

SOCIETY OF INFORMATION TECHNOLOGISTS

TECH SPLIT

2022



B.S. Abdur Rahman
Crescent
Institute of Science & Technology
Deemed to be University u/s 3 of the UGC Act, 1956
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DEPARTMENT OF INFORMATION TECHNOLOGY

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DEPARTMENT OF INFORMATION TECHNOLOGY- AN OVERVIEW

The department was started in 1999 and has been offering B.Tech.-Information Technology since 1999, MTech. -Information Technology since 2010 and Ph.D. since 2009. It has highly qualified, experienced and dedicated faculty members specialized in various areas like Artificial Intelligence, Deep Learning, Machine Learning, IoT, IIoT, Data Science, Cyber Security, Cloud Computing, Mobile Computing & Networks, Computer Networks, Ad hoc Networks and Software Engineering.

The faculty members contribute their very best to the academic environment by publishing research papers in National and International Journals. The department imparts comprehensive knowledge coupled with practical exposure, which is essential for software design, development and testing in the IT industry. To expose latest trends to the students, value-added courses, MOOC, in-house seminars, workshops, industrial visits are conducted periodically. A National level symposium 'ICON' is organized every year by the department's professional society, "Society of Information Technologists (SIT)" to enhance the technical skills of the students.

VISION AND MISSION OF THE DEPARTMENT

Vision

To be a leader in providing quality education and training in the field of Information Technology at Undergraduate and Postgraduate levels and undertake Research activities thereby contributing to the progress of the country.

Mission

- To impart quality education and inculcate professionalism to suit the needs of the industries and society.
- To involve graduates in undertaking need-based Research activities and disseminate the knowledge to develop entrepreneurial skills.
- To improve the professionalism through extension activities, industrial visits and in-plant training.
- To improve communication effectively both in documentation and presentation.
- To create awareness of social, economic responsibilities ethically.

Programme Educational Objectives (PEOs)

Programme Educational Objectives for students of B.Tech – Information Technology Programme within the first few years after graduation are that they will

- Have core competence in mathematics, science and engineering concepts essential to formulate, analyze and solve hardware / software engineering problems
- Possess good breadth of knowledge in the core areas of information technology and related engineering so as to comprehend engineering trade-offs, analyze, design and synthesize data and technical concepts to create novel products and solutions for the real time problems
- Use tools and techniques for software development in different application domains and to grow as an entrepreneur.
- Apply their knowledge and multifaceted skills to get immediate employment and excel in it professional careers or awareness of the lifelong learning needed to continue their education in it or related post graduate programmes to perform excellence, leadership and demonstrate good citizenship.

- Maintain high professionalism and ethical standards, effective oral and written communication skills, to work as part of teams on multidisciplinary projects and diverse professional environments, and relate engineering issues to the society, global economy and to emerging technologies.

Programme Outcomes

On successful completion of the programme, the graduates will be able to:

- Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems
- Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences
- Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations
- Use research based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions

- Create, select, and apply appropriate techniques, resources, and modern engineering and its tools including prediction and modelling to complex engineering activities with an understanding of the limitations
- Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice
- Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development
- Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
- Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions

- Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments
- Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

Programme Specific Outcomes (PSOs)

- Design and conduct experiments for organizing, analysing, interpreting data to develop skills related to information retrieval.
- Identify, formulate and solve computing problems using appropriate tools & techniques to meet industrial and societal needs in different domains

MESSAGE FROM HOD/IT



It is a great privilege and immense honor to inform you that the Department of Information Technology is publishing its annual technical magazine “Tech Split 2023”. It is reflection of student’s hidden talents, skills and caliber. This magazine certainly would induce the young engineers to promote their creativity in approaching things differently. This technical magazine is a platform to exhibit the literary skills and innovative ideas of students.

I would like to thank all editorial team members for providing students a platform for creative thoughts and knowledge expansion. I express my considerable appreciation to all the authors of the articles in this magazine. I express my gratitude to all for their involvement, encouragement, support and guidance.

Dr. N. Prakash

HOD/IT

DEPARTMENT FACULTY



Dr. N. Prakash
Professor & HOD



Dr. Latha Tamilselvan
Professor & Director (MIS)



Dr. I. Sathik Ali
Professor



Dr. G. Kavitha
Professor & Director in charge,
CITL



Dr. Kabeer M
Associate Professor



Dr. M. Syed Masood
Associate Professor



Dr. P. Latchoumy
Associate Professor



Dr. N. Rajendran
Assistant Professor (Sr. Gr.) &
Assistant Director (IQAC)



Dr. Nabeena Ameen
Assistant Professor (Sr. Gr.)



Dr. P. Gnanasekaran
Assistant Professor



Ms. A. Sonya
Assistant Professor



Mr. Mohammed Wajid Khan
Assistant Professor



Mrs. M. Ishwariya
Assistant Professor



Mrs. R. Ramya
Assistant Professor



Mrs. S. Muthahara Fathima
Assistant Professor

SOCIETY OF INFORMATION TECHNOLOGISTS

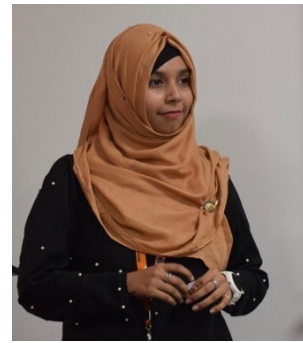
Members of SIT (2022-2023)



SANTHOSHRAJE

B Tech IT (4th year)

GENERAL SECERATARY



IRFANA PARVEEN E

B Tech IT (4th year)

JOINT SECERATARY



THARUN S M

B Tech IT (4th year)

TREASURER

Office Bearers of SIT



YOGI VIGNESH V

B Tech IT (4th year)



SACHIN GIRIDAR RS

B Tech IT (4th year)



RISHIKA SAAJU

B Tech IT (4th year)



SHAMSE AHAMAD

B Tech IT (4th year)



SARATH A

B Tech IT (4th year)

EVENTS ORGANIZED BY SIT

The Department of Information Technology conducted the inaugural function of Society of Information Technologists for the academic year 2021-2022 on 26.11.2021 from 10.00 am to 12.00 pm in virtual mode through the Google Meet app.

The inaugural address on "Embrace Technology" was presented by Mr. Charles Godwin, HR leader and public speaker from ZOHO corporation. Dr. G. Kavitha, Associate Professor / IT, welcomed the speaker, faculty and the students. Dr. I. Sathik Ali, HOD /TI delivered the presidential address at the inaugural event. All the second, third and final year students of B. Tech (IT) &MTech (IT) attended the event in virtual mode.

The annual report on the activities of the department was presented by M.r S. Kishore, General Secretary / SIT. The department activities include the value-added courses offered in association IIT-Bombay spoken tutorial, guest lectures, workshops, webinars etc., organized to develop the technical skills of the students. It was informed that the faculty have published 12 papers in referred International Journals, 5 papers in International Conferences and 3 book chapters by Springer Publishers during the academic year 2020-2021.

The chief guest M.r Charles Godwin, HR leader and public speaker from ZOHO corporation, was a source of motivation to students and he mentioned many encouraging examples from his own life and inspired students to be a self-motivator. He discussed the importance of positive thinking and attitude which brings optimism into life and such constructive changes could make oneself

brighter and more successful. Mr. Charles's informed the students to be guided by a positive mind and driven by self-motivation.

Mr. Charles Godwin shared about contextual experiential learning and also explained about the impact and importance of booming technology.

He insisted the students to identify their strengths and weakness and to learn everything with relevance but with practical experience. He insisted to embrace technology to the fullest and move forward with their career. Mr Charles Godwin presence has imparted valuable information about "Embrace Technologies".

The new team of office bearers of Society of Information Technologists (SIT) were introduced and the various events planned for students during the academic year 2021-2022 were presented by Mr. S. Kishore. The planned events for the academic year are Coding contest, Workshop on Cybersecurity and Blockchain Technology will be conducted according to industry perspective by experts from leading industries. The event was felicitated by D.r Venkatesan Selvam (Dean / SCIMS). D.r Venkatesan Selvam appreciated the efforts taken by the Department in organizing the events and motivated the students to participate in technical events conducted by our Institution and other Institutions across the country.

Crescent
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School of Computer, Information & Mathematical Sciences
Department of Information Technology
Society of Information Technologists

**Inaugural Address on
EMBRACE TECHNOLOGY**

DATE 26 NOV 2021 FRI
TIME 10.15 am To 12.00 pm

Speaker
Mr. Charles Godwin
HR Leader & Public Speaker, Zoho Corporation

Meeting Link: meet.google.com/bbv-rpcg-dsz

Dr. I. Sathik Ali, HOD / IT
President SIT

Dr. G. Kavitha & Dr.M.Kabeer
SIT Co-ordinators

S.Kishore
General Secretary

K.Mohamed Ashiq
Joint Secretary

A.Mohamed Ashiq
Treasurer

www.crescent.education

Workshop on “Network Security” on 19th October 2022

The Department of Information Technology, School of Computer Information and Mathematical Sciences organized a workshop on “Network Security” on 19th October 2022 from 10.15 am to 12.30 p.m. For 2nd year B. Tech IT students.

The Resource Person of the workshop is Mr. Abdul Khader, Lead Network Engineer, Fresh works Ltd. A total of 70 participants including B. Tech IT students, faculty members attended the workshop. Mr. Abdul Khader discussed about network security, 7-layer model, types of network security protections like firewall, Remote access VPN, Network segmentation, access control, zero trust network access, email security, data loss prevention.



Webinar on “The importance of Ethical Hacking” on 31.08.2021

The Department of Information Technology, School of Computer Information and Mathematical Sciences organized an online Webinar on “The importance of Ethical Hacking” on 31st August 2021 from 11.15 am to 12.45 pm through Zoom meeting.

The Resource Person of the webinar is Mr. Manoj Kashyap, Co-founder & Technical Head, Ethical Byte. A total of 270 participants including students, faculty members from various Institutions attended the webinar. Mr. Manoj Kashayap discussed about various kinds of hardware attacks, attacks on IOT devices and the awareness required for securing our Smartphone in the day-to-day activities. Also, he demonstrated about DoS attacks (Wikipedia, Zoom), Router attacks and the attacks happened recently in the Tesla electric car.

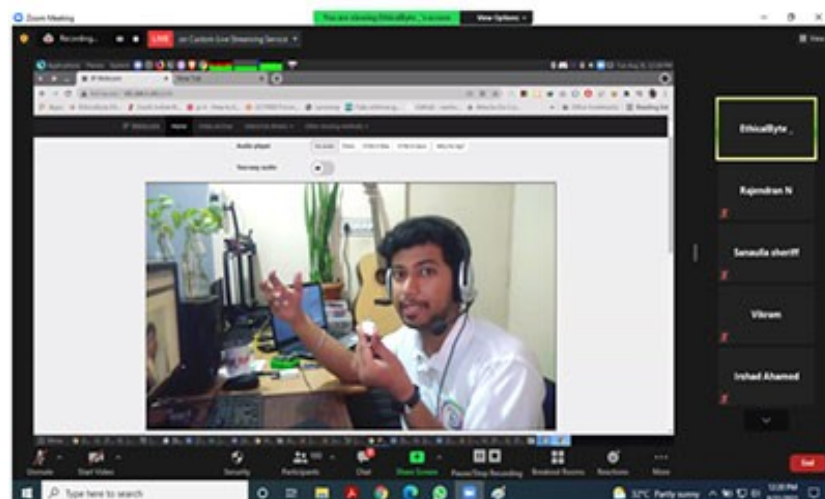
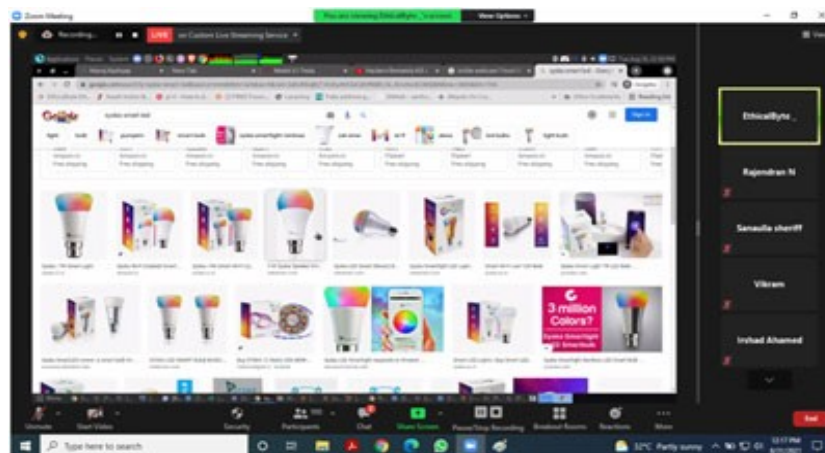
The resource person explained about shell scripting with a demonstration in Linux environment. And he discussed about the design of a pen drive with 3D printer. The discussion was continued about the Crunch tool and Yersinia tools to crack the usernames and passwords (face book) of social media accounts. The resource person advised the participants not to click on the links shared in emails and not to download the attachments which are coming from unknown sources.

It was very exciting for the participants to have interaction with resource person and cleared their queries. The participants appreciated the resource person and the informative session in their feedback.

Coveners: Dr. Venkatesan Selvam, Dean / SCIMS, Dr. I. Sathik Ali, HOD / IT

Coordinator: Mr. N. Rajendran, AP (Sr.Gr) / IT

Co-coordinators : Ms. Nabeena Ameen, AP (Sr.Gr) / IT, Dr. P. Gnanasekaran, AP / IT, Ms. A. Sonya, AP / IT.



TECHNICAL ARTICLES

Top 10 Reasons to Learn JavaScript

There are two reasons why it's sometimes hard to make a choice; either there are too few options to choose from, or there are too many. When it comes to programming languages, there is an embarrassment of riches, which in turn can cause mental gridlock. There's Python, Java, JavaScript, C/CPP, PHP, Swift, C#, Ruby, Objective-C, and SQL, and that's not even the full list! How do you choose?

Now, bear in mind that as far as programmers go, there's no such thing as knowing too many languages. A programmer with a grasp of many languages is a programmer who is highly marketable and very much in demand. Upskilling is always a smart way to go.

Still, you have to start somewhere; and that should be with one of the more popular languages, one that's experiencing unprecedented growth in demand.

What Exactly is JavaScript?

Not to be confused with Java, JavaScript—created by Netscape Communications—first appeared in 1995. Its developers define it as a “scripting or programming language that allows you to implement complex things on web pages.” JavaScript makes web pages more dynamic and user-friendly so that they respond to visitors' actions. Or, to put it another way, JavaScript makes web pages interactive.

JavaScript was once called Live Script; but due to Java's popularity, it was rebranded to take advantage of that fame. You could say that the newer language hitched its wagon to the rising star and went along for the ride, attracting its vast following in the process.

So with this in mind, let's explore 10 compelling reasons to learn JavaScript.

1) It's the most popular programming language

We start our list with possibly the most significant reason! According to Stackoverflow.com, JavaScript is the most popular programming language used by professional developers today. Even back-end developers choose JavaScript more often than not.

2) It's in your browser

JavaScript is, without question, the default language of the internet. You need to look no further than your browser for proof since JavaScript was most likely used to develop it. Since browsers are a necessary part of any user's online experience, it's easy to see why JavaScript is so significant.

3) JavaScript also exists outside of the internet

JavaScript has many uses that go beyond its traditional internet roles. It powers smart televisions, works with the internet of things (IoT), creates native apps for iOS and Android, and builds cross-platform desktop apps, to name a few.

4) JavaScript is Ideal for Newbies

Since it's already installed on every web browser today, JavaScript spares the rookies from the chore of setting up a development environment. Newcomers can just jump in and start coding. It's one of the most accessible entries into coding available, a value-add for beginners. There is also a large online community that offers support and advice.

Also, JavaScript is an excellent tool for beginning programmers who want to expand their skill set into other languages. JavaScript supports valuable skills such as object-oriented, functional, and imperative styles of programming. Beginner developers, in turn, can apply these skills to any new language they want to learn, like Python, Java, or C++.

5) JavaScript is Easy to Learn

Not only is it a natural language to use, but JavaScript is also easy to pick up. JavaScript turns intricate details into abstracts, making things easier for the newcomer. Unlike the higher-level languages, JavaScript has more of a natural language feel to it.

6) You Can Create Visual Effects and Other Eye-catching Aesthetic Features

There's building a web page, and then there's building a visually appealing web page that attracts the user's attention and encourages interaction. JavaScript is so versatile that you can use it to easily add cool design elements such as animation, interactive maps, and scrolling video. Organizations and clients want web designers who can not only put together a technically sound page but one that also will lure visitors. If you know JavaScript, you can deliver.

7) JavaScript is Versatile

Far from being a one-trick pony, JavaScript empowers a programmer to handle any aspect of app design. Do you want to do user-side (front-end) coding? You can do it in conjunction with Angular. Are you more interested in the server-side (back-end)? Bring Node.js into the mix and you can do that, too!

You can also create desktop, mobile, and web apps with Electron, React Native, and React. If you're intrigued by machine learning, then JavaScript will help you there as well.

8) JavaScript also Affects Big Data and the Cloud

JavaScript Object Notation (JSON) is the go-to standard for data exchanges on today's internet. NoSQL databases use JSON documents for record storage; and although JSON plays well with any programming language, it does best with JavaScript.

Also, more developers are turning to Node.js to build cloud-based apps, a very much in-demand market.

9) It's a Valuable Tool for Game Designers

Games are a big business today, and developers who know JavaScript have that extra advantage. The language's versatility, power, and ability to easily create visual effects make it a perfect fit for game developers.

10) Finally, the Career Potential is Skyrocketing

With an increasing number of businesses and organizations going digital, there is a corresponding increase in demand for developers who are familiar with the better-known programming languages. As we've already noted, that's JavaScript!

As it happens, there's also a shortage of good JavaScript developers, so you have increased demand in conjunction with a deficit of qualified people. According to a report released by Devskiller.com, 70 percent of companies surveyed want to hire a JavaScript developer. Also, there's a growing demand for data scientists who have expertise in Python. The market for data scientists and data analytics is projected to grow by 15 percent between 2015 and 2020. In actual numbers, that means 364,000 new job openings. Considering how every Python web app uses JavaScript in their front end, it becomes clear that the language is a necessity.

Businesses and other organizations that are looking for JavaScript professionals are willing to pay well, too! Indeed.com shows that a JavaScript developer can potentially earn an annual average of \$113,643 in the United States.

If you're looking to become a programmer who can always be assured of a stable career and get well compensated for it, then you want to learn JavaScript.

Rishika Saaju

B Tech IT (4th year)

How Blockchain Technology is Revolutionary

Bitcoin has seen its value rise from a few pennies to nearly \$65,000 at one point, but has it yet become the status quo as far as the U.S. markets are concerned? Some might say yes, and indeed digital currency is more accepted now than it once was, but is it really causing the massive upset that many thought would happen by this time?

There's been a fair amount of lip service being paid to Bitcoin these days by companies that comprise the current financial establishment. Much of this has to do with blockchain, which is the underlying infrastructure of this digital currency.

Why Are U.S.-Based Financial Companies Investing in Blockchain Technology?

One of the features that blockchain technology offers is a method to create more efficient networks to process financial transactions. Many U.S.-based companies are seeking out ways to streamline their current work processes, so they invest in blockchain technology as a way to boost their bottom line. Examples include the efforts of groups such as the R3 Consortium, and the adoption of robust blockchain resources by new companies like Bloq, as well as by "old guard" companies like IBM.

The sold-out "Consensus 2016: Making Blockchain Real" conference in New York City was notable for its many big-name speakers. They came from both inside (Gavin Andresen, Vitalik Buterin) and outside (Larry Summers, Delaware's Governor Jack Markell) the Bitcoin world. It was clear that the amount of "suits" at this event signaled a major shift from the early days of Bitcoin and blockchain culture that drew technology-oriented crowds rather than investors.

What Exactly Is Blockchain Technology?

At this point, the blockchain is two things. The first meaning of the word refers to a currently operating and open distributed network that is processing Bitcoin transactions worldwide. Bitcoin also refers to a concept that can be used by any company to build its applications. Many companies of all sizes became aware of the efficiencies that come along with blockchain technology, and now they want to use this concept to power their current systems.

The good news is that, thanks to the tools and resources being created by firms like Circle, Bloq, Gem, and Factom, non-technology companies will be able to harness the concept of blockchain for their own uses. The question that remains is whether these applications will truly disrupt the current standards or whether they will merely shift things around.

Simply laying a blockchain model beneath a financial system that needs drastic changes is not real change. When you see large firms like J.P. Morgan embracing blockchain technology but dismissing Bitcoin (as CEO Jamie Dimon did when he doubted any value in Bitcoin), do you really think that these new applications will produce any major change in how banking is done in this country?

Public vs. Private Blockchain

This issue also leads to a growing debate in the Bitcoin world about the distinction between a public blockchain, which exists now, and private modes of blockchain technology, which are what will be created by these new tools. Some in the Bitcoin world feel that the blockchain technology is, at its core, an open distributed network. They believe that any efforts to create private blockchain technology should not even be called blockchain, since it does away with the core function and open culture of the original.

What Is the Future of Blockchain?

Bitcoin is being embraced throughout the world as more and more countries see how it might enact change. Not only can it disrupt the broken systems that exist now, but it might also be able to solve financial concerns as well.

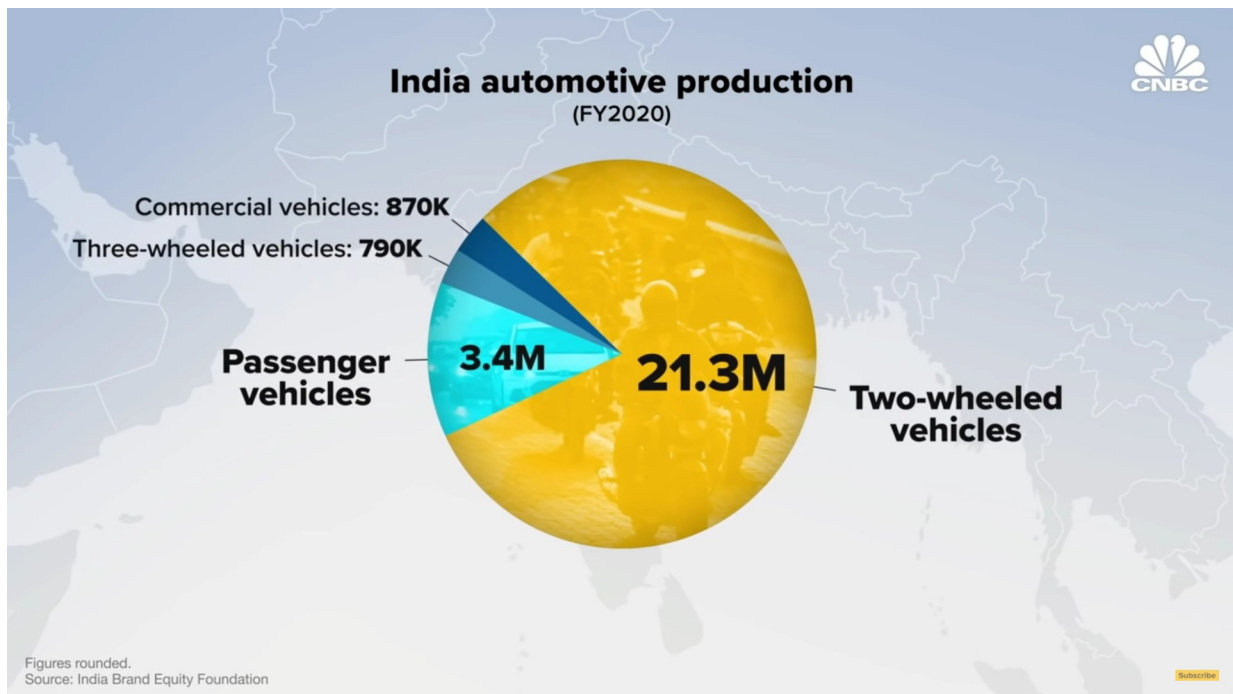
In the U.S., companies are having a love affair with blockchain, which will likely lead to one of two outcomes. Either it will add to, and prop up, the current financial models, or it will create new innovative ways to address the current banking and financial system. If you let companies decide whether to be part of the status quo, you may end up with blockchain being little more than the “new database tool” rather than the “next internet.”

Blockchain could have a similarly disruptive effect on the internet, or it could be the next Y2K. Its fate will be up to innovators, disruptors, and visionaries to accept or address the “status quo” and, ultimately, create a better financial system for all people.

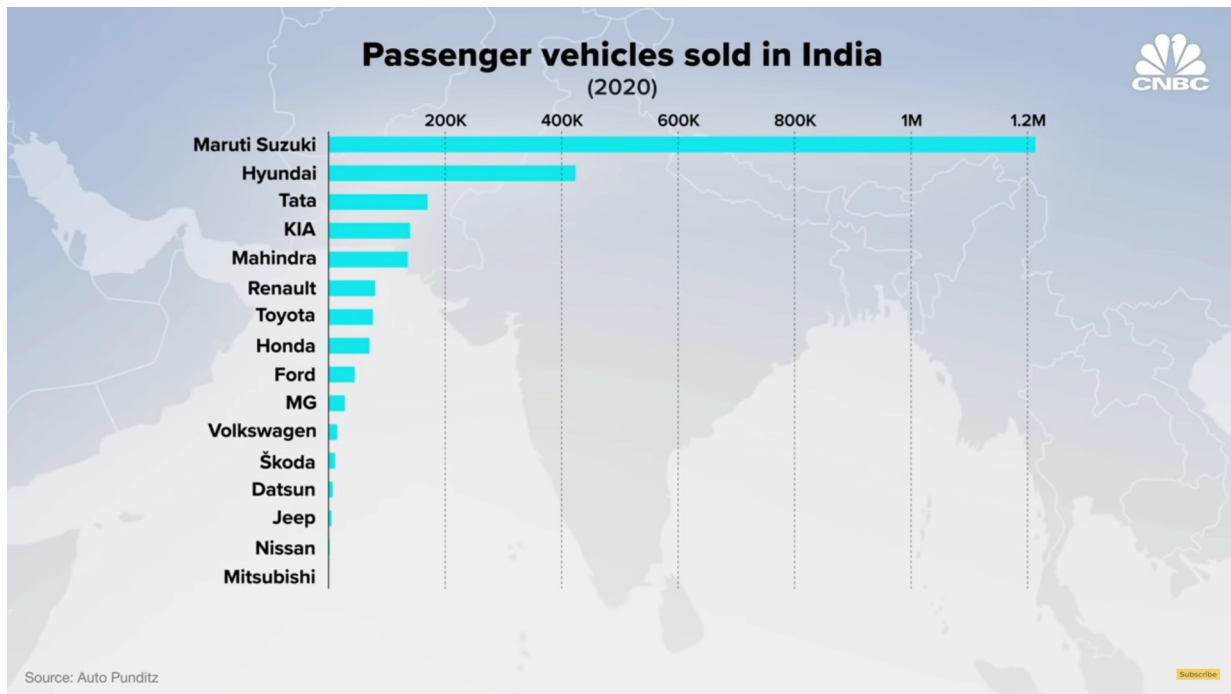
Shamse Ahmad
B Tech IT (4th year)

Could Tesla Succeed in India?

India's car market is unlike any other in the world despite being one of the most populous countries it doesn't have many cars. The Indian market overall is a small car market when compared to other countries. Car ownership is still comparatively much lower in India when you compare it to a place like the United States and so a lot of people mostly rely on two-wheelers and three-wheelers to get to places. It's dominated by motorcycles and mopeds which make up a majority of vehicle sales.



Within the passenger vehicle category, the market is mostly controlled by a few big players. Maruti Suzuki which is owned by Suzuki is the number one player in India they control something like 50 of the market share and everyone has found it tough.



I mean you've been reading about gm getting out of India ford has significantly reduced its operations. India's auto industry has been growing it's now the fifth-largest auto market in the world behind Germany, Japan, the US, and China and it's expected to grow 11.3% from 2020 to 2027. But overall car ownership is uncommon only 22 out of every 1000 Indians have a passenger vehicle and the most popular are on the lower end it is a very cost-conscious market because it has so many cheaper alternatives available.

The best-selling brand in India is Maruti. They're experts in making mini vehicles which are really cheap. They cost around ten thousand dollars that's what makes up a bulk of the Indian market in cars. The luxury segment is small but it's expected to grow at about six percent in the next five years. You do have entrenched players like Mercedes, Benz, and BMW who are the number one and the number two players in the market but the luxury car market accounts for only one percent of the overall passenger vehicle market.

There are not many electric vehicles but that is starting to change. Electric cars are still a very minuscule portion of the total number of vehicles sold in India. The EV market in India is just at the very nascent stage. Tata motors are going to be launching their EV vehicles. Maruti Suzuki has plans to launch hybrid EVs which they would have a joint venture globally with Toyota. Electric auto-rickshaws have been around for quite some time now there are about 1.5 million electric autorickshaws that are used by millions of Indians every day.

Tesla's entry into India is highly anticipated but its cars will be out of reach for most consumers. There is virtually no premium market for electric vehicles in India and very little potential at least in the short term for teslas to sell in numbers in India. You're not talking about the average middle-class person who's going to be buying a Tesla in India. It has adjusted its pricing to boost demand. In China, it has reduced the cost of model 3 several times. Tesla will want to go as aggressively as possible in price. I would look for them to position Model 3 or Model I may be imported as knock-down parts from china assembled in India and sold as exclusive premium

products and when Tesla does come to India it will be entering the EV market in its infancy.

Charging infrastructure is still not up to where it is supposed to be and most of India's power grids are still, coal-powered and power outages, especially during monsoon season, for example, are very common some of its signature features may not be available either. A lot of technologies that Tesla has may not work in India like autopilot and autonomous driving and Auto Change Landing Features. But brand recognition in India is strong Tesla definitely has a loyal brand following in India it's a small but loyal brand following but will that turn into sales it's hard to say initially. Tesla has the kind of potential to actually double or triple the premium car market in India. Some experts think importing into India may be the best move for Tesla. Government incentives and policies were used in China, the US, and Europe to help jump-start the industry in those countries.

So India just cannot afford to go electric yet unless the Indian government jumps in there and says okay we're going to fund this. The government has over the past years announced some initiatives to incentivize battery producers to set up shop in India to give incentives to buy electric vehicles and want to incentivize the local carmakers to produce more electric vehicles by imposing tariffs on imported ones. It is unclear whether Tesla is working with the government as it did in China. Tesla will be facing increasing competition.

Several automakers have plans to introduce electric cars in India. India's local manufacturers like Tata Motor, Mahindra and Mahindra are already selling electric vehicles in the country. With the high cost associated with EVs today tesla's biggest competition may still be cheaper gas-powered cars. Internal combustion engine vehicles are still very popular in India because they are comparatively cheaper and so there'd be competition from these local producers as well as the foreign imported cars. But if Tesla were to build a more affordable EV it could give tesla the competitive advantage it needs. India wants to embrace electric vehicles but they'll do it at very low price points like less than ten thousand dollars.

They'll invest in two-wheeler and three-wheeler electrics because that's where the market is and then eventually move up into cars and then up into premium cars. Given all the challenges that India does have, I don't think that the EV market in India will take off in any fashion in the near future or even in the longer term. India's growth fell off a cliff last year because of the coronavirus pandemic and so the immediate priorities right now is to get that growth back on track maybe some of that can be incorporated into the electric vehicle space but that remains to be seen.

Tharun S.M

B Tech IT (4th year)

An Overview On ChatGPT

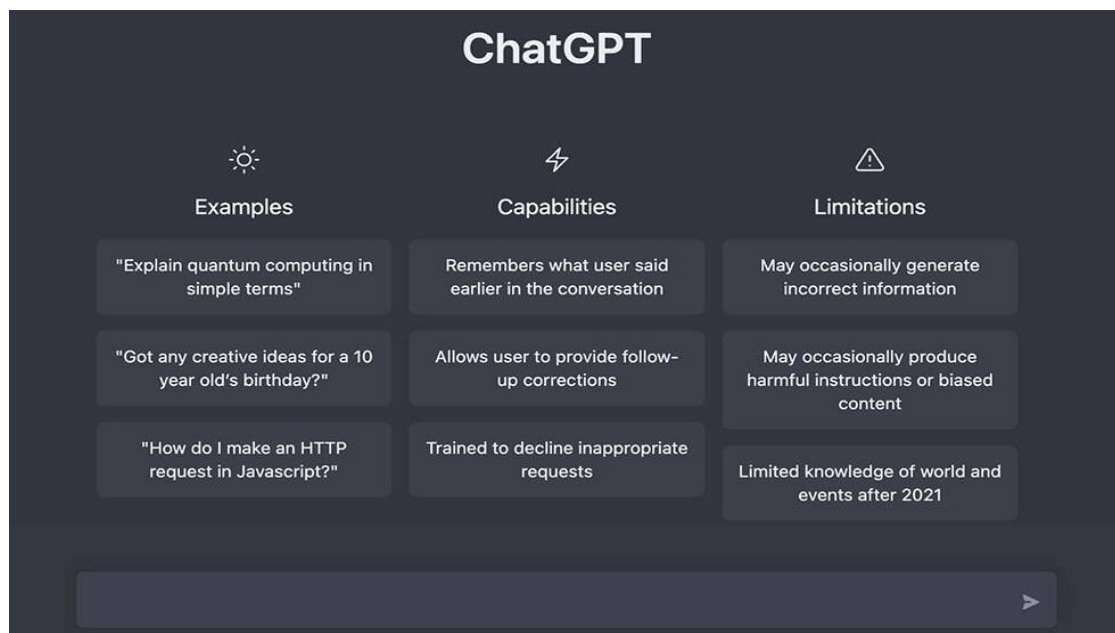


Since Open AI released its blockbuster bot Chat GPT in November, users have casually experimented with the tool, with even Insider reporters trying to simulate news stories or message potential dates. To older millennials who grew up with IRC chat rooms — a text instant message system — the personal tone of conversations with the bot can evoke the experience of chatting online. But Chat GPT, the latest in technology known as "large language model tools," does not speak with sentience and does not "think" the way people do. That means that even though Chat GPT can explain quantum physics or write a poem on command, a full AI takeover is not exactly imminent, according to experts.

It is an AI chatbot auto-generative system created by Open AI for online customer care. It is a pre-trained generative chat, which makes use of (NLP) Natural Language

Processing. The source of its data is textbooks, websites, and various articles, which it uses to model its own language for responding to human interaction. Chat bots like GPT are powered by large amounts of data and computing techniques to make predictions to string words together in a meaningful way. They not only tap into a vast amount of vocabulary and information, but also understand words in context. This helps them mimic speech patterns while dispatching an encyclopedic knowledge. Other tech companies like Google and Meta have developed their own large language model tools, which use programs that take in human prompts and devise sophisticated responses. Open AI, in a revolutionary move, also created a user interface that is letting the general public experiment with it directly.

This chatbot system provides information and responses to inquiries through AI. The popular version of Chat GPT is the GPT-3 model. The main feature of Chat GPT is generating responses like those humans would provide, in a text box. Therefore, it is suitable for chatbots, AI system conversations, and virtual assistants.



However, it can also give natural answers to questions in a conversational tone and can generate stories poems and more. Moreover, it can:

- Write code
- Write an article or blog post
- Translate
- Debug
- Write a story/poem
- Recommend chords and lyrics

To make the AI carry out one of these demands, all you need to do is type the command into the chatbot.

Chat GPT trained on?

It relies on NLP (Natural Language Processing). It is an excellent tool for researchers and developers working on various NLP projects, and it has many specific tasks, domains, and applications available to work within.

It is well-trained on biased and unbiased data, in the form of text from books, articles, and websites. Chat GPT can reproduce data outputs and reliability – crucial for many sensitive apps and other valuable AI systems. However, it is still prone to error, and biases and depends on its training data – provided in 2021. As humans we are, more and more, interacting with AI-powered machines, and Chat GPT is a revolution in the field of AI. It is a robust model and particularly advanced thanks to its deep-learning capabilities and NLP. Ultimately, it can generate human-like answers and is easily understandable to users. Thought that does not always make it right.

Chat GPT coded in?

Chat GPT is built on the GPT-3 language model developed by Open AI. Although the source code for GPT-3 has not been released, a post on the Stack exchange site suggests that GPT-3 is written in the “same model and architecture as GPT-2”.

The application itself is apparently capable of providing code in Python C++ and JavaScript, should it be prompted to create any. Chat GPT is pretty good at generating text which mimics human speech. This is useful if you need a post for a website or social media page, but do not have the time to write it out yourself. It can also produce code – again, useful if you do not have the time to write it out yourself.

Sachin Giridar R S

B Tech IT (4th year)

An Overview of Metaverse

The metaverse is described as the inevitable evolution of the internet. But what exactly is the metaverse, and what will it become? Learn what businesses need to know now. Imagine a virtual world where billions of people live, work, shop, learn and interact with each other -- all from the comfort of their couches in the physical world.

In this world, the computer screens we use today to connect to a worldwide web of information have become portals to a 3D virtual realm that is palpable -- like real life, only bigger and better. Digital facsimiles of ourselves, or avatars, move freely from one experience to another, taking our identities and our money with us. This is known as the metaverse.



Why is the metaverse important?

"Metaverse" became a household word when Facebook rebranded its corporate identity to Meta in October 2021 and announced plans to invest at least \$10 billion in the concept that year. In addition to Meta, tech giants including Google, Microsoft, Nvidia and Qualcomm are also investing billions of dollars in the concept. Management consultancy McKinsey & Company has bullishly predicted that the metaverse economy could reach \$5 trillion by 2030. E-commerce is expected to be the dominant engine, with gaming, entertainment, education, and marketing in the metaverse also becoming important sectors. Today, companies use the term to refer to many different types of enhanced online environments. These range from online video games like Fortnite to fledgling virtual workplaces like Microsoft's Mesh or Meta's Horizon Workrooms to virtual dressing rooms and virtual operating rooms. Rather than a single shared virtual space, the current version of the metaverse is shaping up as a multiverse: a multitude of metaverses with limited interoperability as companies jockey for position. Other futurists, however, argue that while it is early days for the metaverse and fundamental technical barriers still exist, the metaverse will happen. And, it will arrive with a big bang.

"It is clear that it is one of the most highly anticipated technology evolutions of the coming decade," Dave Wright, chief innovation officer at IT provider ServiceNow, told TechTarget writer George Lawton in "History of the metaverse explained."



What is the metaverse? A short history

The metaverse is a vision of what many in the computer industry believe is the next iteration of the internet: a single, shared, immersive, persistent, 3D virtual space where humans experience life in ways they could not in the physical world. Some of the technologies that provide access to this virtual world, such as virtual reality (VR) headsets and augmented reality (AR) glasses, are evolving quickly; other critical components of the metaverse, such as adequate bandwidth or interoperability standards, are probably years off or might never materialize.

How does the metaverse work?

the metaverse is largely unbuilt, there is little agreement on how it will work. Broadly speaking, however, the metaverse is a digital ecosystem built on various kinds of 3D technology, real-time collaboration software and blockchain-based decentralized finance tools. Factors such as the degree of interoperability among

virtual worlds, data portability, governance and user interfaces will depend on how the metaverse pans out.

Lauren Lubetsky, senior manager at Bain & Company, speaking in a session on the metaverse at the 2022 MIT Platform Strategy Summit, outlined three possible scenarios:

- The metaverse remains a domain of niche applications, used by consumers for entertainment and gaming but stopping well short of an all-encompassing virtual reality.
- The metaverse is controlled by large competing ecosystems -- for example, Apple and Android meta worlds -- with limited interoperability.
- The metaverse is a dynamic, open, and interoperable space, much like the internet but in 3D.

Santhoshraj.E

B Tech IT (4th year)

NON-TECHNICAL ARTICLES

Value of Games in Education

Education aims at full development of the human personality. The human personality has several sides and it is the purpose of education to develop all these sides so that the individuals may attain his full stature. Man has a body, a mind and a spirit. According to education aims at the physical development, intellectual development and the spiritual and more development of man. It is a very narrow view of education to think that educations merely give knowledge to a human being and thus fits him for the purpose of earning his livelihood but educations does much more than this.

Games and sports develop a sound mind in a sound body. They strengthen our muscles, make our bodies strong, increase our capacity for work and develop our power and alertness. They are excellent training in concentration and endurance. While playing a game a player is constantly being attacked by his opponents, so he remains always alert. Game and sports infuse in us a sense of cooperation- esprit de corps. They teach us the important lesson- all for one and one for all. We learn team spirit. No player can play only for himself, he must obey his captain. He must place the interests of the team above everything else. A player may score a goal or a run, but it is the team that wins. In addition to this, games and sports teach us the presence of mind, fellow -feeling and discipline. The lesson of the spirit of sportsmanship is brought home to us. It is to win without pride and to lose without bitterness.

Players learn self-control. They are not swayed by sudden fits of anger or passion. Games teach them cool-mindedness and courage. If we have constantly to compete

with others in the open field, we shall develop mainly courage. Sportsmanship means a calm, forgiving and cheerful view of life. Game and sports provide a healthy outlet for our surplus energy. They promote international understanding. They open before us a new world of competition and struggle when they are over. We feel closer to our comrades in other parts of the world.

Games make a man tough and thus enable him to withstand the sling and arrows of fortune. Games teach retain other lesson as well. They teach team-spirit or the spirit of mutual cooperation. They teach the value of unity or united effort. They teach the necessity of always obeying the orders of the captain or the leader. All these are valuable lessons which prepare man to live correctly and nobly. Education aims at building up character and character includes all the qualities mentioned above. In spite of their defects, games and sports are essential to our healthy growth. They invigorate our bodies, refresh our minds and help us grow into healthy and upright citizens. Games and sports, in short, play an important part in giving us complete education. Education means the all-round development of the learners. Games contribute a lot towards this end. Thus the value of games in forming and molding character is very great. Education aims too at developing qualities of leadership in human beings. The qualities of leadership are developed most effectively and fruitfully through games.

Irfana Parveen

B Tech IT (4th year)

Hyper-globalism is threat to human prosperity

Globalization is the mechanism by which knowledge, ideas, information, goods and services are broadly dispersed throughout the world and is operated by blending cultural and economic systems. This concurrence aids and develops in increased alliance, intercommunication, collaboration, integration and interconnection among nations. The world becomes globalized when countries in different parts of the world are interwoven economically, politically and culturally. It expands the assimilation of economies around the world through trade and financial flows to get optimized returns and for the wellbeing of people. Globalization resulted in the rising interdependence of the world's economies, cultures and populations proposed by trans-border trade in technology, people, goods, services, information and investments.

The period of hyper globalization has been associated with the most dramatic turnaround in the economic fortunes of developing countries. Hyper globalization is based on the concept of homogenous global culture throughout the world. It has led to the flooding of multinational companies in the global market. GDP rose from 15 percent to 26 percent during the period 1992-2010 from merchandise exports alone as a result of hyper globalization. Exports alone contributed to 33 percent of GDP. The Information and Technology (IT) sector witnessed sharp decline in their costs but there was no much decrease in travelling costs.

The existence of hyper-globalization is clearly implied through substantial rise in Foreign Direct Investment (FDI). Global FDI as a percentage of world GDP has grown seven-fold. Dematerialization of globalization – Important is considered more to services than material. Hyper globalization lead to more widespread and democratic output available to businesses throughout the world. It has lead to bilateral relationships between countries and different regions in the form of trade agreements. Through hyper globalization, countries are able to produce things where they have a comparative advantage and import those that can be made at a lower opportunity cost. Hyper-globalization and leveraging comparative advantage work well in a world without geopolitical frictions or natural disasters.

Hyper globalization has a lot of advantages which created much benefits to the nations worldwide. But it has also affected human prosperity negatively in terms of culture, economy, ecology, politics and technology. It lead to economic imbalance among nations where one country benefits at the expense of another. Developed countries capitalize developing countries which results in wide disparities between rich or affluent and poor countries, people within these countries also experience a huge division amongst themselves. This has resulted in countless crime cases happening recently between rich and poor. Developing industries and increased pollution is dangerous for the survival of human population. Unemployment created due to lack of technical knowledge which is essential in world of competency and skill are some of the reasons that hinder human prosperity.



Hyper globalization cannot be completely considered as threatening factor to human prosperity. The impact of globalization in different countries and how they are implemented in each of these nations matter how threatening they are. When things are desired discreetly and achieved rigorously the end result would bring negative impacts. Hyper globalization should be trailed rapidly where positive effects offset negatives.

Globalization can be strived swiftly at the current pace or even at higher pace but these changes need to be proceeded cautiously by considering sustainable development, culture and needs of the nations. The major reason for hyper globalism to become a threatening factor is because it increases inequality among individuals and creates huge difference between rich and poor. If all these factors are taken care of, then hyper globalization brings more benefits than challenges.

Intasar
B Tech IT (3rd year)

Non-Performing Assets and Their Impact on Economy

NPA is nothing but old wine in new bottle. The bad loans which were known as Bad Debts has been renamed as Non-Performing Assets as per the Narsimham Committee recommendations. Previously banks used to write off the bad debts as per their own decisions depending upon the health of the banks. But Narsimham Committee prescribed a standardized norm for provisioning of NPAs. Narsimham Committee was implemented in all banks in the year 1991. The committee also classified the assets in different categories and rates of %age for provisioning.

Standard assets are those assets which are running good without any default. Previously there was no clause for provisioning of these standard assets. Subsequently banks were directed to provide on their standard assets also at the following rates: Direct advance to agriculture or small and micro enterprise: 0.25%, Commercial real estate residential 0.75%, for real estate commercial 1% and teaser housing loan 2%.

Effects of NPAs

If it is analyzed critically it would be evident that the banks started incurring losses after implementation of Narsimham Committee recommendations. Due to provisioning of assets in standardized form, the erosion of capital of the banks started. Thereafter the concept of strong banks and weak banks came into effect. For survival of weak banks, the government started recapitalizing the weak banks. RBI and government started pressuring the banks to implement stringent methods for recovery of the NPAs and to improve their balance sheets. On critical analysis it has been observed that major portion of NPAs is contributed by several top industrialists.

Generally, the NPAs in agriculture and priority sector is comparatively lower than that of the corporate houses. It is said that due to government policies of waiving agriculture loans in cases of floods, droughts and natural calamities burden of NPAs of all PSBs is increasing. Generally marginal farmers and small entrepreneurs pay their loans in due time which is evident from surveys by different agencies. Though the government has enacted SARFAESI Act in 2002 that empowered the banks to acquire the mortgaged land, building, etc and dispose the same in auction for recovery of bad loans but the banks are still facing problems while implementing the said Act.



Preventive Measures

1. Evaluate borrower's Credit Information Bureau (India) Limited (CIBIL) score.
2. Compromise or use various settlement schemes.
3. Use alternative dispute resolution mechanisms for faster settlement of dues such as use Lok Adalats and Debt Recovery Tribunals.
4. Actively circulate information of defaulters.
5. Take strict action against large NPAs.
6. Use Asset Reconstruction Company.
7. Legal Reforms such as implementation of the Insolvency and Bankruptcy Code have already taken place.
8. Corporate Debt Restructuring (CDR).
9. Propose guidelines on wilful defaults/diversion of funds.
10. Special Mention Accounts – Additional Precaution at the Operating Level.

Latest Measures by RBI

The main proposals are:

1. Lenders' Committee with strict timelines for a resolution plan to be established.
2. Lenders must be given incentives to agree to collectively and quickly plan

3. Improvement in current restructuring process focus on viable plans and a fair sharing of losses between promoters and creditors.
4. Future borrowing for non-cooperative borrowers with lenders must be made more expensive in resolution.
5. Asset sales must be given more liberal regulatory treatment.
6. If loss is fully disclosed, lenders must be allowed to spread their losses on sale for over two years.
7. It will not be construed as restructuring if takeout financing is made possible over a longer period.
8. If specialized entities are acquiring 'stressed companies', leveraged buyouts must be allowed.
9. Steps must be taken to facilitate better functioning of Asset Reconstruction Companies.

Anirudhan A

B Tech IT (4th year)

INDUSTRIAL VISIT TO MYSORE:

Our final year students of B.Tech IT 2019-2023 batch went to an industrial visit to Kaynes Technology India Private Ltd Mysore, Karnataka from 11.11.2022 to 14.11.2022.

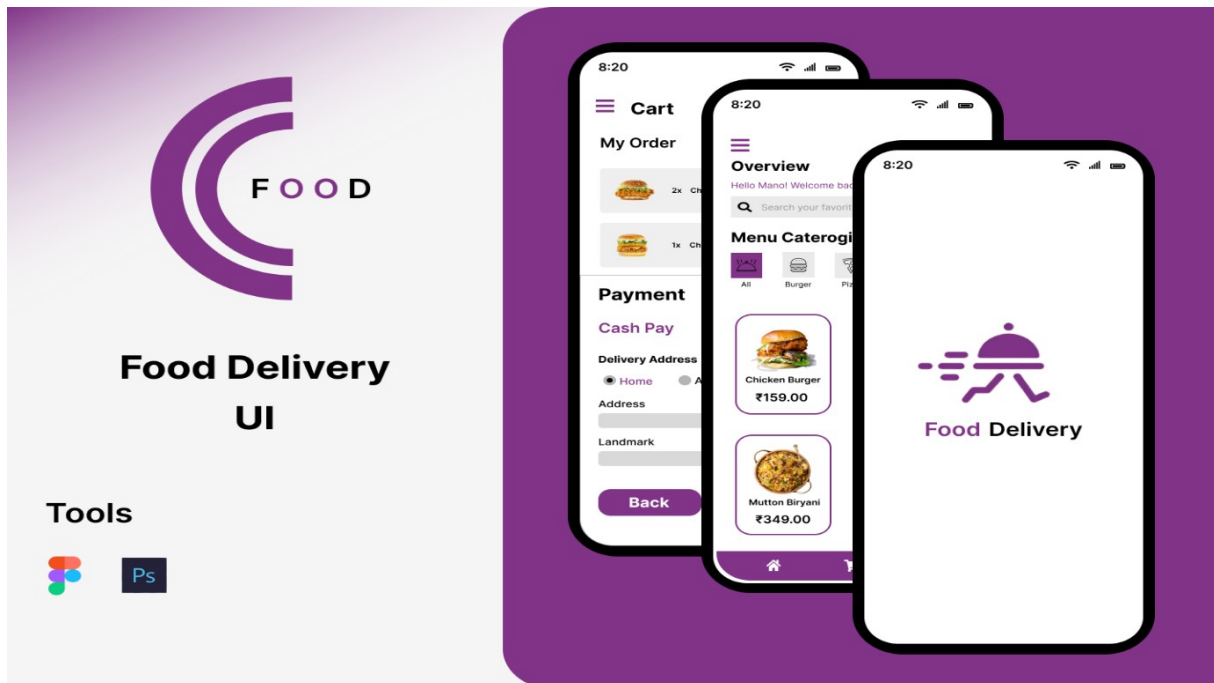
Kaynes Technology India Private Ltd, Mysore, India is a leading domestic player in the Electronics System & Design Manufacturing Services Space with Global footprint. Apart from its mother plant and additional manufacturing facility at Mysore it has five manufacturing plants at Bangalore, Chennai, Manesar, Parwanoo, and Selaqui.

The Services offered by Kaynes mainly include Systems Design & Engineering, Equipment Installation and Commissioning including Support for On Board Systems, Overhauling and Maintenance of Electronic and Electrical Equipments, Component level Electronic Card Repair and Re-Engineering/ Obsolescence Management, PLC Programming and System Commissioning and Systems Integration Activities.



STUDENTS CORNER

FOOD DELIVERY APP



Design Overview

The main reason for making this app is to save the customer's time and deliver the best food that they search for. This app will help the people get food anytime and from anywhere they want.

Problem

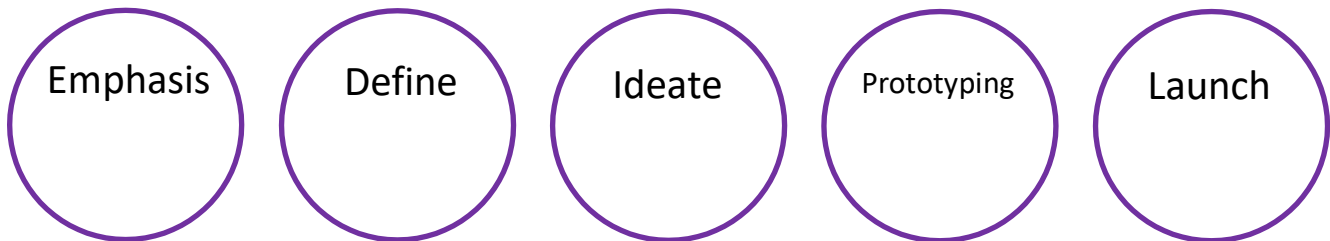
- First off, clients in the meal delivery industry have been found to be extremely erratic waiters.

- Second, it becomes extremely difficult for the delivery partners to bring the food to you in a fresh state.
- Third is the cost.

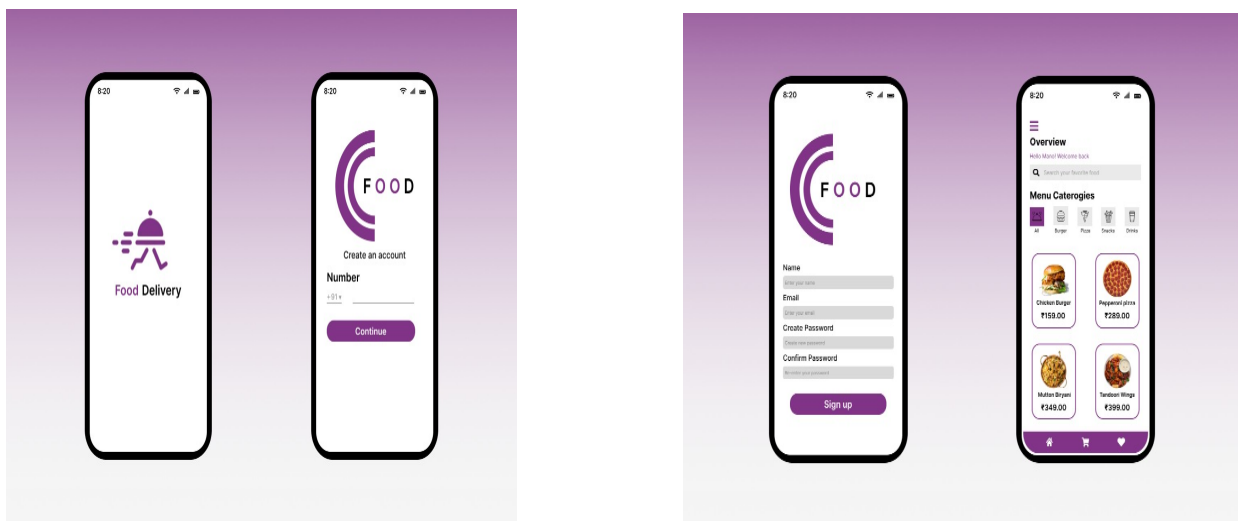
Solution

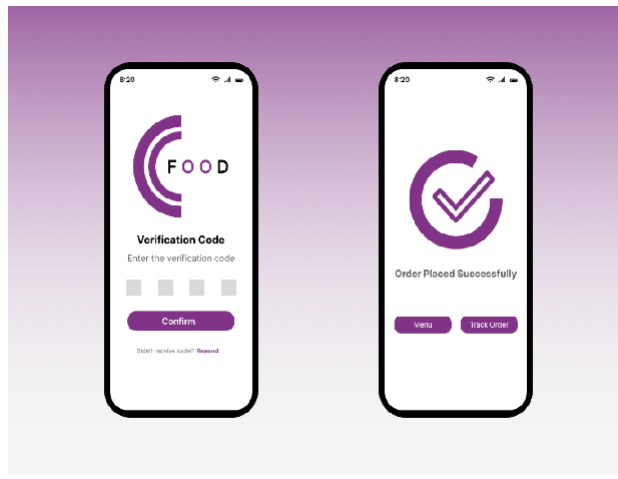
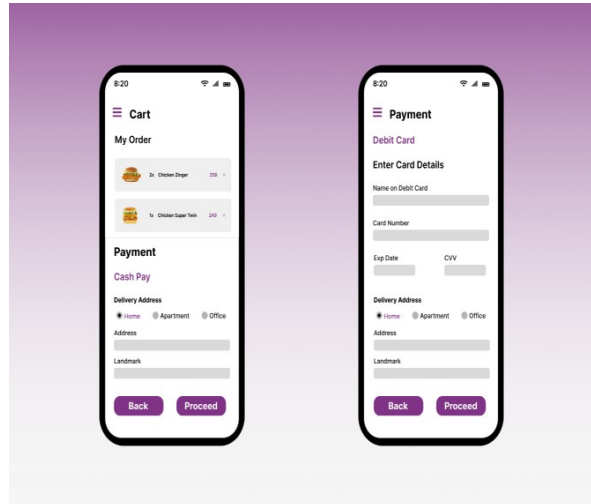
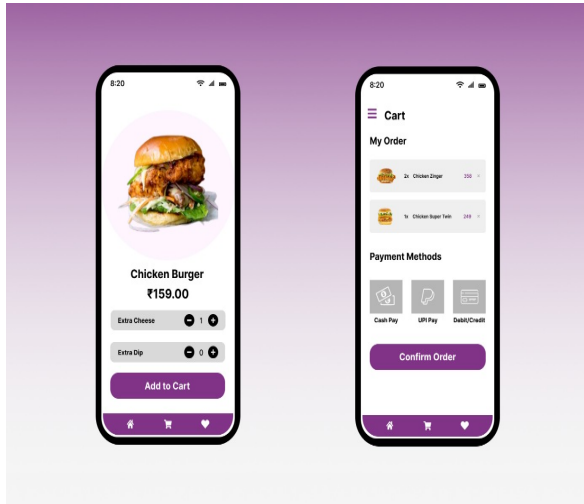
- Increase the number of delivery personnel and provide the purchasers with a tracking link as a remedy for late delivery.
- Users care a lot about quality, so we need to employ technology to guarantee it.
- In addition, prices should be affordable for customers so that everyone can buy food without any difficulty.

Design Process



Visual Screens





MANO SELVA VIJAY. D. A

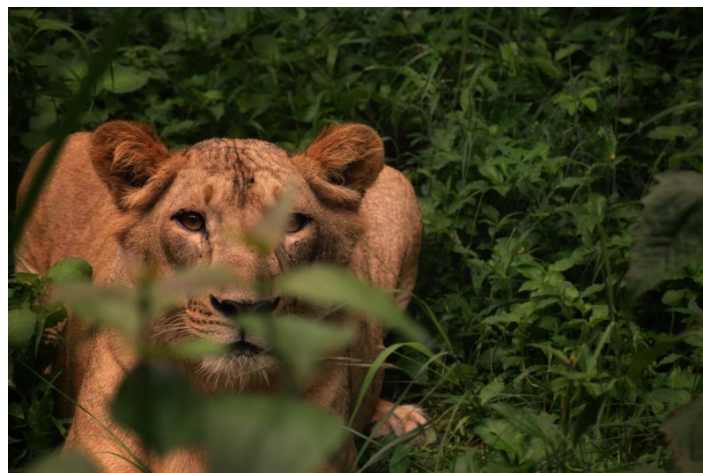
B Tech IT (4th year)

PHOTO & ART GALLERY:



SHAHITH

B Tech IT (3rd year)



SANTHOSHRAJ E

B Tech IT (4th year)

