



Words From the Director

~DR. RUPESH VASANI



I am pleased to congratulate Computer Engineering Department for issuing first issue of Departmental eNewsletter “FUZZY TO CRISP”. Huge congrats to the editorial team. A wide number of readers are welcomed by the newsletter “FUZZY TO CRISP” perspectives from the Department of Computer Engineering. The faculty's job is to develop students' talents and skills for their future. Let this be a forum for professors and students to show their creative abilities and revolutionary ideas. The outside world will come to know about the achievements and extraordinary performances of the students and faculties through this online medium. My best wishes will always be with this type of good efforts of the Computer Engineering Department.



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- From the Desk of the director
- From the Desk of the Principal
- From the Desk of the HOD
- Department Activities
- Faculty Technical Article
- Faculty Activities and Achievements
- Placement
- Students's Corner

HOD'S DESK

DR. VIRAL PAREKH



GREETINGS !

Dear Readers,

“We are all born with a divine fire in us. Our efforts should be to give wings to this fire and fill the world with the glow of its goodness.”... Dr. APJ Abdul Kalam.

Our young generation of today is full of energy and is impatient to succeed. It is very important for us to channelize their energies and provide them a right platform to learn and prepare for the future. Leaving you at this thought, I feel immense pleasure to proudly present the first issue of Computer Engineering Department's e-Newsletter

“FTC: Fuzzy to Crisp”. The newsletter will mainly cover the tech articles, literary work, and the activities in and around the campus. The aim is to imbibe a spirit of professionalism and make the young minds aware of the latest technologies in order to attain complete and correct vision.

“FTC” is an initiative by our young and enthusiastic students of III semester under the club “BLUWINGS’ . This club is initiated by students, managed by students, participated by students and of course benefitted by students. This is one initiative, which I feel will give wings to all my students to gain new tech horizons. This would not have been possible without the support of the respected Ms.Neelima Shah Ma'am and Director sir, “Prof.Dr. Rupesh Vasani”. We sincerely thank them for being our motivation and source of inspiration. Further, I extend my deep gratitude to all the members who are directly or indirectly involved in this small voyage.Hoping an active participation from all students and faculty members in our future endeavors!!

Vision and Mission of the Institute

Vision:

SAL Education aims at developing young creative thinkers in a learning environment of high academic ambience by collaborating values, professional and technical competence with the vision to be a prominent centre of learning with significant international impact and local commitment and thus producing leaders with the global views and Indian ethos.



Mission:

- To endlessly strive for the complete development of the learners by educating learners in a state-of-art technology.
- Helping them to imbibe professional ethics and social commitments, so that they emerge as competent professionals to meet with the global challenges.
- To contribute to shaping a better future for humankind by developing effective and socially responsible individuals and organizations..



Vision and Mission of the Department

Department Vision:

To produce skillful and socially responsible Computer Engineers, innovators, researchers and entrepreneurs contributing to the development of society.



Department Mission:

- 1.To impart quality and skilled technical education with effective teaching learning process.
- 2.To provide well-equipped infrastructure for molding young minds towards innovation, research and life-long learning.
- 3.To foster institute industry collaborations and develop the essence of team work, communication skills, leadership, working ethics and entrepreneurship.
- 4.To develop professionally and ethically responsible citizens working for the betterment of society.





Program Educational Objectives:

PEO-I The graduate will be able to employ their skilful knowledge expertise to solve various industrial and real world problems.

PEO-II The graduate will exhibit professionalism, ethical attitude, communication skills and practice their profession with legal and societal responsibilities.

PEO-III The graduates will excel in their professions as good leaders, innovators, researchers and entrepreneurs

PEO-IV The graduate will be engaged in continuous education and lifelong learning with post-graduation, certification courses and research activities.

ROLE OF DATA SCIENCE IN PRICE PREDICTION

Seminar on Role of Data Science in Price Prediction was held on 7/7/2021 by Mr. Raj Makhijani. Faculty from SALITER and Computer Engineering Student were present during 10:30 AM to 01:30 PM.

Department of Computer Engineering | SAL Institute of Technology & Engineering Research

WEBINAR ON
Role of Data Science in Price Prediction

JULY 7 | **10:30 AM To 1:30 PM**

Raj Makhijani
Sr. Developer and Team Leader
BrainyBeam Technologies Pvt Ltd

MODERATOR

Prof. Sudha Patel
Head of department,
SALITER.

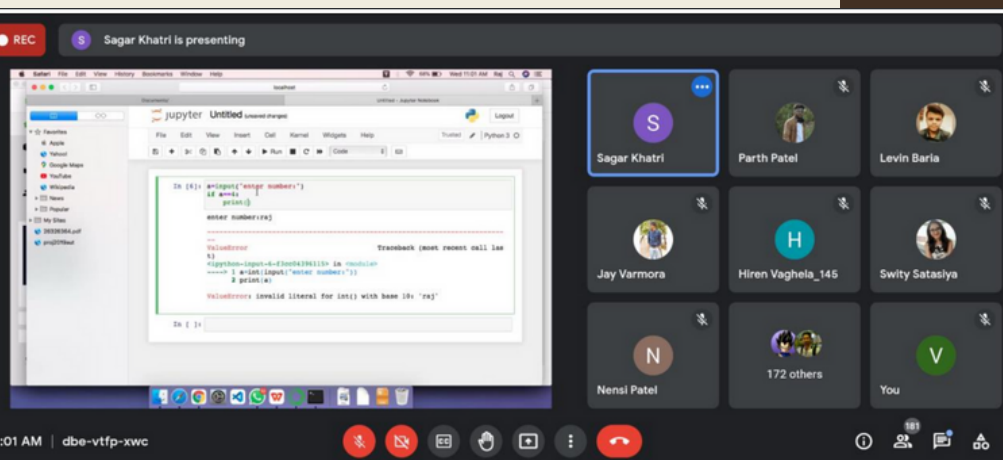
Prof. Nidhi Patel
Faculty Coordinator,
Computer Department,
SALITER.

Prof. Vaibhavi Joshi
Faculty Coordinator,
Computer Department,
SALITER.

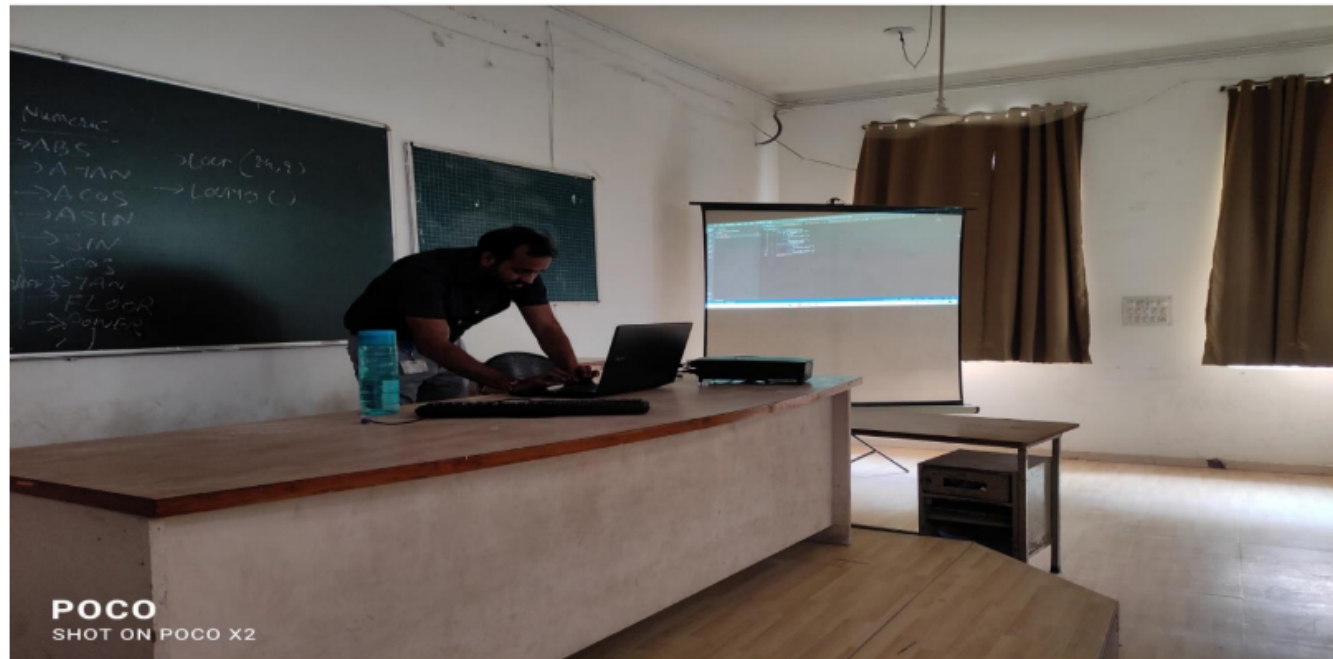
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WEB DESIGNING

One Day workshop on Web Design. It was held on 9/17/2021 by Mr. Jay amin. Faculty from SALITER and Computer Engineering Student of Sem 3 were present during 10:00am to 10:00 PM.



WEB DESIGNING

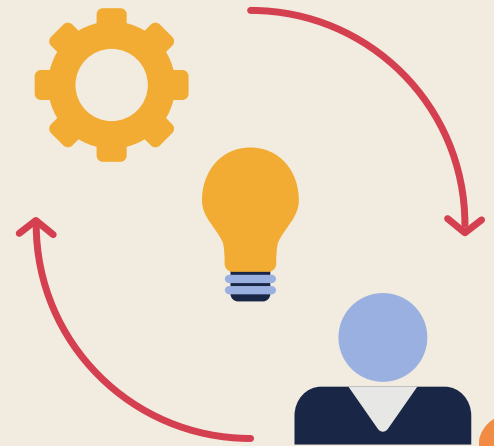


DEPARTMENT ACTIVITY SEMINAR/WORKSHOP ORGANISED

ESSENTIALS OF BLOCK-CHAIN



One day, Webinar on "Essentials of Block-Chain". It was held on 13/04/2021 by Mr. Akash Padhiyar. The session was conducted for 100+ B.E. Computer Engineering Students from SALITER.



WEBINAR ON PYTHON PROGRAMMING

Webinar On Python Programming was organised on 28/01/2021 by Computer Engineering Department in association with Akash Technolab. Our key speaker Mr. Akash Padhiyar delivered webinar for semester IV during 2:00 p.m-3:15 pm. with Meet Platform. Faculties of CE Department and students were present.

SAL EDUCATION SAL INSTITUTE OF TECHNOLOGY & ENGINEERING RESEARCH
Opp. Science city, Sola Bhadaj Road Ahmedabad - 380060 Gujarat, India

Department of Computer Engineering

• Organise a Webinar For •

**CE Students
On
Python Programming**

28 Jan-2021 2:00 pm

Akash Padhiyar

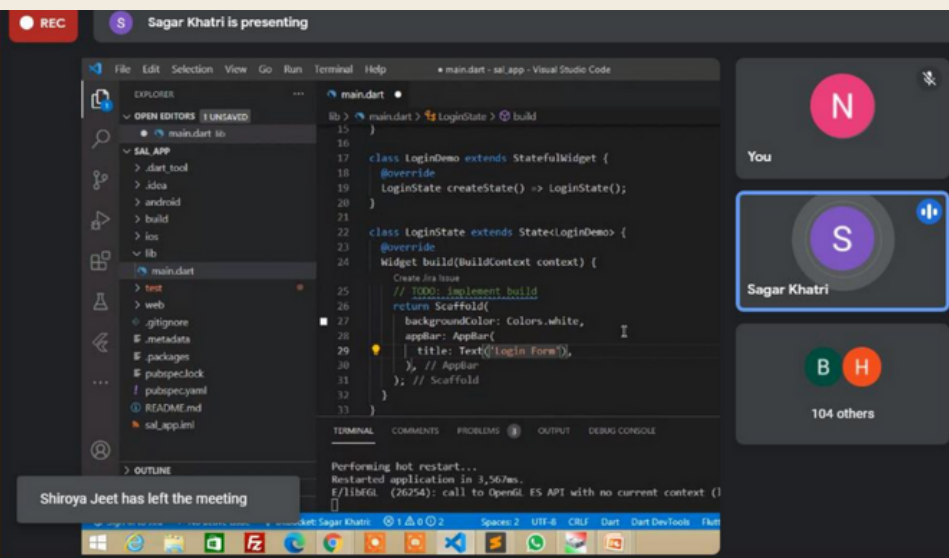
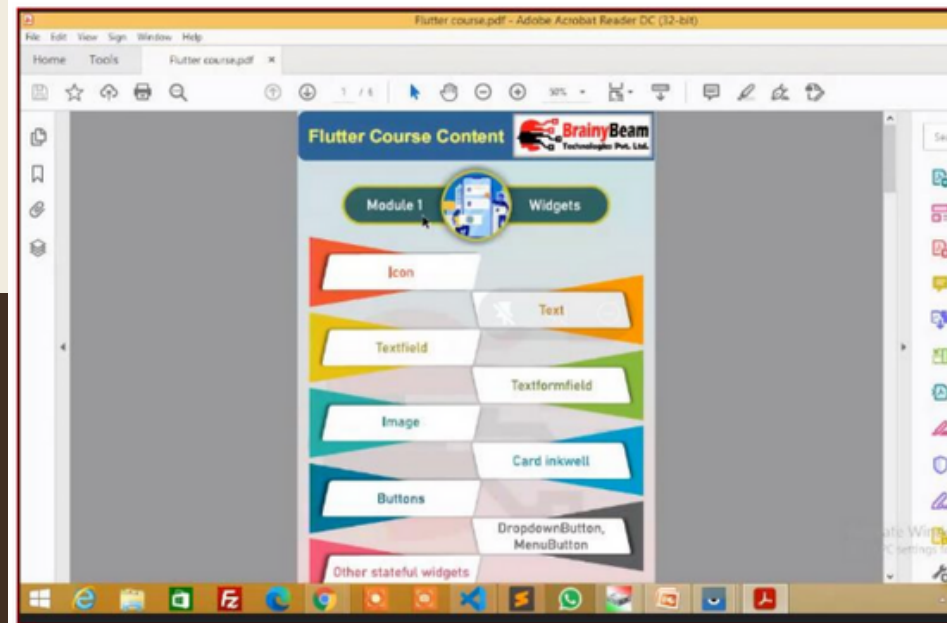
DEPARTMENT ACTIVITY SEMINAR/WORKSHOP ORGANISED

FLUTTER- A CROSS PLATFORM MOBILE APP DEVELOPMENT

Following are topics that were covered during webinar were:

Topics to be covered:

- What is Flutter?
- Native vs Cross platform
- Widgets
- Layouts
- Navigation
- Appbar



One-day Webinar on “Flutter- A cross platform Mobile App Development” was held on 30th June 2021 by Mr.Sagar Khatri , Sr. Developer, Brainy Beam Technologies Pvt. Ltd. In association with SAL Education 3 Faculties and 79 students were present in webinar during 10.30 am to 1:30 PM.

Prof. Miki Patel attended Webinar on “Hands-on Machine Learning using Python” on 23rd to 24th February , 2021

Prof. Pooja Dutta attended 5-day Webinar on ""INTEGRA Capacity Building Programme for ICT Tutorson" on 29-11-2021 to 03-12-2021

Prof. Madhuri Parekh attended workshop on Research Methodology on Emerging Trends, Technology and Technical Research Writing using Tools during 21st June, 2021 to 25th June, 2021

Prof. Sudha Patel attended FDP on "Data Analytics and Data Science" during 31-03-2021 to 12-04-2021.

“

A METHODOLOGY FOR APPLYING MACHINE LEARNING ALGORITHMS IN THE MEDICAL INDUSTRY

Prof. Hemali Shah and Prof. Bhvana Shah has published paper on A Methodology for Applying Machine Learning Algorithms in the Medical Industry - JARIIE - UGC Approved, 2395-4396, JUNE,2021.

“

MEMCACHED: AN EXPERIMENTAL STUDY OF DDOS ATTACKS FOR THE WELLBEING OF IOT APPLICATIONS

Nivedita Mishra, Sharnil Pandya, Chirag Patel, Nagaraj Cholli, Kirit Modi 4, Pooja Shah 5, Madhuri Chopade, Prof. Sudha Patel and Ketan Kotecha has published a paper on "An Investigation on Memcached: An Experimental Study of DDoS Attacks for the Wellbeing of IoT Applications" - Smart Healthcare Systems Based on the Internet of Things and Artificial Intelligence, Sensors, UGC Approved, ISSN 1424-82202, Year of Publication: 2021.

ROBOTIC PROCESS AUTOMATION



ASST. PROF. MIKI PATEL

Robotic process automation (RPA), also known as software robotics, uses intelligent automation technologies to perform repetitive office tasks of human workers. Robotic process automation (RPA), also known as software robotics, uses automation technologies to mimic back-office tasks of human workers, such as extracting data, filling in forms, moving files, et cetera. It combines APIs and user interface (UI) interactions to integrate and perform repetitive tasks between enterprise and productivity applications. By deploying scripts which emulate human processes, RPA tools complete autonomous execution of various activities and transactions across unrelated software systems.

HOW DOES RPA WORK?

According to Forrester, RPA software tools must include the following core capabilities:

Low-code capabilities to build automation scripts

Integration with enterprise applications

Orchestration and administration including configuration, monitoring and security Automation technology, like RPA, can also access information through legacy systems, integrating well with other applications through front-end integrations. This allows the automation platform to behave similarly to a human worker, performing routine tasks, such as logging in and copying and pasting from one system to another. While back-end connections to databases and enterprise web services also assist in automation, RPA's real value is in its quick and simple front-end integrations.

THE BENEFITS OF RPA

There are multiple benefits of RPA, including:

- Less coding: RPA does not necessarily require a developer to configure; drag-and-drop features in user interfaces make it easier to onboard non-technical staff.



- **Rapid cost savings:** Since RPA reduces the workload of teams, staff can be reallocated towards other priority work that does require human input, leading to increases in productivity and ROI.
- **Higher customer satisfaction:** Since bots and chatbots can work around the clock, they can reduce wait times for customers, leading to higher rates of customer satisfaction.
- **Improved employee morale:** By lifting repetitive, high-volume workload off your team, RPA allows people to focus on more thoughtful and strategic decision-making. This shift in work has a positive effect on employee happiness.
- **Better accuracy and compliance:** Since you can program RPA robots to follow specific workflows and rules, you can reduce human error, particularly around work which requires accuracy and compliance, like regulatory standards. RPA can also provide an audit trail, making it easy to monitor progress and resolve issues more quickly.
- **Existing systems remain in place:** Robotic process automation software does not cause any disruption to underlying systems because bots work on the presentation layer of existing applications. So, you can implement bots in situations where you don't have an application programming interface (API) or the resources to develop deep integrations.

CHALLENGES OF RPA

While RPA software can help an enterprise grow, there are some obstacles, such as organizational culture, technical issues and scaling.

ORGANIZATIONAL CULTURE:

While RPA will reduce the need for certain job roles, it will also drive growth in new roles to tackle more complex tasks, enabling employees to focus on higher-level strategy and creative problem-solving. Organizations will need to promote a culture of learning and innovation as responsibilities within job roles shift. The adaptability of a workforce will be important for successful outcomes in automation and digital transformation projects. By educating your staff and investing in training programs, you can prepare teams for ongoing shifts in priorities.

DIFFICULTY IN SCALING

While RPA can perform multiple simultaneous operations, it can prove difficult to scale in an enterprise due to regulatory updates or internal changes. According to a Forrester report, 52% of customers claim they struggle with scaling their RPA program. A company must have 100 or more active working robots to qualify as an advanced program, but few RPA initiatives progress beyond the first 10 bots.

WHAT'S NEXT AFTER RPA?

The latest buzzword for where RPA technology evolves to is hyperautomation. The idea is automating business processes—even automatically—of increasing complexity, that today rely on knowledge inputs from people. Automating begins to change the nature of work itself, not only by providing an accessible way for business processes to become more “digital” but by changing the human work experience and setting the stage for more complex and intelligent augmentation and transformation of business. In short, RPA defined the start of a new era of work. The rest is yet to come.



CYBER SECURITY



ASST. PROF. MAHIPALSINH ZALA

Cyber security is the application of technologies, processes, and controls to protect systems, data, servers, and devices like laptops, mobile phones, and computers from cyber attacks. It is also known as Information technology security or electronic information technology. Cyber security aims to reduce the risk of cyber-attacks and protect against unauthorized exploration of systems, networks and technologies. A strong cyber security strategy has layers of protection to defend against cybercrime.



The following best practices and technology can help you implement strong cyber security

CYBERTERRORISM

This threat is a politically-based attack on computer and data technology to cause a widespread social disturbance.

MALWARE

This threat binds ransomware, spyware, viruses and worms. It can install harmful software, block your computer resources, disturb the system, or secretly transmit data from your data storage to hackers

TROJANS

Like the legendary computer virus of mythology, this attack tricks users into thinking they're opening a harmless file. Once the Trojans are found in your device, it attacks the system, typically establishing a backdoor that enables and permits cybercriminals.

BOTNETS

This could be a hideous attack involving large-scale cyber attacks conducted by remotely Malware contaminated gadgets.

ADWARE

This threat is one type of Malware. It's often called advertisement-supported software. This virus is a Potentially Unwanted Program(PUP) installed without permission and automatically generates unwanted online ads.

SQL INJECTION

SQL means Structured Query Language attack, which embeds malicious code into SQL using a server.

PHISHING

Hackers use fallacious messages, especially e-mail, to fool the recipient into opening it and following the instructions that typically kindle personal information. Some Phishing attacks also introduce Malware.

MAN- IN- THE- MIDDLE ATTACK (MITM)

MITM attacks involve hackers inserting themselves into two-person online transactions. Hackers can filter and steal desired data of users. MITM attacks often happen on unsecured public WI-FI networks.

DENIAL OF SERVICE (DOS)

A Denial of Service attack is a type of cyber attack which is a malicious threat which aims to render a computer or other devices. A DOS attack is characterized by using a single computer to launch the attack.

STEPS TO PREVENT CYBER THREATS

Individuals and organizations can take simple steps to prevent data breaches and keep their information safe and secure.

1. The first and basic step is to create a unique and original password for each account. Users must update their password after every three months.
2. Keep the software up to date, as cybercriminals often target known flaws in software to access users' information.
3. Social media users should set their accounts as non-public or private.
4. A Virtual Private Network (VPN) is a great way to shield users' data, especially when using public WI-FI.
5. Children should get proper knowledge about usage of the internet from Teachers and elders.

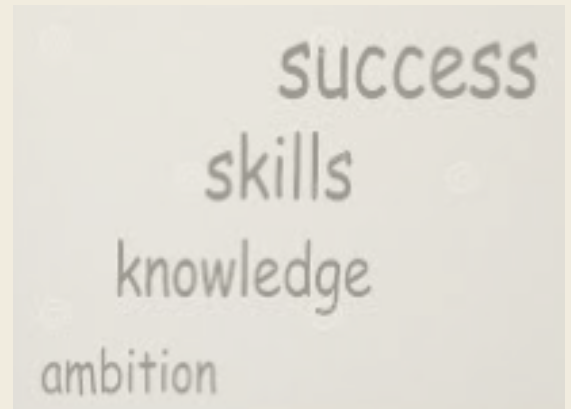


PLACEMENT

Placements provide students, the opportunity to achieve specialized skills, of their choice and also acquire the ability skills required for real-life work. The knowledge of an industry or sector is increased, and the students can make better decisions about future career choices.



Knowledge and skills are the most important factors companies use to assess freshers during campus placements. With every business and organization going digital, the IT sector today is a booming field as compared to other sectors and there is a huge demand of Computer Science Engineers and programmers.



Gajeriya Meet got placed at Visudh Ajviam Pvt Ltd with the package of 8.0 LPA.

Methaniya Hiral got placed at Visudh Ajviam Pvt Ltd with the package of 8.0 LPA.

Sweta Mandani got placed at TCS with the package of 3.36 LPA.

Purohit Nipul got placed at Toujours Peritus with the package of 3.36 LPA.

Karan Patel got placed at Visudh Ajviam Pvt Ltd with the package of 8.0 LK.p.a.

Ish Lavingya got placed at BrightChamps Tech Pvt Ltd with the package of 5.0 LPA.



ART GALLERY



Art by
~Janvi Patel &
Jainam Patel





ART GALLERY



Art by

~Janvi Patel & Jainam Patel



Art by
~Maitri Makwana

