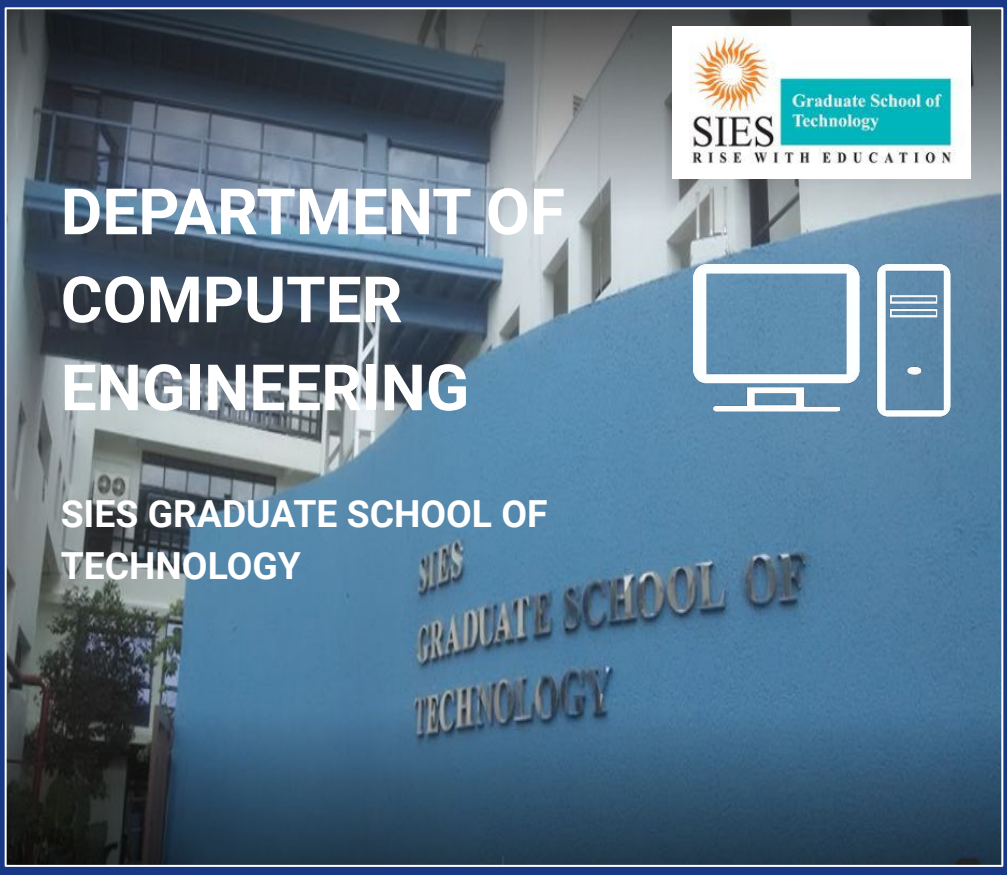
Techniz

2018 - 2019



VISION

To be a centre of Excellence in Computer Engineering to fulfill the rapidly growing needs of the Society.

MISSION

- To Impart quality education to meet the professional challenges in the area of Computer Engineering.
- To create an environment for research, innovation, professional and social development.
- To nurture lifelong learning skills for achieving professional growth.
- To strengthen the alumni and industrial interaction for overall development of students.

PEO

- Practice Computer engineering in core and multi-disciplinary domains.
- Exhibit leadership skills for professional growth.
- Pursue higher Studies for career advancement.

PSO

- To apply computational and logical skills to solve computer engineering problems.
- To develop interdisciplinary skills and acquaint with cutting edge technologies in software industries.

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Message from HOD

Dr. Rizwana Shaikh
HOD-CE

It's my pleasure to introduce the Department of Computer Engineering of SIES Graduate School of Technology. The department nurtures and moulds the students to enter in the fast changing pragmatic world yet maintaining the sensitivity in them. The Department is one of the most dynamic departments and has consistently maintained an exemplary academic and research record.
I am really glad to share that the department stands on the strength of experienced and well qualified faculty who are very dedicated to teaching and also involved in up-gradation of knowledge. Their research experience will help to cultivate the future of our students. With great demand in industry and great placement opportunities, the department stands to be proud.

Our students are not only academically sound and disciplined but they also organize various events like TML, Innovations,ByteCamp, EDC cell and NSS activities to showcase their talents under non – technical, technical, cultural and social forums.I believe that my team consisting of CE Dept students, staff and faculty is capable of doing wonders.

Message from Faculty Incharge

Prof. Pranita Mahajan
Faculty Incharge

As the faculty incharge of the current issue of “TECHNIZ” department magazine, this issue is particularly special to me as it was a challenge to not only live up to the standards set by the previous issue but also set new ones. With this issue, we serve a platter of articles on innovative technology bridging the industry-academia gap. With this issue, we aspire to ignite innovative thinking in building engineers.

We were lucky that we retained all members from the team behind the earlier issue. Everything from the collection of articles right down to the final edits was more or less smooth sailing. I worked closely with the team to ensure everything was done according to a schedule. The work was performed in an organized, almost professional manner and credits to my entire “TECHNIZ” team for their commendable job.

I would also like to thank every member of the “TECHNIZ” team, without whose contribution, this issue would not have been possible. I hope you enjoy reading this magazine as much as I enjoyed working towards its creation, and more importantly, I hope that the articles in this magazine inspire you.

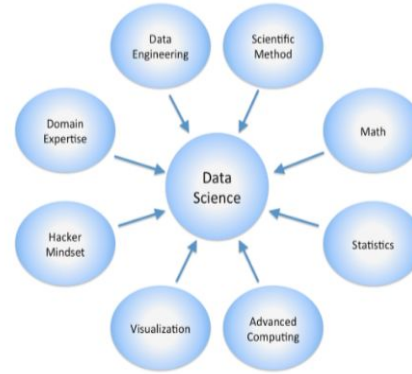
A closer look at data science industry and its expectations from Engineers

Prof. Pranita Mahajan

Data science is a multidisciplinary blend of scientific methods, processes and systems. At the core there is data, which can be structured or unstructured. Data science is the science of getting insight of this data to extract knowledge which can play vital role in taking strategic business decisions. It deals with interdisciplinary fields such as statistics, information science, data mining and visualisation.

Turing award winner Jim Gray has mentioned data science as a “fourth paradigm” of science. According to him data science has evolved from empirical, theoretical, computational and now data-driven. Data is growing potentially so the need to extract information by analyzing it. Everything about science is changing because of the impact of information technology; it is helping business industries in creating new opportunities and growth. Last decade has seen gradual development in technologies and analytical tools; it has made it possible for business operators acquire numerous benefits from their data assets. Data Science is allowing enterprise’s to successfully leverage that potential like never before. The data scientists investigate data to find characteristics or pattern within the data for example industries like Amazon, Flipkart try to find the interest of a person and gives recommendation based on the earlier pattern. This industry is not limited to shopping portals scientists are moving towards domains like health, security, academic, finance and many more. The data scientist role is to provide data warehouse solutions by extracting, transforming and loading (ETL) data.

Data can be in any form, taking this raw data for analysis may take more time and lead to wrong results. Cleaning this data is valuable process which can increase the efficiency of analysis. According to Aberdeen group “The impact of higher-quality data is most immediately evident in the quality and speed of business decisions. Organizations reporting data accuracy of over 90% were able to put reliable information in the hands of their executives fast enough to meet demand 80% of the time.



Companies with lower than 70% data accuracy only succeeded at meeting this demand window half of the time”. Data scientist should have in depth knowledge of database architecture, spreadsheets, BI tools with which extracted information can be centralized, protected and maintained. This maintained information is analyzed to find valuable insight such as patterns, association and characteristic which in turn can help in taking business decisions using mining techniques such as predictions , classification etc.IIf one look at data science industry from engineers perspective there are huge job opportunities like, data analyst, data engineers , the business analyst, statisticians who organizes data, visualize it and helps in predictive modelling by applying various algorithms. To achieve this one should have knowledge of languages such as C/C++, JAVA, R, Python, SQL, HIVE, Pig, Spark and should be skilled in using tools like R Studio, Rapidminer, weka, openRefine etc. Data scientist duties include creating various machine learning tools and applying various automation/recommendation algorithms to get value from the data. This information help in business decision making leading to the industry growth.

For aspiring data scientist there is good news, the substantial growth of data has lead to the need to understand it. Companies are in search for the peoples who can dig into the data to give them valuable information in the form of charts, predictions, patterns which can help companies in understanding their customers. There are a number of companies for whom their data is their product. In this case, the data analysis or machine learning going on can be pretty intense. This is probably the ideal situation for someone who has a formal mathematics, statistics background and is hoping to continue down a more academic path. Data Scientists in this setting likely focus more on producing great data-driven products than they do answering operational questions for the company. Companies that fall into this group could be consumer-facing companies with massive amounts of data or companies that are offering a data-based Service.

As per McKinsey report published in 2013 predicted that the global business community would feel the pinch of an acute shortage of Data Science professionals for the next decade, specifically a shortage of "1.5 million analysts" skilled at deriving competitive intelligence from the vast amounts of static and dynamic (real-time) data. While such a prediction is coming true, a greater focus on marketing the importance of Data Management to enterprises and within higher education institutions is enabling the entire industry to cope with shortages in ways that were not fully understood only a few years ago. The upheavals within the Data Science industry will continue throughout 2020, but so will more growth and more possibility.

Damn Vulnerable Web Application (DVWA)

Prof. Kalyani Pampattiwar

Damn Vulnerable Web App (DVWA) is a PHP/MySQL web application that is damn vulnerable. Its main goals are to be an aid for security professionals to test their skills and tools in a legal environment, help web developers better understand the processes of securing web applications and aid teachers/students to teach/learn web application security in a classroom environment.

Utilizing intentionally vulnerable web applications to teach and practice cyber security principles and techniques provides a unique hands-on experience that is otherwise unobtainable without working in the real world. Creating such applications that emulate those of actual businesses and organizations without exposing actual businesses to inadvertent security risks can be a daunting task.

Benefits of DVWA:

- Hacking anything without the permission is a Crime. So as a student or beginners from where you got this permission so you can use this. For advanced users to sharpen their skill DVWA is the best platform.
- In DVWA you do not have to take permission from other.you can simply install this in a virtual environment and start using it.
- It is very simple to install.
- This is the best place to do hacking.
- In fact, this is running in your local environment and it is totally legal.

Difficulties levels in DVWA:

As the name suggests DVWA has many web vulnerabilities. Every vulnerability has four different security levels, low, medium, high and impossible. The security levels give a challenge to the 'attacker' and also shows how each vulnerability can be counter measured by secure coding.

Security levels in DVWA

Impossible: In this level, you will face challenges like CTF and it is harder than the other level. This level gives difficulties which we face in the real world.

High: This vulnerability level gives the user an example of how to secure the vulnerability via secure coding methods. It lets the user understand how the vulnerability can be counter measured. This level of security should be unhackable however as we all know this is not always the case. So if you manage to bypass it, that you are doing right.

Medium: This security level's purpose is to give the 'attacker' a challenge in exploitation and also serve as an example of bad coding/security practices.

Low: This security level is meant to simulate a website with no security at all implemented in their coding. It gives the 'attacker' the chance to refine their exploitation skills.

Different kinds of Vulnerabilities in DVWA that we can test

1. BRUTE FORCE: In the brute force vulnerability we can test whether the login portal is vulnerable to the brute force or not. Here we can try almost all combination of words, number, special symbol. we can also use the dictionary file. The main goals are to crack the login name and password.brute force can be applied in the different parameter. Here we have to brute force login screen.

2. COMMAND INJECT: In the command inject vulnerability the goal is an execution of arbitrary commands on the host operating system via a vulnerable application. Command injection attacks are possible when an application passes unsafe user-supplied data to a system shell. In this attack, the attacker sends operating system commands are usually executed with the privileges of the vulnerable application so here you have an empty field so
you can execute os commands on that.

3. CSRF: Cross-Site Request Forgery (CSRF) is an attack that forces an end user to execute unwanted actions on a web application in which they're currently authenticated. CSRF attacks specifically target state-changing requests, not theft of data since the attacker has no way to see the response to the forged request. With a little help of social engineering (such as sending a link via email or chat), an attacker may trick the users of a web application into executing actions of the attacker's choosing. If the victim is a normal user, a successful CSRF attack can force the user to perform state-changing requests like transferring funds, changing their email address, and so forth. If the victim is an administrative account, CSRF can compromise the entire web application. So here we can create a fake page and send it to the victim to perform the necessary steps.

4. SQL INJECTION: SQL Injection (SQLi) refers to an injection attack where an attacker can execute malicious SQL statements that control a web application's database server. An attacker can use it to bypass a web application's authentication and authorization mechanisms and retrieve the contents of an entire database. SQL Injection can also be used to add, modify and delete records in a database, affecting data integrity.

5. XSS(DOM): Cross-site scripting is a vulnerability that allows an attacker to send malicious code (usually in the form of Javascript) to another user. Because a browser cannot know if the script should be trusted or not, it will execute the script in the user context allowing the attacker to access any cookies or session tokens retained by the browser. While a traditional cross-site scripting vulnerability occurs on the server-side code, document object model based cross-site scripting is a type of vulnerability which affects the script code in the client's browser.

6. XSS(REFLECT): Reflected XSS attacks, also known as non-persistent attacks, occur when a malicious script is reflected off of a web application to the victim's browser. This vulnerability is typically a result of incoming requests not being sufficiently sanitized, which allows for the manipulation of a web application's functions and the activation of malicious scripts. Here we can use a various javascript function to exploit this.

7. XSS(STORED): The persistent (or stored) XSS vulnerability is a more dangerous version of a cross-site scripting flaw it occurs when the data provided by the attacker is saved by the server, and then permanently displayed on "normal" pages returned to other users in the course of regular browsing, without proper HTML escaping. Here we also have to use javascript but here if you successfully embedded the javascript then this will result into the xss stored means that malicious content will be visible to anyone.

STUDENT ARTICLES

Success in Smart India Hackathon 2019

The Smart India Hackathon provided us a wonderful opportunity to interact with all the experts around the nation. We didn't realise it was the world's biggest digital movement until we were a part of it. We interacted with experts from various domains and learnt a lot. Mentors were really helpful and provided guidance to us 24*7. The environment there was completely new to us, we were provided a dedicated workspace, sticky notes, colorful sketch pens and more. Mentors were continuously keeping a track of the progress we were making. Honourable Prime Minister Narendra Modi addressed all the participants through a video conference and wished us luck. There were various recreational activities like Zumba and Yoga placed in between the time table to help us refreshen ourselves. There was a rule which stated that at any given time there must at least 2 members of the team on the desk so we divided the shifts accordingly. Hospitality provided by Kumaraguru College of Technology was great we all felt like being at home, everything was systematic. Dorms provided were clean and the food was tasty and edible. The entire team had great fun, we all learnt a lot and got great exposure. We got a glimpse of the global competition and learnt how important it is to keep yourself updated with the latest technology.In the end it was fun hacking for 36 continuous hours with Redbull helping us go the extra mile. Winning the hackathon was icing on the cake, we all felt like we had contributed our part in building a stronger and technologically advanced India.

It was a great experience for all of us, we enjoyed our time thoroughly throughout the journey of SIH right from abstract selection to winning the hackathon. We got to interact with a lot of governments officials specialized in their respective domain. Mentoring provided by them was really helpful in cracking the solution. Hospitality provided by the Nodal center was great, all the volunteers and the staff were really supportive and polite at all times. At last we thank all the sponsors for making this event possible and giving young generation to help remove the technological barrier in the country.

Swarika Bhosale
Team Azukarin,TE CE
Winner of SIH 2019
SOFTWARE CATEGORY

REMOTE SENSING TECHNIQUE FOR MONITORING AND REDUCING HARMFUL GAS EMISSION FROM VEHICLES

SUBHED CHAVAN, SAHIL SHETTY,
SIDDHARTH CHAVAN

The main source of atmospheric taint happens due to automobiles.Using empirical scrutiny, ritual mechanized air monitoring system has high rigor, but uneconomical and single datum class make it infeasible for large-scale furnishing. In order to eject the issues in ritual systems we have introduced Internet of Things (IoT) into the field of environmental barrier. This paper is to introduce vehicle emission monitoring system using Internet of Things (IoT) which is a green thumb for tracking down vehicle causing taint on the city roads and measures multifarious genres of toxic wastes, and its level in air. This paper puts forward a kind of real-time air pollution monitoring system at any time anywhere using Gas Sensor.The measured data is shared to vehicle proprietor via text message, and agencies of national environment.This assay shows that the system runs abiding, an economical and can be controlled tractably,it can smell out the vehicle exhaust in real-time, and can improve the detecting level and accuracy of the exhaust monitoring system. This system provides good outcome in monitoring the air pollution exclusively in the urban areas.

Proposed Methodology:

The proposed model detects only emission of carbon dioxide. But, there are many harmful gases which pollute the environment like carbon monoxide, hydrocarbons, nitrous oxide etc. The prototype can be extended to detect these gases which cause damage to earth. Air pollution has significant influence on the concentration of constituents in the atmosphere leading to effects like global warming and acid rains. To avoid such adverse imbalances in the nature, an air pollution monitoring system is utmost important. Commercially available discrete gas sensors for sensing concentration of gases like CO2, NO2, CO and HC are calibrated using appropriate calibration technologies. The sensor currently used is MG811 for detection of CO2 emissions. It can withstand a temperature up to 70 degrees. A high grade sensor can be used instead of MG811 to withstand higher temperatures, so that the entire system can be installed in the exhaust of the vehicle. Aight weight middleware and a web interface to view the live pollution data in the form of numbers and charts will be developed. Other parameters like temperature and humidity are also sensed along with gas concentrations to enable data analysis through data fusion techniques.Experimentation carried out using the developed wireless air pollution monitoring system under different physical conditions show that the system collects reliable source of real time fine-grain pollution data.

The objective of this work is to come up with cost effective, reliable, scalable and accurate real-time air pollution monitoring system with wireless sensor networks.

Conclusion: The main objective of smart emission monitoring system is to make it more innovative, user friendly, time saving and also more efficient than the existing system. Using smart systems not only efficiently takes a advance in environmental quality, but it also helps vehicle owner to save a lot of unnecessary troubles compared to the traditional emission test

SUBHED CHAVAN
BE CE

THE HUMAN-CENTERED WAY OF DESIGN THAT I LEARNED FROM DSC SUMMIT

Swapnil Satish Shide,TE CE(D))

The DSC Summit was organized by Google Developers for 182 DSC leads from across India. It was a wonderful experience talking to other leads and Googlers. The tagline **"Connect Build Grow "** perfectly suited the environment.

I would like to share the many things that I have learned in these 3 days which are helpful to all the students & developers like you. So let's get started.

- **Design Thinking by Ghanashyam**

Design Thinking is an iterative process which seeks to understand user, challenge assumptions, redefine problems and create innovative solutions to prototype and test.Design thinking gives us a proper strategy for solving problems.

- **Collaborate to Create**

Never think that you are going to do all the work alone. Collaborate with others as every one has a different perspective on the problem. Try to take the good points from everyone and start implementing them. At the summit, to learn this very thing they gave us a task to create a spaghetti-stick tower using only 20 spaghetti sticks which should have a marshmallow on the top of it. We were given only 8 minutes to do the same. After this task, I understood what “Collaborate to Create” means. As everyone in the team was different everyone picked up a different role for this. For example, joining the spaghetti sticks, handling the cello-tape, etc.

- **Make Others look Good**

While working in teams, we must appreciate each other for small victories. This especially helps while working on challenging projects, because appreciation boosts their confidence and keeps them motivated which ultimately helps to build a great project.

To teach this at the summit, they asked us to play rock, paper & scissors. Starting with an unknown person the one who losses the game will have to cheer the winner. This chain continued till from the 182 leads only 2 players were left. That was indeed a completely new experience for me. Almost all the people in the room were cheering for one om and the environment was full of happiness.

- **Identify the real problem**

Finding out the real problem is the most important part of the process as all solutions will be curated for solving it. Identifying problems is not that easy, because in every individual's perspective the problem is different. Also while in a conversation, they'll only describe the problem from their perspective. The real way of understanding the problem is by putting yourself into their shoes and empathizing with them.They gave us an example of Nepal's Infant Mortality problem. For solving this problem, Nepal approached top institutions requesting them to make a low-cost incubator as they were expensive because of which only a few hospitals in Nepal had those, resulting in a higher rate of infant mortality in Nepal.But when the research team had gone to Nepal they found that most of the child births were happening on the way to the hospital, and as Nepal is a hilly area the temperature outside at that time is very less compared to the mother's womb.

So they figured out that they don't only need a low-cost incubator but also a solution which could work without a constant supply of electricity and which would be very intuitive for their mothers to use.After all, they came up with an infant warmer, which is having the design of a sleeping bag. This has helped curb the infant mortality rate..“Technology alone can't solve massive problems, but technology with love can”

- **Learn to Listen**

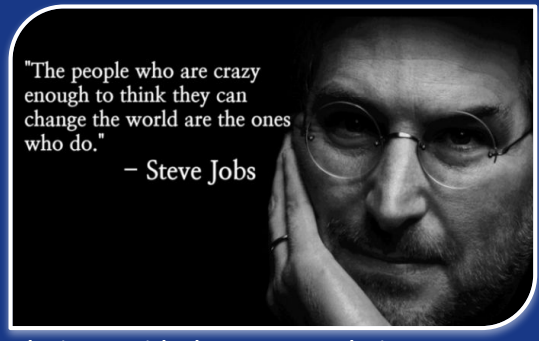
While interacting with others we often allow ourselves to be distracted and preoccupied with other things or thinking about what we are going to say next.The most difficult skill to learn is to give someone the respect and consideration they deserve by being fully present & attentive.

- **Never ask a question leading or of yes/no type**

We all while asking questions try to go to the conclusion faster, that is why we ask questions which leads to a quick reply. For example, “Are you planning to increase your reach of NGO using social media?” Such questions are very short answer, maybe in a yes/no or by a little info. But such questions don’t give you a clear idea of the situation.The aim while understanding their problem and process should be to seek stories from them. Let them talk about themselves. Notice interesting answers & ask follow up questions like “Why did you do that?” or “How do you do that?”. So the right way of asking our initial question is “How do you plan to increase NGO’s reach?” We all while asking questions try to go to the conclusion faster, that is why we ask questions which leads to a quick reply. For example, “Are you planning to increase your reach of NGO using social media?” Such questions are very short answer, maybe in a yes/no or by a little info. But such questions don’t give you a clear idea of the situation.The aim while understanding their problem and process should be to seek stories from them. Let them talk about themselves. Notice interesting answers & ask follow up questions like “Why did you do that?” or “How do you do that?”. So the right way of asking our initial question is “How do you plan to increase NGO’s reach?”

- **The Process of solving the problem**

After analyzing the whole situation find what you want to improve and choose a problem that you are going to solve.
Let everyone in the team create maximum ideas in minimum time without limiting their creativity.
The time frame andminimum ideas from every person should have to be fixed; this will put pressure on their minds.In this way, you can Get extraordinary out of the box ideas from them.After finding the Solutions Individually, list out all the solutions with the team and give it a run through them. While listing them down don't discard any solution saying it is not possible because great things are unusual and need some think process to improve on them.Now start to think of the constraints that you have one by one & then discard those solutions which are not satisfying the constraints and try to group them into one or more services.



- **Prototyping solutions to not only solving problems but to empathize with the user**

While prototyping you should keep the people in your mind who is going to use your product, how they are going to use it, why they are going to use and last but not the least where they are going to use it. After analyzing all things make your product more and more intuitive and fun for them to use. Take feedback after every prototype & observe in which part are they are facing issues & what are the common mistakes made by them, etc.For understanding this they told us a story of Doug Dietz industrial designers working for GE healthcare. Doug remembered the first time when he saw a little girl crying on her way to an MRI scanner which was designed by him. The challenge for Doug was to create an MRI scanner experience that the children would love.Doug then went to Stanford's Design School for a workshop. He learned about the human-centered approach to design and innovation. He started to observe and gain empathy for young children at a daycare. After so much effort from groundwork and talking to kids' parents, Doug reinvented the design of an MRI scanner.

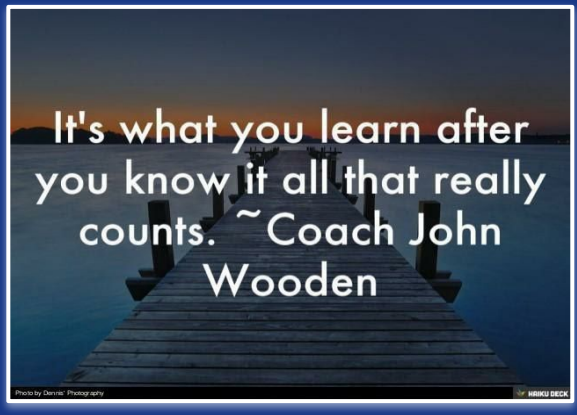
After implementing this design the patient's satisfaction scores went up to 90%. Now children do not suffer from anxiety anymore. Instead, some of them even ask their parents if they can come back later.This was a very wonderful story teaching us to empathize with our users. This was the end of our design thinking workshop.

- **Building With Love by Sairee Chahal**

Sairee is a founder and CEO of SHEROES. Sheroes is a first of its kind social network only for women. Sheroes provides a safe and trusted place for women where they can discuss health, careers, relationships and share their life stories, achievements and moments. Sairee has told us about how they have started small as a helpline number for women and now they are impacting the lives of millions of women out there.This shows us that if you want to solve a problem do it with love, doesn't matter how small you start. Stand with each other and continue your work. In the process appreciate good things around you and delete the negativity from your lives.Because happiness depends on how we choose to look at the world.

- **What junior developers should do**

Explore the path of self-learning. Get fundamentals right and do side project to take a deeper dive into technology. Make mistakes, learn from them and keep evolving. Build a community around you. Optimize the current instant. Keep exploring but give it some time. Try to read as many blogs as possible and learn from them.



Contribute to open-source projects to learn good coding practices and gain exposure to real-world projects.Map technology to the problem, not the other way around. Interact with new people & understand their viewpoint. While appreciating or criticizing keep in mind that, What you say matters, but how you say also matters.Don't go after the hype, search inside yourself. What drives you? It's OK if you don't find it. If you find it, then make a plan. It's OK if your plan doesn't work. Don't forget to try again.

SWAPNIL SATISH SHINDE
SE CE

ACCIDENT MITIGATOR

My team of 3 members developed a device called Accident Mitigator to provide golden hour service in an event of a road accident. This project was built in a time frame of 24 hours during the annual institute held hackathon-Bytecamp 2018 and won third prize for the same. We presented this system at DDR competition held by NMMC and UNDP and were selected amongst the top 8 teams across Mumbai. We were given a time frame and funding to build a better prototype by the organizing committee. We presented our final prototype and received the award in November 2019.

KAMLESHWAR RAGAVA
BE CE

BENEFITS OF INTERNSHIP

Every student has basically 3 goals after college. It is either pursuing higher education, becoming an entrepreneur or getting a job. All of these things have one thing in common, work. Engineering is a field where new technologies and new inventions are booming. If one has to survive this industry they need to be prepared. Sure, college plays a very important role in shaping students' interests but when it comes to working towards the path to achieve interests, they need to be prepared in a way that they are ready for the real-time industry level technologies and projects.

Here comes the role of internships. Firstly, they help in providing a necessary base and foundation to an experience that will help provide a perspective to work in this industry. During an internship a student learns how a project works. From the idea stage to the deployment stage. He gets to be a part of the proceedings of corporate work environment and gets to experience how things work there. Exposure to such projects can help increase experience in that field making it easier and faster when the student actually starts working.

Secondary to gaining experience and exposure in the industry, one actually gets to work hands-on on a project that is not only using the latest and the most in-trend technology in the industry but also it is a project that will impact the world immediately. This helps motivate the student, when he understands that the customers or clients offering the project are actually real people with real problem statements. They then realize how important a customer is and how his requirements are what a project is based on. How a client reacts to development of an application and how changes need to be done in a manner that it is beneficial to the customer as well as the company. An intern is allowed to participate in the ongoing procedures that happen during the development of the product. This helps to gain perspective and exposes the student to the reality of the industry.

When working in a corporate environment, the students can make multiple connections in this industry. A larger and more experienced network is established by a student. These connections help a student not only presently but also in the future when he wants to show his progress in the field to a larger and more influential set of corporate individuals. Another perk of working in the corporate environment is getting familiar to corporate culture. The corporates generally have a certain work culture that helps the employees to invest their time not only at work but also in other activities that help boost their performance. Different intra and inter corporate competitions are held to keep up with the technologies and their applications.

Frequent meetings take place to ensure proper communication and smooth functioning in a project and within a team. Many of the corporates have an open-door policy and mail system where a person at any hierarchical position can go up to their heads and talk about their ideas or discrepancies individually.

Having an internship experience is therefore very important in helping a student understand the proceedings of corporate working. It induces a pinnacle of confidence in them that not only helps them work on projects and new technology in their future job and other endeavors but also give them a gist of corporate life and its affairs.

Mr. GBN BABU
PARENT OF SAI APURVA G
TE CE

प्रभावी व्यक्तिमत्वासाठी स्वयंअध्ययन

विद्यार्थी मित्रांनो,

तुम्ही सर्वजण इंजिनिअरिंगचे विद्यार्थी...म्हणजे कम्प्युटर, लॅपटॉप यांसोबत जास्तीत जास्त वेळ असता. या सर्व साधनांवर काम करताना बऱ्याच बाबी आपण स्वतः शिकत असतो. एखादी अडचण आली तर पटकन गुगल करून आपण त्यावर सोल्यूशन मिळवतो. हीच स्वयंअध्ययनाची पद्धत आपण इतर सर्व विषयांसाठी सुद्धा आत्मसात करणे गरजेचे आहे. शिकण्याची जिज्ञासा व जिद्द ही आपणास नवनवीन गोष्टी शिकण्यास प्रेरणा देतात.

अभ्यासक्रमात समाविष्ट असलेले घटक तर सर्वच जण शिकतात व काही जण तर, त्यात पैकीच्या पैकी गुण देखील मिळवतात. परंतु अभ्यासक्रमाच्या चौकटीबाहेर जाऊन आपल्या क्षेत्राशी निगडीत कौशल्य, अद्ययावत ज्ञान तसेच त्या क्षेत्रात करिअर करण्यासाठी आवश्यक सर्व पूरक बाबी जसे की संभाषण कौशल्य, व्यक्तिमत्त्व विकास, समुहाचे मानसशास्त्र, नेतृत्व गुण आणि आपली मते इतरांना पटवून देण्याची कला तुम्हाला आत्मसात करावी लागेल. या सर्व बाबी शिक्षक वर्गातील तासिकेला शिकवू शकत नाहीत. त्यासाठी गरज आहे ती स्वयंअध्ययनाची !

वाचन हे स्वयंअध्ययनाचे प्रभावी साधन आहे. वाचनाने आपले अनुभव विश्व अधिकाधिक समृद्ध होत जाते व आपले व्यक्तिमत्व खुलून दिसते.

स्वयंअध्ययन हा स्व उन्नतीचा राजमार्ग आहे.

सौ.विजया सतिश शिंदे

Parent of Swapnil Satish Shinde
SE CE

OUR ALUMNI

IBM

STERLING B2B INTEGRATOR

Viren Razdan
B.E. in C.E.
(2018 Passout)

IBM Sterling B2B Integrator is a transaction engine that runs the processes that you define and manages the processes according to your business requirements. It supports high-volume electronic message exchange, complex routing, translation, and flexible interaction with multiple internal systems and external business partners. It helps companies integrate all their complex B2B and EDI processes across partner communities in a single gateway. It provides a flexible platform, available on premises or through hybrid cloud, that supports data transformation and most communication protocols; secures your B2B network and data; provides certified container support; and achieves high-availability for operations with IBM Sterling Global Mailbox. B2B Integrator enables you to reduce costs by consolidating on a single platform and automating B2B processes across enterprises, while providing governance, adherence to standards and visibility for those processes.

Sterling B2B Integrator:

- Ties together applications, processes, data, and people, both within and outside your organization
- Offers flexible options for deployment, configuration and customization, including the functionality to add capabilities one at a time
- Complements, rather than disrupts, your critical existing systems
- Provides a robust security infrastructure
- Includes innovative visual management tools for easy configuration of and visibility into work flows, system and trading partner activities, translation maps, and business process implementation
- Works with existing and emerging business and communication standards

Together, these features enable you to configure the components that enable you to meet your evolving application integration requirements.

Sterling B2B Integrator is configured strategically around the specific processes crucial to your company's success. Its systematic and managed approach supports your integration requirements for both transaction-oriented and batch processes, and works with both pre-existing Electronic Data Interchange (EDI) protocols and Internet-based XML protocols. You can enable your existing systems to integrate past, present, and future technologies and practices.

- Business Process Approach - The Sterling B2B Integrator approach to integration centers around business process management. A business process is a goal-driven, ordered flow of activities that accomplishes a business objective.
- Modular Design - Sterling B2B Integrator is designed around a core transaction engine, which orchestrates your message exchange, routing, translation, and other processes.
- Building on Your Existing Assets - The compatibility of Sterling B2B Integrator with your existing systems and its modular design, drastically reduces the standard complications associated with large-scale systems changes.
- Full Process Recovery - During the execution of a business process, at every step, Sterling B2B Integrator maintains the status of the process and the current version of the business data associated with the process step.
- Connecting People to Data with Web Extensions - With Web Extensions, you can create and customize pages that users can access over the Internet to interact with data. The browser-based technology works hand-in-hand with other components.

STUDENT ACHIEVEMENTS

Sr. No.	Name of Student	Class	Name of Activity	Place	Level (National/ International/ Zonal/District)	Awards
1	Aditya Parthasarathy	SE CE	Matters 2.0 (Online Quiz)	Reliance Industries	National	1st position
2	Swarika Bosale Apurva Mhatre Ajun Nair Aakash Nair Aditya Loke	TE CE	India Hackathon	Kumaraguru College of Technology,Coimbatore,Tamil Nadu	National	1st position
3	Harish B Aditya Kulkarni Kamleshwar	BE CE	India Hackathon	Sathyabama Institute of Science and Technology (Deemed to be University) ,Kanchipuram, Tamil Nadu	National	Special Appreciation from Ministry of Civil Aviation
4	Chinmay Chandak Arvindraj T Jhanvi Dubule Chetan Ade Saijayanth Sonal K	TE CE	Smart India Hackathon	Sri Krishna College of Engineering and Technology,Coimbatore,Tamil Nadu	National	Participated

5	Kamleshwar Ragava	BE CE	Student Innovation and Prototype Competition NMMC	NMMC, Navi Mumbai	Zonal	8th rank, Cash Prize of Rs. 50,000
6	Aditya Kumar Kartik Rajesh Gopalakrishnan N	BE CE	Electrowiz Project Competition	Datta Meghe COE	National	1st Prize
7	Mahadevan Narayanan Ajun Nair Panicker Akhilesh Ashutosh Dhondka	TE CE	Deep Blue Project	Masket, MBP	National	1st Runner up
8	Sayali Patil Venkatesh A Suyash J Shantanu G	TE CE	Err_404 Hackathon	Saboo Siddik College of Engineering	State	3rd Prize
9	Shubham Tarate	SE CE	Virtual BAJA SAEINDIA	Chitkara University Punjab	National	Participated

10	Shubham Tarate	SE CE	Endura Student India 2019	NMIET Talegaon Pune	National	Participated
11	Shubham Tarate	SE CE	BAJA INDIA 2019	IIT Ropar Punjab	National	Participated
12	Siddharth Byale Senthil T	SE CE	Anveshna Science & Engineering Fair	Mumbai	Zonal	Participated

PROUD MOMENTS

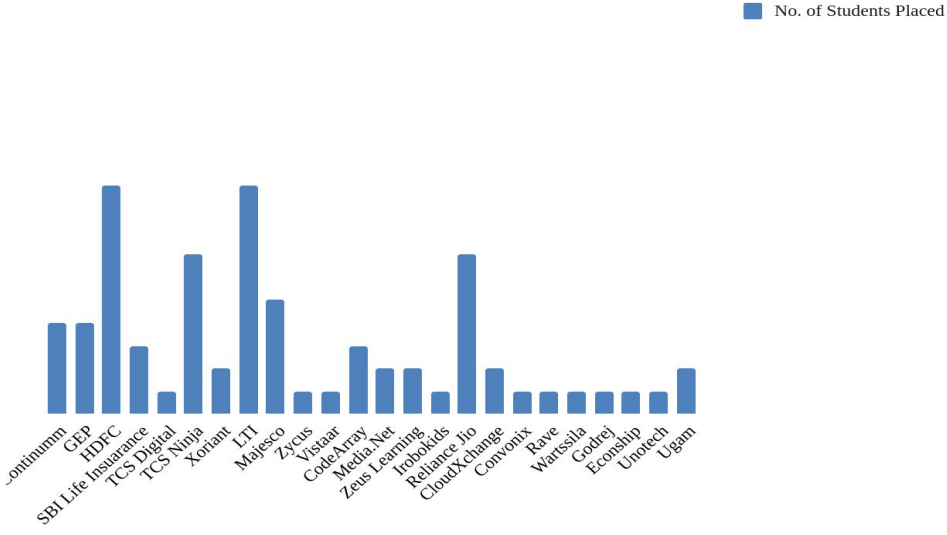
PLACEMENT STATISTICS

2015 - 2019

Total Strength	108
Higher Studies	11

Company Name	No. of Students Placed
Continumm	4
GEP	4
HDFC	10
SBI Life Insuarance	3
TCS Digital	1
TCS Ninja	7
Xoriant	2
LTI	10
Majesco	5
Zycus	1
Vistaar	1
CodeArray	3

Company Name	No. of Students Placed
Media.Net	2
Zeus Learning	2
Irobokids	1
Reliance Jio	7
CloudXchange	2
Convonix	1
Rave	1
Wartssila	1
Godrej	1
Econship	1
Unotech	1
Ugam	2



INNOVATIONS 2019

The CSI Student Chapter of SIES Graduate School of Technology organised a national level project competition, INNOVATIONS, on 15th March, 2019. Innovations served as a platform for young minds to take this window of opportunity and bring forward their innovative ideas in the form of projects.

This time the CSI council of SIES GST nerul worked hard and strategically thus creating a mark of receiving 100+ abstracts, a count never seen before . The projects were from various fields such as computers, information technology, electronics, Internet of Things, Robotics, Mechanical, etc. Out of the received abstracts,45 projects were selected for the competition after carefully analysing each project based on parameters such as novelty, effectiveness, positive impact on society and scalability. “Spending quality time, quality efforts and hard work provides quality results, was proved by the participating teams.”.

There were 3 venues for the competition: Venue A – presentations related to computer and IT.

Venue B – presentations related to IOT.

VenueC – presentations related to mechanical and Electronics.

We had the privilege of having Mr. Aniket Mhala, Global Technology Head– Agile, DevOps; Microservice Practice Oracle Financial Services Software Limited as the chief guest for the event. The principal of SIES GST, Dr. Vikram Patil, welcomed the chief guest and all the jury panel.

The jury panel across the venues included Mr. Ramesh Kharat, Diretor Priar web limited, Mr. Jayant Dani, Principal Consultant at Tata Consultancy Services, Mr. Shailendra Kelkar, Director Aparna Web Services, Mr. Rajan Joshi, Chief Project Engineer (Mechanical) Wartsila India Private Limited, Mr. Pratik Jani, CEO & founding Director of YUPS Tech in India and Zerek Technologies in Bahrain, Mr. Pratik Mehar, Evolabs Technology and Solutions LLP.

The Valedictory Ceremony was graced by Dr. Vikram Patil, Principal, Dr. Rizwana Shaikh, HOD CE and Ms. Suvarna Chaure, CSI, SBC . The vibrant and innovative competition was concluded by a vote of thanks given by the Chairperson of CSI Student Council, Ms. Shridhar R .

INAUGURATION CEREMONY

VALEDICTORY CEREMONY

VENUE- A

Prize	Title	Group Members	College
1st	Digital Salesman	Vijay Raj Vedik Dave Shivani Sharma Ahmed Bhesaniya	Sarvajanik College of Engineering and Technology, Surat.
2nd	Enhanced Teaching Learning Process	Lakshmi P. Rohini Bhutda Bhakti Patil	Walchand Institute of Technology , Solapur

VENUE- B

Prize	Title	Group Members	College
1st	Garbage Plastic Profiling	Venkatesh A Shantanu Ghar Sayli Patil Sarthak Sharma	SIES GST
2nd	Smart Traffic Lights using CCTV	Sai Prasad Shweta Shekhar Omkar Warade	SIES GST

VENUE- C

Prize	Title	Group Members	College
1st	Vibration Dampers in ambulance	Vyankatesh Pratik Vikas Parmar Dattatray Bhamne Moin Nadaf	Walchand Institute of Technology , Solapur
2nd	Production of inexpensive bio plastic from fish scales	Priyanka Sarwade	Walchand Institute of Technology , Solapur

WINNERS & IMPACT

Impact Analysis

Students developed, presented and demonstrated applications using basic engineering knowledge and computational and logical skills for analyzing and designing complex problems useful for society and environment using modern tools so mapped with PO1,PO2, PO3,PO4, PO5, PO6, PO7, PO8,PO9, PO10, PO11, PO12, PSO1 and PSO2 .

INDUSTRIAL VISIT

SARAS DAIRY - JODHPUR

The Computer science and information technology department of SIES Graduate School of Technology visited Saras Dairy in Jodhpur city in Heavy Industrial Area.Paschimi Rajasthan Dugdh Utpadak Sahakari Sangh accompanying 80 students.

(JodhpurPRDUSS) was established in the year 1972, under the Operation Flood Programmed finds from D.P.A.P. were utilized for the construction of plant at Jodhpur, and later on the establish various chilling centers. In its scheme of functioning, milk cooperative societies were organized in the village so as to provide and assured market to milk producers and also ensure equitable return to the farmers by eliminating middleman. A feeder balancing dairy of 1 lac liters per day capacity at Jodhpur and 4 milk chilling centers of 10,000 liter/day capacity each at pokarn, pali, Balotra and Merta city have been established. All these plants were commissioned during 1974-76. The students learned about the working of various machines and procedures for making butter, ghee, cheese and paneer. The students ended the industrial visit with delicious Saras ice cream.

SARAS DAIRY - JODHPUR

Impact of the visit:

- Most attendees found visit very informative and acquired knowledge about industry.
- Students get some acquaintance to the field, which helps them to understand the working culture of industry to some extent.
- Has been introduced to the new industry of Milk products.
- Able to understand B2B and B2C models.
- Got clear understanding of Client, middle man, services, product.

ACKNOWLEDGEMENT

At the end, we would like to extend our sincere gratitude to our management for their constant support. Also, we would like to thank our Principal for the constant encouragement. We would also like to thank our HOD Dr. Rizwana Shaikh for the support and motivation to make this magazine a successful one. Also would like to thank our Faculty Incharge, Prof. Pranita Mahajan for shaping Techniz. Lastly we would like to thank all the faculty members, students, alumni and all stakeholders for their valuable inputs.

The Editorial Board

Techniz