solution for blockchain companies seeking to provide subscriptions. Expirable tokens permit companies to part with their assets temporarily, which mimics subscription-based commerce. this flexibility was previously not feasible. as a result, IQ Protocol has constructed the picks-and-shovels for a circular economy.

The governance token of the IQ Protocol is $IQT which is also set to release during Q1 2022 with a complete supply of 1 billion. PARSIQ is in the final stages of closing its private fundraising round and has already announced a Whitelist program for a public sale. Allocations and further incentives could be provided to liquidity providers and to the most lively and constructive community participants in diverse social forums.

reNFT:
reNFT is an NFT rental protocol built on Ethereum, which permits NFTs to be rented or borrowed in a trust-less and secure way. The famous NFT marketplace Rarible is incorporated with reNFT's decentralized protocol.
NFT lenders on reNFT must specify the everyday rent, the NFT collateral price, and the max rental duration at the time of lending. those parameters are used to calculate the overall rent amount. The borrowers, on their part, have to mention the rent duration.
As soon as a borrower agrees to the terms set by the lender, the whole rent charge gets deducted from the borrower's balance, and the NFT is transferred to the borrower with complete custody. The Smart contracts store the amount and act as escrows during the rental process. Funds are returned to the borrower only if the successful return of the NFT to the owner is done. If the borrower is unable to return it within the stipulated duration, the collateral may be claimed by the lender from the reNFT contract.
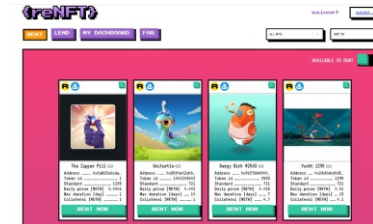
Complete rental terms for every NFT are listed in the dashboard

The collateral may be quite excessive depending upon the actual price of the NFT, which offers a little or no incentive for a borrower to default. but, in the event an NFT's rate exceeds the collateral after being borrowed, the borrower may try to make a profit by maintaining the asset and sacrificing the collateral.
To avoid such situations, reNFT has developed integration tools to permit trust-less and collateral-free rentals. these smart contracts will offer a "usage right" this is linked to the original NFT and the terms of borrowing.
The governance token of reNFT is

$rent, which will permit holders to vote on proposals within the reNFT DAO. As a part of their roadmap, reNFT plans to immediately integrate with other NFT marketplaces such as OpenSea, and amplify compatibility to Solana and Polygon. The venture is backed by marquee investors like Animoca brands and Lattice Capital.
Within the interest of the readers, it should be stated that as per the reNFT website, even though the smart contracts had been thoroughly examined and peer-reviewed, they've no longer been officially audited yet. users are therefore recommended to exercise warnings while using the utility.

Drops:
Drops applies DeFi primitives to NFTs, permitting users to leverage their NFTs to acquire loans and earn yield. It operates on a Polygon chain. Drops' own fractionalization protocol can create NFT renting pools, wherein users can deposit their assets and mint dNFT tokens - ERC20 tokens which represent the NFT assets and produce fungibility to non-fungible assets. every NFT venture will have its very own renting pool.
dNFTs represents a share of the renting pool. The market value of the dNFT tokens will be tied to the fee of the locked NFT. The smart lending contracts hired by Drops have been primarily based on Compound Finance's smart contracts.
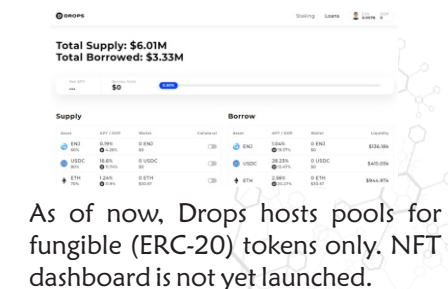
As of now, Drops hosts pools for fungible (ERC-20) tokens only. NFT dashboard is not yet launched.
NFT(s) may be redeemed by returning the dNFT tokens (+ fees) to the respective renting pool. but, as per the whitepaper, it appears that evidently, it is viable to get a one-of-a-kind NFT (from the same collection) on redemption. As per

Discord moderators, the whitepaper is slated for an update. So this could change in the future. we can look forward to the main-net going live to understand how dNFT redemption through pools will work.
as a substitute, users can lock up their NFT assets without depositing them to the renting pool. This guarantees that, on redemption, they'll acquire the precise same NFT that was deposited initially. In this situation, a fee of 0.2% of the minted dNFT tokens needs to be paid as premium each day the NFT is locked.
The contracts are presently being audited via Peckshield. So it is best to take caution while using the dApp at this moment. Mainnet launch is planned after the finishing touch of a successful audit.
$DOP, the software token of the Drops ecosystem, has a complete supply of 15 million. The token may be used to trade NFTs at the platform and to pay yield and cashback rewards to users. $DOP can also be used for platform governance.
The above 3 platforms aren't the only ones that are pushing the limits of NFT Finance. There also are others like NFTfi, NFTX, Fractional, and plenty of more. however, those are nevertheless early days for (DeFi x NFTs). a number of such projects are unaudited. a number of them are beginning to discover their niche. while 2021 has seen the explosion of NFT collections, 2022 will probably begin to see their cost being leveraged to supply financial solutions. something similar is occurring within the world of Play-to-Earn games with the advent of GameFi. Likewise, new platforms will present NFT Finance in approaches we haven't seen earlier.

Disclosure: The author has no vested interest in any of the ventures stated inside the article. They do no longer own tokens of IQ Protocol, reNFT, or Drops. None of the information stated above has to be taken into consideration as financial advice.

Stock Market News Scraper using BeautifulSoup

Poojan Shah (TE Computer)

What is Web Scraping and Why do we need it?

-Web scraping is the process of extracting raw data from any website in an efficient way where large amount of Data can be scraped within a fraction of time. Scraped data can be later used for analysis in different ways. Not every website has an Application Programming Interface(API) nor they offer data sets, so with the help of web scraping, we can get the data and save it in different formats. In this article, we will use BeautifulSoup and Python to scrape the data.

What is BeautifulSoup?

-BeautifulSoup is a Python library that is used for web scraping purposes to pull the data out of HTML and XML files. It creates a parse tree from page source code that can be used to extract data in a hierarchical and more readable manner.

Installation of Required Python Libraries:
1.BeautifulSoup.
"pip install beautifulsoup4"
2.Request Library.

To scrape data from a website, we need to extract the content of the webpage. Once the request is made to a website, the entire content of the webpage is available in the form of plain text.
"pip install requests"
Let's get started with the code –

```
from bs4 import BeautifulSoup
import requests
```

Here, we are importing Beautiful-Soup and request library. The website which we are using to scrape news:
https://www.equitybulls.com/.

```
url = "https://www.equitybulls.com/"
news = requests.get(url)
doc = BeautifulSoup(news.text, "html.parser")
```

The following code will send a Get request to the web page and the doc object will
contain the html file parsed in a tree-based structure using html.parser.
Extract News Headlines from the website:
To find out under which html tags our headlines are located, we need

to inspect our web page. To inspect a web page click F12.

```
* <a href="category_uhol?d=318349" class="media-left"></a>
* <div class="media-body">
  <a href="category_uhol?d=318349" class="catg_title">Acrysil ltd's UK subsidiary
  announces acquisition</a> == $0
</div>
```

Here, we can see that our 1st headline is located under the <div> tag containing the class="media-body". We will use the method find_all() to search <div> tags, with a class of media-left. By using a for loop, we will iterate through each tag and scrape the headlines and append them in headings list.

```
headings = []
  for updates in doc.find_all("div", attrs={"class": "media-body"}): headings.append(updates.text)
```

Now let's scrape all the url's for each headlines respectively-

Here we can see that the <a> tag contains href link with class="catg_title". We will use the method find_all() to search class_="catg_title" where href attribute is True. l.get will get all the hyperlinks inside <a> tag, then we will concatenate https://www.equitybulls.com/with the scraped href link to create a URL. we will append thet URL into our list named click_link.

```
click_link = []
  for l in doc.find_all(class_="catg_title",
  href=True): l_ck = l.get('href')
  click_link.append("https://www.equitybulls.com/" + l_ck)
```

Map each headline with it's link respectively-
We will create a Dictionary and with the help of zip() function we will zip the two different list i.e. headings and click_link into a single dicitionary.

```
headings_links = dict(zip(headings, click_link))
```

When we print the dictionary we will get headings and links in key-value pair:

Here is the Full Code-

```
from bs4 import BeautifulSoup
import requests

url = "https://www.equitybulls.com/"
news = requests.get(url)
doc = BeautifulSoup(news.text,"html.parser")

headings = []
  for updates in doc.find_all("div", attrs={"class": "media-body"}):
    headings.append(updates.text)

print("HEADINGS:-", headings)

click_link = []
  for l in doc.find_all(class_="catg_title",
  href=True): l_ck = l.get('href')
  click_link.append("https://www.equitybulls.com/" + l_ck)

print("Links:-", click_link)

headings_links = dict(zip(headings, click_link))

if __name__ == "__main__":
    print(headings_links)
```

List of websites you can try news scraping on:-
https://www.livemint.com/market/stock-market-news
https://www.indiainfoline.com/markets/news

Happy Scraping

ABOUT THE DEPARTMENT

Department of Computer Engineering is the largest and most research strong department of its kind in Mumbai University. The Department was established in 2014 and currently offers a B.E in Computer Engineering. The department boasts a vibrant student body and a stellar faculty team of qualified and experienced professors. The Department has developed many state-of-art, fully air-conditioned laboratories with more than 200 desktop computers in various fields of Computer Engineering such as High Performance Computing, Web Technologies, Cloud Computing, Software Engineering etc. thereby providing ample facilities for project development and research. The department has tie up with CSI and maintains close relationship with industries of repute. The department takes immense interest in conducting professional activities such as organizing workshops, seminars and expert lectures to meet the challenges in the IT industry. Our results are constantly on the upward trajectory and the phenomenal growth of the department is attributed to the winning combination of dedicated and experienced faculty, brilliant students and strong administrative support from the institute.