DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BYTE

TECH MAGAZINE 2021

VIMAL JYOTHI
ENGINEERING COLLEGE

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

VISION

- To contribute to the society through excellence in scientific and knowledge-based education utilizing the potential of computer science and engineering with a deep passion for wisdom, culture and values.

MISSION

- To promote all-round growth of an individual by creating futuristic environment that fosters critical thinking, dynamism and innovation to transform them into globally competitive professionals.
- To undertake collaborative projects which offer opportunities for long-term interaction with academia and industry.
- To develop human potential to its fullest extent so that intellectually capable and optimistic leaders can emerge in a range of professions.

MESSAGE FROM
MANAGER
VJEC

"

"**Everybody should know how to programme a computer, because it teaches you how to think**" says Steve Jobs. There are no areas of life untouched by the computer science engineering. Vimal Jyothi is contributing remarkably to making the world more livable.

At this juncture, I cannot but appreciate the efforts of Computer Science department for their unmatching hard work and contribution to society during the Covid-19 pandemic. The efforts of the department, in attracting many students to this ever-green engineering stream, is worth noting here. 'Byte' of course is a manifestation of the teamwork, creativity and skills of the students as well as the faculty. I sincerely congratulate everyone behind the scenes and wish all the best to the "Byte".

James Chellamkottu

Rev. Fr James Chellamkottu
Manager, VJEC

"

MESSAGE FROM
PRINCIPAL
VJEC

"

I am glad to note that the Department of Computer Science and Engineering is bringing out a technical magazine in the academic year 2020 - 2021 with a perfect blend of articles on the latest trends in technology and its history and evolution

I take this opportunity to appreciate the entire team worked behind this project, especially the editors, designers and the article contributors. I am sure that this magazine will set a good precedence and benchmark for the coming batches to emulate and improvise. Once again congratulations for your efforts in this pandemic period and all the best for all your future endeavours.

Benny Joseph

Benny Joseph
Principal, VJEC

"

MESSAGE FROM
HOD CSE DEPT.
VJEC

It is a proudful moment for the Department of Computer Science and Engineering that the Technical magazine, Byte is released.

Nowadays, different applications of Computer Science and its associated streams such as Artificial Intelligence and Data Science are being used worldwide in an enormous manner. Hopefully, a lot of research in allied fields and interdisciplinary areas are also taking place to make these applications more and more user friendly and beneficial to common people. Research in Natural Language Processing, Computational Biology etc. are paving paths to a well-balanced world.

Congratulations to Ms Tintu Devasia and other magazine committee members for the sincere effort they have put to actualize this group of knowledge bits. I wish all readers of Byte a nice technological walk-through and let Byte give a technical tasty bite to every reader

Jeethu v Devasia

**Jeethu V Devasia
HOD CSE Dept**

MESSAGE FROM
STAFF EDITOR CSE Dept.
VJEC

Byte is designed to present to its readers the technical know-how , and also showcases the talents of our faculty members and students.

With a sense of pride and satisfaction I would like to say that with the active support of the management, faculty and students, Byte has come alive . With all the efforts and contributions put in by the students, I truly hope that the pages that follow will make some interesting technical reading. I congratulate the editorial team for making Byte innovative and inspiring.

Tintu Devasia

Tintu Devasia
Asst. Professor CSE Dept., VJEC

EDITORIAL COMMITTEE

Dr. Jeethu V Devasia
Prof. & HOD

Staff Editor:
Ms. Tintu Devasia
Asst. Professor

DESIGN TEAM

Joshua Mathew
S4 CSE A

Dennis Benny
S4 CSE A

Vignesh PV
S6 CSE

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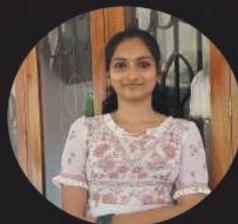
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S4 CSE A

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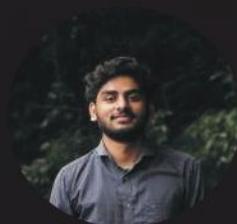S4 CSE B

Shijas P
S4 CSE B
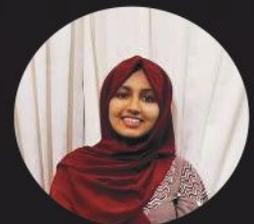
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S4 CSE B

Anamika Prasanth
S6 CSE

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S6 CSE

Rana Fathima
S6 CSE

EDITORIAL NOTE

Putting a magazine together was no cakewalk. All the editorial team members have spent sleepless nights to make this magazine stand out. So here we introduce "BYTE", the long awaited tech magazine of Computer Science Department of VJEC for the year 2020-2021.

Our life has become so much easier just because of the outcome of development in the technology field. This magazine is a platform that brings out new technological affairs. "BYTE" presents the hard work and dedication of students and contributions of teachers in the field of IT.

We are grateful to our esteemed principal Dr. Benny Joseph and to the HOD of CS department Dr. Jeethu V Devasia for their motivation and uphold. We are highly indebted to our mentor Ms. Tintu Devasia for her guidance and relentless support. We express our considerable appreciation to all the authors of the articles in this magazine. These contributions have required a generous amount of time and effort. It is this willingness to share knowledge, and concerns with fellow beings that has made this magazine possible.

BYTE- Enjoy each and every byte of the magazine. Traverse and experience the latest tech knowledge.

Magazine name suggested by
Ramdev CM, S6 CSE

FACULTY DETAILS

Dr. Jeethu V Devasia
HOD, Professor
B Tech, M Tech, Ph D

Dr. Manoj V. Thomas
Professor
B.Tech, M.Tech, Ph.D

Dr. Renji P Cheriyan
Professor
B.E, M.Tech, PhD

Ms. Divya B
Associate Professor
B.Tech, M.Tech

Ms. Neena V V
Associate Professor
B.Tech, M.E

Abdul Latheef M M
Associate Professor
B Tech, M Tech

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B Tech, M Tech

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Assistant Professor
B.Sc, M Tech

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Assistant Professor
Diploma, B Tech, M Tech

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Btech, ME

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B Tech, M Tech

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Assistant Professor
B Tech, M Tech

Ms. Keerthijith P
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B Tech, M Tech

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B Tech, M Tech

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Assistant Professor
MSc, ME

Ms. Ankita Sebastian
Assistant Professor
B.Tech, M.Tech

Ms. Tintu Devasia
Assistant Professor
B.Tech, M.Tech

Ms. Angel Varghese
Assistant Professor
B Tech, M Tech

Ms. Ambili M A
Assistant Professor
B Tech, ME

Ms. Nayana Suresh
Assistant Professor
B.Tech, M.Tech

Mr. Thomas Jacob
Trade Instructor
Diploma, M Sc

Ms. Bindu Sebastine
Trade Instructor
B Com, PGDCA, Diploma

Mr. Sibi Joseph
Trade Instructor
Diploma

Mr. Timmy Philip
Trade Instructor
B Sc, MCSE, CCNA

Ms. Shijimol K T
Trade Instructor
Diploma, B A , M C A, B Ed

Mr. Lithin Mathew
Trade Instructor
ITI, B Sc

ARTIFICIAL INTELLIGENCE

(AI)

Dr. MANOJ V THOMAS
PROFESSOR, DEPT. OF CSE

ARTIFICIAL INTELLIGENCE: SCOPE AND OPPORTUNITIES

AI is a really promising technology that affects the human lives in manifold ways. In this article, some of the major applications of Artificial Intelligence are discussed. Even though, not being a comprehensive discussion, the cited instances are powerful enough to give a strong impression of the opportunities this disruptive technology would bring in the near future.

AI IN EDUCATION:

Automated grading is one aspect in which the faculty need not spend time for grading the answer sheets of their students. Grading will be carried out by computer programs. In this case, the faculty gets more productive time for teaching and research. In the near future, AI will help in developing really personalized virtual assistants that are accessible to students at any time for personalized attention and care.

AI IN FINANCE:

Algorithmic Trading that uses complex AI systems to make trading decisions is the trend these days, and it can often make millions of trades in a day without any human intervention. Several companies deploy AI engines to assist the investors with various investment plans or practices. For example, BlackRock's AI engine, 'Aladdin', is used by clients to help with investment decisions. These AI applications use natural language processing to read text such as news, broker reports, and social media feeds. Through the data analysis, they gauge the sentiment on the companies mentioned and assigns a score. Japan's leading brokerage house, 'Nomura Securities' uses AI to assess the current market conditions, and predict how share prices will be changing a few minutes down the line. Hence, investors can take better trading decisions at any point in time. In the personal finance domain also, AI is used to assist people with their personal finances. For example, an AI app called 'Digit' helps consumers optimize their spending and savings based on their own personal habits and goals.

AI IN HEALTHCARE:

Nowadays, ANN based clinical decision support systems are widely used by leading hospitals for medical diagnosis and effective interpretation of medical images for the detection of an abnormal growth such as tumor. AI based systems are also used for Heart sound analysis. In developed countries, companion robots are used for the care of the elderly people without human intervention. Another use case is to predict the likelihood of death from surgical procedures considering the present and previous health data of patients. Also, AI based robots are used for carrying out accurate surgery in lesser time.

AI IN AGRICULTURE:

Agricultural robots are used for harvesting, weed control, planting seeds, environmental monitoring and soil analysis. 'See & Spray robot' from Blue River Technology uses computer vision technologies to monitor and precisely spray weedicide on cotton plants. Another example of AI in agriculture is the case of Berlin-based agricultural tech start-up called PEAT which developed an application called 'Plantix' that can identify potential defects and nutrient deficiencies in the soil through analysis of images. A study conducted by 'Verified Market Research' shows that the agricultural robots market will reach $11.58 billion by 2025.

AI IN AUTOMOTIVE INDUSTRY:

Autonomous Vehicles and driverless cars will drive the future. Major companies such as Google, Tesla, Nissan, Waymo etc. have invested huge amounts in the research and development of self driving cars. Research is underway to develop self parking cars without any error. The AI system, in this case, consists of radar, cameras, GPS, and cloud services, and uses computer vision, image detection and advanced Deep Learning to drive around without human intervention. With the advances in AI, it is possible to accurately predict objects behavior; thereby ensuring safe and faster travel.

AI in Entertainment & Artificial Creativity:

In Netflix or Amazon, AI is used for finding the right movies for individuals depending on their current state of mind and tastes. Netflix provides highly accurate predictive technology based on customer's reactions to films using the machine learning techniques. It examines millions of records to suggest shows and films that you might like based on your previous actions and choices of films. Music similar to human-like composition can be composed by AI based programs. Classical albums and even film scores can be generated by programs. For example, 'MuseNet' is a deep neural network capable of generating 4-minute musical compositions using 10 different instruments. It can combine styles from country to Mozart to the Beatles. Content automation tools such as Wordsmith can be used as a natural language generation platform. If you provide the tool with facts and figures, it will convert your data into insightful narratives within no time. Major companies such as Yahoo, Microsoft, etc. generate around 1.5 billion pieces of content every year through this technology.

AI in Social Media:

Billions of people use Instagram, Snapchat, Facebook, Twitter, WhatsApp etc. to stay connected with the virtual world. This entails the generation of massive amounts of personalized data. By the thorough analysis of this huge amounts of data, latest trends, hashtags, and requirement of different users can be identified which has enormous potential in the targeted advertisements. Social media platforms such as Twitter use applications using Deep Learning and NLP techniques to filter out offensive content (hate speech). Twitter has banned 300,000+ terrorist-linked accounts, 95% of them were detected by AI machines. Another example is Facebook which uses AI for face verification using machine learning and deep learning concepts to detect facial features and tag your friends automatically. Also, every user activity in the Facebook is closely watched for billions of users, and each user gets advertisements that are relevant to their interests. Analysis shows that Facebook and Google secured a total of 85% of the online ad-market precisely because of deeply-targeted advertisements.

AI in Gaming:

Classic example is the Deep Blue (1997) computer developed by IBM. It was the first chess playing computer system to defeat a reigning world champion in a match under standard chess tournament time controls. Deep Blue system could beat the then world champion Garry Kasparov. As another example, DeepMind's AlphaGo Computer defeated 18-time world champion Lee Sedol of South Korea in 2016. AlphaGo is a computer Go program developed by Google DeepMind. Later in the year DeepMind improved AlphaGo programme using the AI techniques, and produced the better program called AlphaGo Zero. It was powerful enough to beat the old version AlphaGo in an AI-AI face off.

AI in Data Security:

AI is being widely used in detecting software bugs and cyber-attacks in computer programs and systems in a better way (AEG bot, AI2 Platform etc.)

AI in Robotics:

General robots are programmed to perform repetitive tasks while intelligent robots perform tasks with their own experiences without being pre-programmed. Humanoid Robots Erica and Sophia can talk and even behave like humans.

AI in E-Commerce:

Earlier days, how difficult it was to find a product without knowing its exact name. Nowadays, AI is helping shoppers to discover associated products with recommended size, color, or even brand. Today, when you search a particular product on the online portal, all possible results related to the item are displayed. Just like search engines read our minds! In a matter of seconds, we get a list of all relevant items. Recommendations for products as "customers who viewed this

item also viewed" and "customers who bought this item also bought", personalized recommendations on the home page, and through emails are helping the shoppers make the shopping experience memorable. Research has shown that recommenders increase sales up to a 30%.

AI IN BANKING:

AI based programs are used for customer support, detection of anomalies in transactions and also to detect credit card frauds. For example, HDFC Bank uses AI-based chatbot called 'EVA' (Electronic Virtual Assistant) for customer support. Since its launch, EVA has addressed over 3 million customer queries, interacted with over half a million unique users, and held over a million conversations. Eva can collect knowledge from thousands of sources and provide answers in less than 0.4 seconds. MasterCard and RBS WorldPay use AI and Deep Learning to detect fraudulent transaction patterns and prevent credit card fraud saving millions of dollars every year.

VIRTUAL ASSISTANTS:

Virtual assistants such as Siri, Cortana, Alexa or Google Duplex are gaining popularity these days because of the type of user experience they provide. They use speech recognition and NLP to perform a wide range of tasks on your command such as to ask natural language questions, play music, make phone calls, order items online, hail an Uber, set reminders, and answer questions and also to integrate with smart home devices.

AI IN TOURISM:

Using Predictive Analytics driven by artificial intelligence, the price of a flight ticket in future can be accurately predicted. The price trend is analyzed on the basis of the recorded data on each route. So, you get notifications of when to book your flight. Ridesharing Apps Like Uber and Lyft deploy Differential Pricing strategy using Predictive Analysis to earn more profits. Also, commercial flights use an AI Autopilot to automate most of the manual tasks a human pilot would do. On an average, during the flight of a Boeing plane, it has seven minutes of human steered flight (reserved only for takeoff and landing), for the rest of the time, the control is taken by the autopilot.

GOOGLE'S AI-POWERED SERVICES:

Using anonymized location data from smartphones, Google Maps (Maps) can analyze the speed of movement of traffic at any given time suggesting the fastest routes to travel. Another example of use of AI is 'Spam Filters' in emails. In this case, simple rules-based filters are not effective, and hence the spam filters must continuously learn from a variety of signals such as the words in the message, message metadata (where it's sent from, who sent it, etc.). Research shows that this technique successfully filters 99.9% of spam using ML algorithms. Another AI based feature of Gmail is 'Gmail Smart Reply' in which the user is offered three auto-reply options. After using it for a while, the Auto Reply begins to improve, and starts to adopt your personal writing style. Google utilizes a 'Deep Neural Network' to generate the email replies. In the near future, complex responses for an email would be possible. 'Personalised Search' of Google is an example of the use of machine learning algorithms. The search engine is able to customize the search results based on your preferences.

Dr. Manoj V Thomas

THE COSMIC FUTURE

JEWEL JOSEPH
| S8 CSE

What will human race be like in future? The future of human evolution in space will be followed by challenges both similar and different to those that have guided our development for countless generations. Humans are now a well established civilization who knows their exigency, and have found ways to reify it, or else works towards achieving it. Hence a cultural upgradation is not the matter of discussion as it have evolved and as such and will evolve over time as human perspectives change. But what could lead us into the fruition of our idea on another earth and life in there? It is dependent on our astute, annexe to our knowledge and its practicality, as well as how much technology have to change or the capability of our existing knowledge to lead us into our cosmic future.

There are many factors to look into about a life on another planet. How will humans survive in a completely unknown environment? What would happen when humans decide to leave the Earth and explore different planets? Before all of that we need to swing into eventuating meare conjectures that we have acuired till date and scale up the knowledge we hold. The latest and most anticipated venture connected to the red planet is NASA'S Mars exploration program whose countdown is set forth to february 18, 2021.

The goal of the Mars Exploration Program is to explore Mars and to provide a continuous flow of scientific information and discovery through a carefully selected series of robotic orbiters, landers and mobile laboratories interconnected by a high-bandwidth Mars/Earth communications network. The Indian space research center is all set to launch its first manned mission to space, called Gaganyaan project, in December 2021. New technological advancements in space research are certainly promising.

BIG DATA ADVANCES AND SPACE EXPLORATION

Big Data has made big impactful strides and now it has joined the "race for space". While big data analytics had already been put to work in learning about dark matter, via data discovery techniques, statisticians and astrophysicists are applying advanced techniques to unlock the mysteries of universe.

The visual analytics tool, primarily for big data discovery, reporting and interactive

exploration that works in memory was put to test by two researchers, Lars Daldorff and Siavoush Mohammadi who turned to standardized analytical solutions to explore the large amount of solar research project data from the plasma simulations they had conducted from NASA. NASA has made extensive use of Big Data driven analytical engines for their Curiosity Rover project. The underlying technology was an open source program, called Elasticsearch, one that also powers companies like Netflix and Goldman Sachs.

Data management is just one piece of the puzzle, visualization and interpretation are major elements that help in understanding space research data. The surge in development and deployment of CubeSats (miniaturized satellites) and onboarding of faster communication technology has made space exploration slightly less challenging. The real value of geospatial big data lies in powering the world's economy. It can be achieved by combining traditional geospatial techniques with spatial behaviour and create model.

SOFTWARE TO DETECT ASTEROIDS BETTER

NASA has launched a new software that can help amateur astronomers detect new asteroids in an efficient way. Developed in partnership with Planetary Resources Inc of Redmond, Washington, D.C., the desktop software application showed a 15-percent increase in positive identification of new asteroids in our solar system's main belt of asteroids between Mars and Jupiter.

The application is based on an Asteroid Data Hunter-derived algorithm that analyses images for potential asteroids. It is a tool that can be used by amature astronomers and citizen scientists.This new algorithm gives astronomers the ability to use computers to rapidly check the images and determine which objects are suitable for follow up to that leads to finding more asteroids than previously possible.The desktop software application is free and can be used on any basic desktop or laptop computer.The application will tell the user whether a matching asteroid record exists and offer a way to report new findings to the Minor Planet Center, which then confirms and archives new discoveries.

INSTRUMENT FOR FINDING EXTRATERRESTRIAL BACTERIA

Scientists now wants to create a planetary robot that would mimic what biologists do every day in terrestrial laboratories: look through microscopes to visually identify microbial life living in samples.

Although very early in its technology development, the concept would take NASA's hunt for extraterrestrial life to the next level by actually looking for bacteria and archaea in soil and rock samples. So far, NASA's rovers have carried tools and instruments designed to look for biosignatures or signs of life that indicate habitability, not life itself, regardless of how primitive.To find life on another planet, this robotic instrument would concentrate on identifying bacteria and archaea, members of a large group of single-cell microorganisms that thrive in diverse environments and are thought to be the first organisms to appear on Earth about 4 billion years ago. On Earth, one gram of soil typically contains about 40 million bacterial cells and a milliliter of fresh water usually holds 1 million cells. The challenge here is simplifying and automating the process so that samples can be prepared on individual slides, heated, and automatically rotated for viewing under a microscope, which likely would have to be focused many times to see deep within the sample.

ARTIFICIAL INTELLIGENCE AND SPACE RESEARCH

The world is but a mystery and AI could help in finding answers and explore such mysteries. AI has long been a companion of space research agencies like NASA, European Space Agency, CNSA (China National Space Administration) and Space X. The history of AI and space exploration is older than anyone could possibly think. Let's travel back in time of
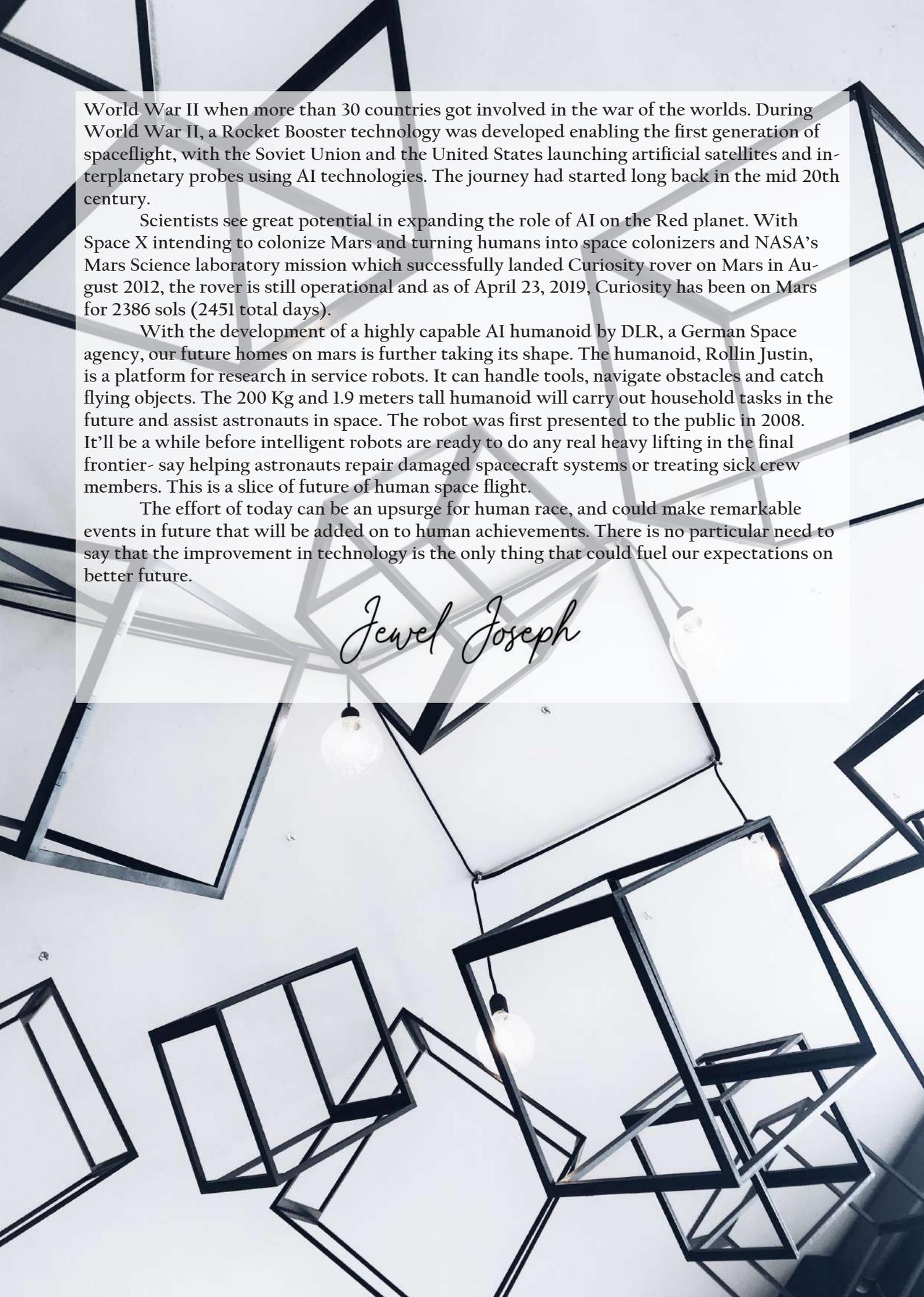
World War II when more than 30 countries got involved in the war of the worlds. During World War II, a Rocket Booster technology was developed enabling the first generation of spaceflight, with the Soviet Union and the United States launching artificial satellites and interplanetary probes using AI technologies. The journey had started long back in the mid 20th century.

Scientists see great potential in expanding the role of AI on the Red planet. With Space X intending to colonize Mars and turning humans into space colonizers and NASA's Mars Science laboratory mission which successfully landed Curiosity rover on Mars in August 2012, the rover is still operational and as of April 23, 2019, Curiosity has been on Mars for 2386 sols (2451 total days).

With the development of a highly capable AI humanoid by DLR, a German Space agency, our future homes on mars is further taking its shape. The humanoid, Rollin Justin, is a platform for research in service robots. It can handle tools, navigate obstacles and catch flying objects. The 200 Kg and 1.9 meters tall humanoid will carry out household tasks in the future and assist astronauts in space. The robot was first presented to the public in 2008. It'll be a while before intelligent robots are ready to do any real heavy lifting in the final frontier- say helping astronauts repair damaged spacecraft systems or treating sick crew members. This is a slice of future of human space flight.

The effort of today can be an upsurge for human race, and could make remarkable events in future that will be added on to human achievements. There is no particular need to say that the improvement in technology is the only thing that could fuel our expectations on better future.

Jewel Joseph

DEPLOY YOUR FIRST DISCORD BOT

EVER WANTED TO BUILD AND SHIP A DISCORD BOT? START HERE

ABHINAV KM
S8 CSE

Everyone seems to be interested in making bots these days, and you can't really blame them. Making bots is fun! However, some concepts that go into getting a bot up and running might not be very intuitive, so I've made this tutorial to go over the basics.

What You Need
1.   Python (we'll be using 3.7 for this tutorial)
2.   discord.py (we'll be writing our bot using this)

I'll continue the tutorial under the assumption that all who've followed so far have some background with programming/have used Python before. If you don't/haven't, no problem! real-python has really good Python tutorials for people of all skill levels.

MAKING SURE EVERYTHING IS UP AND RUNNING

Boot up your terminal/command line and type in the name of the Python installation. Linux users would have something along the lines of python3 , while Windows users might have theirs called *py* fig(a).

Once that's accounted for, we can install discord.py . We'll be using pip for that. Pip is a package management system used to install and manage software packages written in Python fig(b).

```
D:\DESKTOP\CODE\PROJECT\Py\ambu>py --version
Python 3.8.5

D:\DESKTOP\CODE\PROJECT\Py\ambu>
```
fig(a)

```
D:\DESKTOP\CODE\PROJECT\Py\ambu>py -m pip install -U discord.py
Requirement already up-to-date: discord.py in d:\code\python\lib\site-packages (1.5.1)
Requirement already satisfied, skipping upgrade: aiohttp<3.7.0,>=3.6.0 in d:\code\pythor
Requirement already satisfied, skipping upgrade: yarl<1.6.0,>=1.0 in d:\code\python\lib\
)
```
fig(b)

WRITING A BASIC BOT

```
1   from discord.ext import commands
2   from discord import Status, Game
3   from discord.errors import LoginFailure

5   bot = commands.Bot(command_prefix="?")

7   @bot.listen('on_ready')
8   async def bot_is_ready():
9       print(f"Logged in as: {bot.user}")
10      await bot.change_presence(status=Status.online, activity=Game(f"{bot.command_prefix}help"))

12  if __name__ == '__main__':
13      token = getenv('BOT_TOKEN')
14      try:
15          bot.run(token)
16      except LoginFailure:
17          print("Improper Token was passed!")
```

Let's go over what the script does. Since we're creating a bot that can respond to commands, we'll be using the commands. Bot module from discord.ext (Line 1).

- Line 5: We're specifying the bot's prefix to be ?. You can find out more about what exactly can be passed as an argument in the docs.
- Lines 7-10: We're adding a listener that basically tells the bot to listen to an event. There are many events out there for pretty much everything that happens on Discord. You can find them in the docs.
- Line 15: Here, we are running the bot. Anything you need done must come before this.

Before we can see the bot in action, there's one more thing to do: set an environment variable. For obvious reasons, it's not a good idea to leave sensitive information in your script even less so if it's going to be posted somewhere public.

Depending on your OS, the steps would differ:

- For Windows
- For Linux

Remember to name it BOT_TOKEN and set the value to your bot's token.

WriteBots has a nice guide on how you can get the token and create an app if you haven't done so already. Once you're done setting the token, you're ready to run the bot!

**D:\DESKTOP\CODE\PROJECT\Py\ambu>pv kunjan.pv**

Voila, your bot is online!

Now that we have our bot up and running, try typing ?help in chat. Here, ? is whatever you have set as your bot's command prefix.

Right now, this only shows the help command. Let's liven things up a bit with a simple echo command:

```
@bot.command()
async def echo(ctx, *, args):
    await ctx.send(args)
```
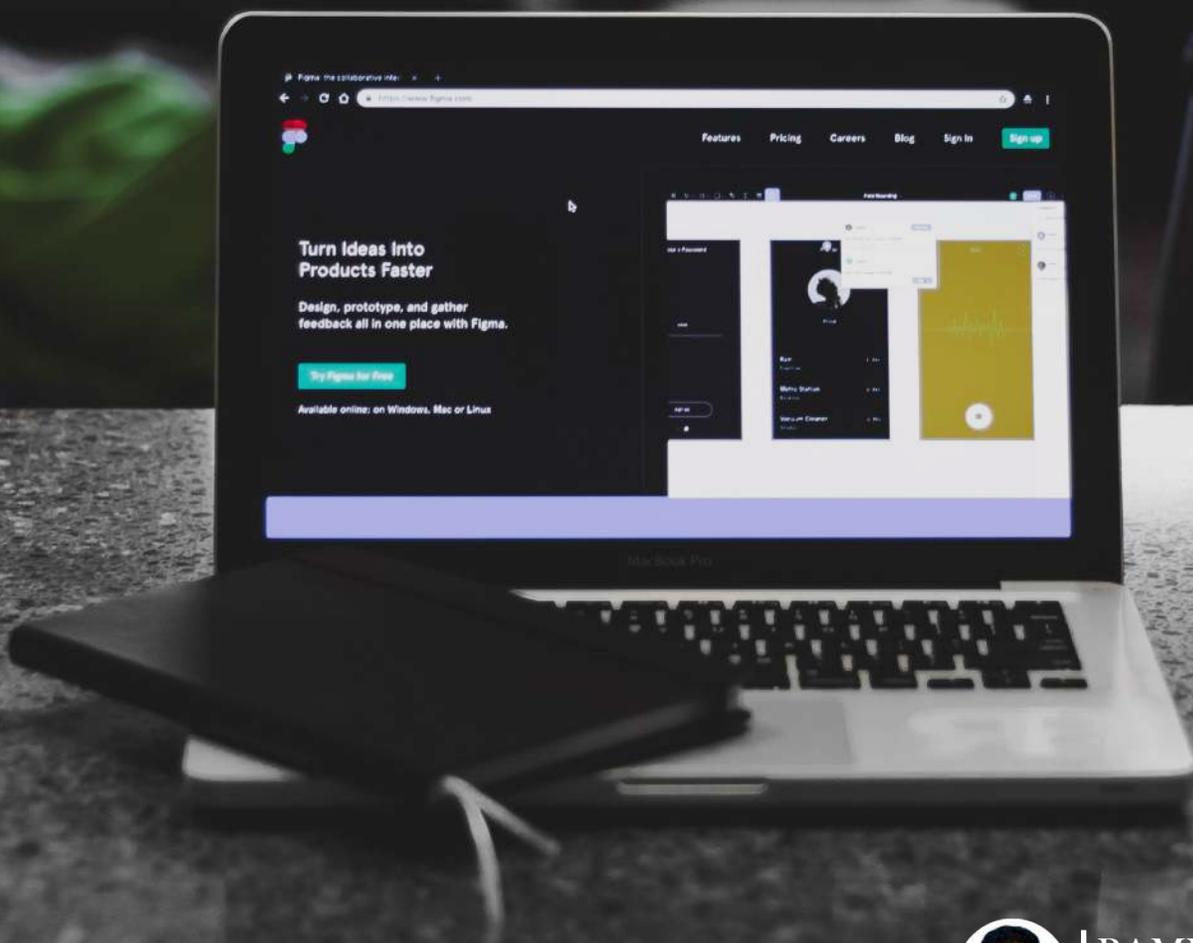
Now try running ?echo Hello World. The bot should be echoing what you just said.
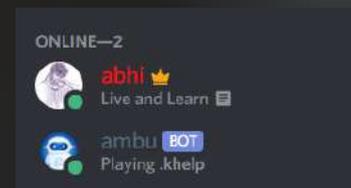
Abhinav KM

WEB DEVELOPMENT OR ANDROID DEVELOPMENT

Which One is Better Career Choice ?

RAMDEV CM
S6 CSE

Web development and Android development are the two most emerging career sectors for developers. Both of these sectors require different skills, have different markets, and most important have diversified usability. While making choice, we need to compare them on the basis of the frameworks required for development steps in learning Web Development and Android development, level of difficulty, career opportunities, salaries, and future trends of android and web development.

1. Understand Difference Between Web Development and Android Development: Web Development involves coding, designing, and operating web applications and websites. A proficient Web Developer is expected to design and develop a user-friendly website with easy navigation. The programming languages needed for web development are HTML, CSS, JavaScript etc. Web development can further be divided into 3 categories:

- Front-End Web Development: It involves designing the webpage i.e. how the website looks, inserting the content as well as specifying different navigation.
- Back End Web Development: It involves dealing with the database and server-side programming. It basically maintains all the data that is being entered and processes the data to display the output to the users.
- Full Stack Web Development: It is a combination of front end development as well as back end development. The full stack developer takes care of the designing of the websites as well as maintaining and processing the data entered.

2. Steps to Learn: Web Development and Android Development
Web Development:
Step 1: Select your field of interest among Front End and Backend Development
Step 2: Front End Developers need to learn the skills required such as

- Creating the layout using HTML (Hypertext Markup Language)
- Styling your web page using different attributes in CSS (Cascading Style Sheet)
- Responsive designs that help web pages to adjust to the device (Bootstrap)
- Version control systems such as Git and GitHub also need to be used as they allow to track changes made and go back to the previous versions.

If you are interested in Backend development then you can learn

- Programming languages such as Java or Python,
- Server-side frameworks such as Node JS and
- SQL and NoSQL Database Systems such as MYSQL, MongoDB where data to be stored, retrieved, and updated.

Step 3: You also need to know about

- HTTP protocols and deployment tools which allow moving files/data to and from the server.
- Learning DevOps would be a great addition as it helps a single team to implement the entire Application Development Lifecycle.

Android Development:
    An android developer specializes in designing applications and android apps for the marketplace.

Step 1: Learn the basics of android development which includes

- Java SDK

- Knowledge of any programming language among Java/Kotlin
- Android UI Design

Step 2: Learn the advanced skills of android development which includes

- Proficient in using Git, REST API
- Knowledge about Database Systems
- Able to design applications around UI, cloud message API, and continuous integration.

3. Difficulty Level

Front-End Web development is slightly easier than Backend Web development because in the backend you need to keep track of the data processed in addition to storing and maintaining the data. Overall web development is comparatively easier than android development – however, it majorly depends on the project you build. For example, developing a web page using HTML and CSS can be considered an easier job in comparison with building a basic android application.

4. Career Opportunities

Similarly, the job opportunities for Web Developers are expected to grow by 25-27% by the year 2024. So, the job market for both technologies is constantly increasing. But since learning web development is comparatively easier than android development, competition for web developers is huge! On the other hand, android developers are relatively lesser in numbers than web developers, so they are slightly in greater demand. Developers skilled in both android and web development would have the highest demand overall because it will open up much more career opportunities for them in both the developing fields. It's better to for people how holds their interest and skills in multiple domain such as DevOps, Site Reliability, Cloud Services etc.

5. Learning Curve

Web development and Android development both offer great and impressive learning skills. Web development gives us knowledge of different languages such as HTML, CSS, JavaScript, and also frameworks such as ReactJS, AngularJS and server-side frameworks like NodeJS. In mobile app development, you can learn about developing an iOS app as well as developing an android app. Here, you get a chance to learn and implement programming languages like Java, Kotlin etc. Learning Git and GitHub and database management systems is a common requirement for any kind of software development process. Be skilled in any programming language. This can help you in building logics and implementing them in the scenario.

6. Salary & Future Advancements

Salary is one of the most seen requirements while deciding on career options. So for a Web developer in India, salary varies from 5 LPA to 27 LPA depending upon the experience and expertise in the development. Salary of android developer also lies somewhere in the same region, it is slightly more for iOS developers as skilled iOS developers are lesser as compared to android developers. You may find lot of communities for helping and supporting, The demand for good and user-friendly mobile and web applications is continuously going to rise in the future and not going to stop any time soon!!

So, as of now, you have got a clear picture of which career option suits you the best! Now, what are you waiting for? Pick up a domain and start learning!!As long as the internet exist, the scope for websites, android and iOS apps never expire.....

Ramdev C.M

UNITY ENGINE
TO BUILD YOUR OWN GAME

Have you ever wondered how games are made? So, did I. A Game is structured form of play, usually undertaken for entertainment or fun, and sometimes used as an educational tool. All video games are made from two elements, pixels and code, and many video games contain hundreds of each. And to make things simpler, we have game engines. Game engines are tools available for game designers to code and plan out a game quickly and efficiently.

A game engine, also known as a game framework, is a software-development environment designed for people to build video games. The core functionality typically provided by a game engine includes a rendering engine ("renderer") for 2D or 3D graphics, a physics engine or collision detection (and collision response), sound, scripting, animation, artificial intelligence, networking, streaming, memory management, threading, localization support, scene graph, and may include video support for cinematics.

Two of the most common and top-level game engines are unity and unreal engine (used for making pubg mobile) – yes pubg was made on unreal and I am talking of making a game in unity. Why? Mostly because unreal is not easy for a beginner to learn due to its complexity. Unity on the other hand is comparatively user friendly.

AKASH AJITH
S4 CSE A

Video games have had many drastic changes over the course of the last 30 years. One of the first major differences that you will notice between games over the course of time is the picture and graphics themselves. Back in the '80s and '90s, the majority of the pictures that we saw on the games were seriously pixelated, having a grainy composure to them, and making the pictures seem difficult to look at, honestly. Now, with the help of CGI and other advanced graphics, these games look more lifelike than ever before, making it seem as though you are literally in the world of the game itself.

Unity is a cross-platform game engine developed by Unity Technologies. The engine can be used to create 2D, 3D, virtual reality, and augmented reality games, as well as simulations and other experiences. The engine has been adopted by industries outside video gaming, such as film, automotive, architecture, engineering and construction.

Several major versions of Unity have been released since its launch. The latest stable version, 2020.2.0, was released in December 2020. As of September 2019, 52% of the top 1,000 mobile games were powered by Unity, as well as 60% of all AR/VR content. Unity game players are located in 195 countries - which is literally every single country on the planet. And there's a reason for Unity's popularity, especially for smaller-scale projects: it's free. The engine's Personal license allows individuals to create commercial games free of charge, on the condition that they haven't earned or received more than $100,000 in revenue or funding derived from the use Unity in the last 12 months. You can download the engine through unity hub available on their official site: https://unity3d.com/get-unity/download

Some of the YouTube tutorials that helped me out were: Brackeys, Thomas brush, Awesome tuts, Jonas Tyroller and Dapper Dino. They upload free tutorials every now and then on YouTube that is worth more than any paid course.

The contents in this article were referred from Wikipedia and from Unity Official Site.

Akash Ajith

UX/UI AND DESIGN ASPECTS

NIHAL MANOJ
S6 CSE

Back in the 1970's, if you wanted to use a computer, you had to use the command line interface. The graphical interfaces used today didn't yet exist commercially. For a computer to work, users needed to communicate via programming language, requiring seemingly infinite lines of code to complete a simple task.

By the 1980's the first graphical user interface (GUI) was developed by computer scientists at Xerox PARC. With this ground breaking innovation, users could now interact with their personal computers by visually submitting commands through icons, buttons, menus, and checkboxes.

Here is where User Experience and User Interface kicks in. User Experience (UX) and User Interface (UI) are some of the most confused and misused terms in this field. A great product experience starts with UX followed by UI. Both are essential for the product's success. UX is focused on the user's journey to solve a problem, UI is focused on a how product's surfaces look and function. Both are essential for the product's success. UX is focused on the user's journey to solve a problem, UI is focused on how a product's surfaces look and function.

User experience was first coined by Don Norman, a cognitive scientist who said that: *"User experience encompasses all aspects of the end-user's interaction with the company, its services, and its products"*.

User experience design is the process of developing and improving the quality of interaction between a user and all facets of a company. UX design is NOT about visuals, it focuses on the overall feel of the experience. While user experience is a conglomeration of tasks focused on the optimization of a product for effective and enjoyable use, user interface design is its complement, the look and feel, the presentation and interactivity of a product.

Consequently, there is no single definition of a good user experience is one that meets a particular user's needs in the specific context where he or she uses the product. A UI designer will think about icons and buttons, typography and color schemes, spacing, imagery, and responsive design. It is responsible for the transference of a product's development, research, content and layout into an attractive, guiding and responsive experience for users.

UI design transfers the brand's strengths and visual assets to a product's interface, making sure the design is consistent, coherent, and aesthetically pleasing. The design process should consider the Why, What and How of product use. The Why involves the users' motivations for adopting a product, whether they relate to a task they wish to perform with it or to values and views which users associate with the ownership and use of the product. The What addresses the things people can do with a product and its functionality. Finally, the How relates to the design of functionality in an accessible and aesthetically pleasant way. UX designers start with the Why before determining the What and then, finally, the How in order to create products that users can form meaningful experiences with. In software designs, you will need to ensure the product's "substance" comes through an existing device and offers a seamless, fluid experience.

Creating UI is very challenging as it has to be intuitive for the end user. Front end knowledge is always a great advantage for a designer, so that he can make sure that every project works can be developed. As with any growing technology, the UI designer's role has evolved as systems, preferences, expectations, and accessibility has demanded more and more from devices.
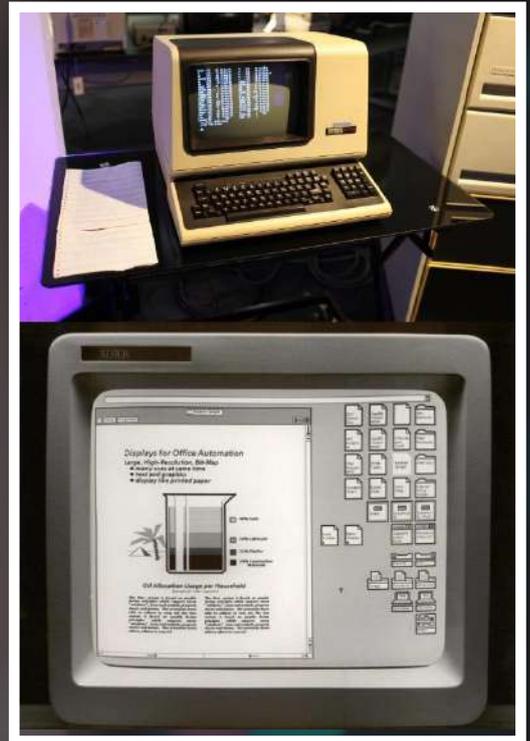
Now UI designers work not just on computer interfaces, but mobile phones, augmented and virtual reality, and even "invisible" or screenless interfaces (also referred to as zero UI) like voice, gesture, and light.

The wide possibilities of technological expansion cannot be merely stated within the scope of this article. Likewise the user experience and user interface designs will have its own wide expansion.

The Why, What and How of UX Design

WHY		WHAT		HOW
Motivations	→	Functionality	→	Accessibility
Values and views		Features		Aesthetics

Nihal Manoj
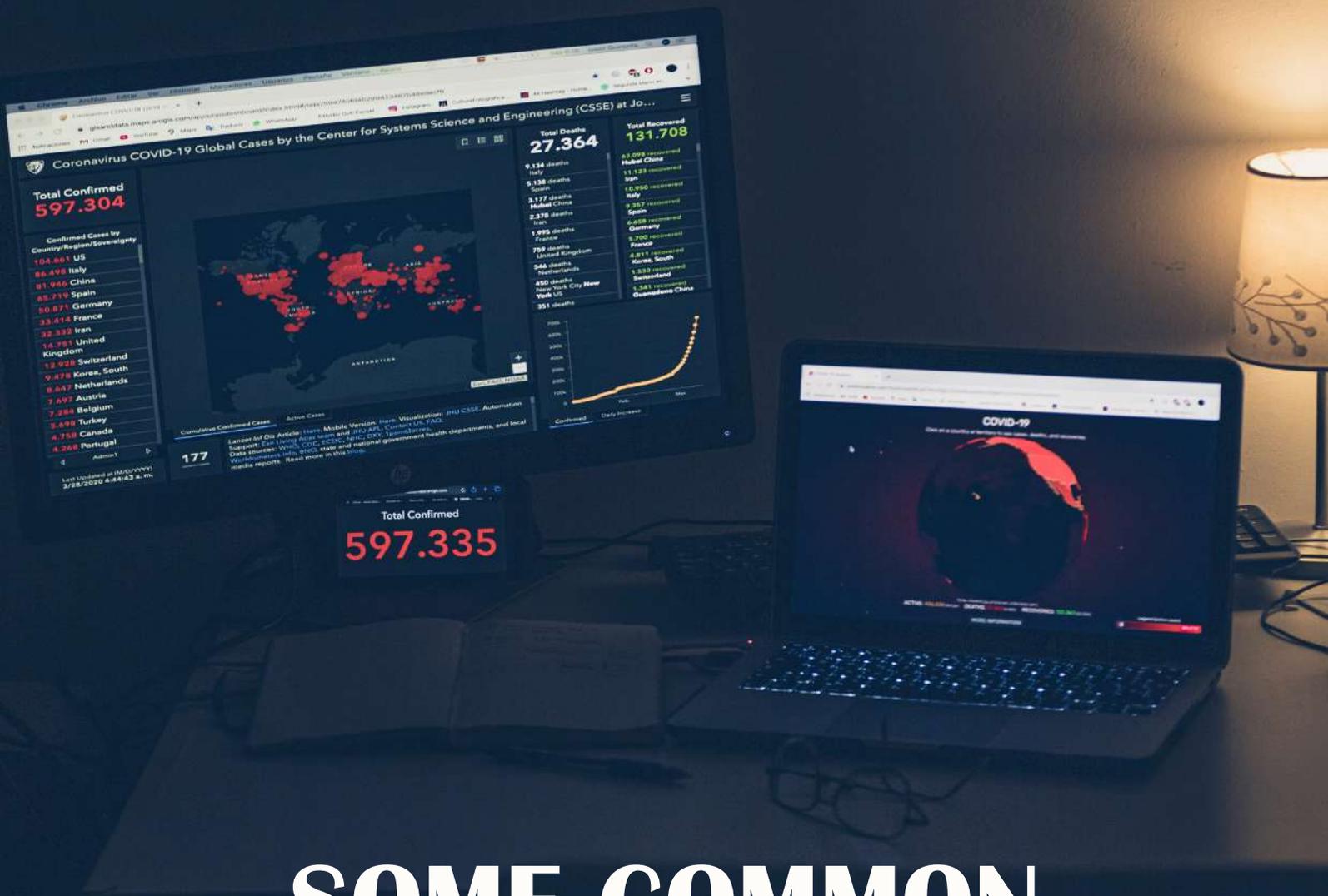
COMPUTER VIRUS

SOME COMMON MISCONCEPTIONS!

JOSHUA MATHEW
S4 CSE A

VIRUS!!

VIRUS!! – This term is still a nightmare to most of the computer users even now as it is! What is and is not a virus? Still most of the PC users are confused at these two points. Let us take a tour through these questions!

WHAT IS A VIRUS?

The term 'computer virus' is not a new one. We have been hearing it since 1980s. The term was first coined by Frederick Cohen. Basically, it's a piece of software created to cause harm or do unethical activities in your system.

WHY PEOPLE ARE SCARED OF VIRUS?

Users are scared of viruses because they can harm the computer by damaging programs, by corrupting or destroying data, by deleting files or by formatting the hard drive. But this fear of virus is one of the major reasons for getting them installed. Most of the threats occur when users who are scared of malware blindly install fake security software. Rogue security software is an example for this. "Rogue security software is a form of malicious software and internet fraud that misleads the users into believing there is a virus on their computer, and to pay money for a fake malware removal tool" (Wikipedia).

WHEN ANTIVIRUS BECOMES THE BIGGEST VIRUS!

As mentioned above, the fear of widespread viruses is also a great advantage for both genuine and fake security software product selling companies. When security threats decrease, the major threats start heading up.

SO WHAT TO DO? DO WE REALLY NEED A THIRD-PARTY ANTIVIRUS?

Windows is the most vulnerable operating system to malware, perhaps because it is the most used desktop and laptop platform around the world. Moreover, viruses get associated with windows' software files as they are in executable format (.exe) & virus can execute and reproduce if its host application is running. The usual solution for this is to use an antivirus. But there is a catch! What do a third-party antivirus do in windows? The best virus makers are the best antivirus makers. So can we trust these antivirus softwares? When installed, it will always first turn the windows defender off to prevent conflicts. This will turn of the windows' default Real Time Protection mode. Otherwise it may cause conflict between windows defender and the third-party antivirus. Once the windows defender is disabled, the installed antivirus can even install malwares on your computer.

So if you're using windows, it's better not to install any antivirus on a windows PC. The best way to prevent virus is to enable the windows' default antivirus program, that is the windows defender and keeping it

updated. It is much better than killing the real time protection by installing any third-party antivirus.

Same is the case if we're using android. In almost all cases, android devices do not need any antivirus to be installed. It's because, by default android permits only the installation of applications from reputed source (Google play). Android has a "play protect" option (which can be seen in play store) to prevent the harmful apps from running on your android device. Also, virus affected files have almost no effect on android expect the malware apps. There is no android virus that can replicate itself and run as on the PC. It's better to keep away the fake security apps from your android device (cleaner apps, virus scanner apps, and the so-called ad based applocks etc.) as they have nothing to do with your device's security. Most of them are spywares.

Same is the case for Linux. The main reason that you don't need antivirus on Linux is that only a least number of virus do exist in Linux. Also, unlike we do on windows, the software programs that we install are mainly from Linux's own software repositories. Also don't run the commands that you don't trust. So, it's better to keep the applications and OS up to date rather than running before the fake security applications.

Joshua Mathew

THE UNKNOWNYMOUS

Truth about the dark web

UVAIS HASSAN
S4 CSE A

We are a generation who had to grow up side-by-side with a new "companion" - technology. Our life is inseparably linked with it. The Internet is a huge part of this new companion of ours. We can't even think of a day where we don't connect to the internet in some way. We are young and we are already well-versed in using this technology. It is us who help our elders to use internet. We shop online, we learn online, we talk online, we work online - the list goes on. But do we know everything there is to know about the Internet?

Almost everybody who uses the internet will have heard of something called the Dark Web. I'll go on and say that we even keep a nefarious image of the Dark Web in our minds, and it's deservedly so, right? I mean, we hear news about illegal practice happening in the Dark Web, we hear that it's impossible to find a user's identity in the Dark Web and we hear that the Dark Web can't be accessed through Google and that special tools are needed to do so. Who can blame us for thinking that the Dark Web is really bad and we need to stay away from it? But like everything in our life, we have the responsibility to try and understand what certain something is before we judge it prematurely and not make an effort to learn more about it.

So, what is Dark Web? It is a subset of Deep Web, a part of the Internet that isn't indexed by search engines. This means it is not visible to search engines and we require a special browser called The Onion Router (or simply Tor) to access it. Deep Web is enormously large. But estimates say that the Dark Web spans over only about 5% of the Internet. So it is small. Dark web offers us anonymity and a way to bypass internet censorship, but it is commonly associated with being a marketplace for buying and selling illegal goods.

We need Tor to access the Dark Web. Why? What Tor does special is that it re-routes our connection requests several times before reaching their destination. For example, if a user in Kochi is trying to connect to a website in Jakarta, Tor routes the request from Kochi to Sao Paulo to Munich to Sydney to Tokyo to, finally, Jakarta. So websites and our Internet Service Provider (ISP) won't be able to pinpoint our exact location.

Dark Web is associated with illegal activities. Arms trafficking, drug dealing, sharing of exploitative content, selling leaked passwords and usernames, websites supporting extremist views are some to name a few. The anonymity offered by Dark Web makes it a safe haven for such malicious activities.

So the Dark Web is illegal? No. It's not illegal to visit this "dark" side of the Internet in many countries. Even in India, it is fine to surf the Dark Web since there are no written laws to prohibit us from doing so. Dark Web also hosts many good websites for online fan communities, Facebook-like social media platforms, etc. What Dark Web offers us is total anonymity. It is upto us to use it in the right way. We have to be aware of the dark side and refrain ourselves from involving in any malicious activity. Accessing the Dark Web is not illegal, nor is it legal. But involvement in criminal activities is illegal and will surely hand us punishment.

What do we take away from all this? We have to know that the Dark Web websites are actually not that different from our usual websites. The difference is in how secretly it is hosted and the means of access to it. Dark Web itself is not illegal, but malicious activities are. But the most important point is that we have to try and learn more about anything before we judge it for only what we hear from others. As a young generation, it is our responsibility to be aware of everything around us and it is us who have to share this knowledge with others.

Uvais Hassan

ROBOT PROOF YOUR CAREER

FUTURIUM

RANJUL ARUMADI
S4 CSE B

Yes, that's right: "robot proofing" and not "waterproofing" (lame robotic laugh follows). Our Zee generation is being confronted with a scary question mark, it's a huge one that goes like "Is my career under the risk of AI invasion ?! ". The AI which came under the banner of "making life easy" can take up our jobs too! , well thank you for your attention but don't be too worried.

Remember the Industrial Revolution? , It was known as the "Gilded age". It was when the horrible problems of urbanization came up and started getting out of hand. Cities were being overpopulated, and neighborhoods became dirty and unsafe. It was even worse for the workers. This very revolution came out with an idea of "let the machine do the hard work while you sit back and supervise". To point out, this machine revolution had its problems but it helped the world in a good way too.

Now lets put that away. AI is a concept that is bugging people with questions and worries. As Eliezer Yudkowsky puts it: "By far, the greatest danger of Artificial Intelligence is that people conclude too early that they understand it."
Many online platforms and even the governments like that of Finland is giving out free courses on AI to demystify it altogether.AI or any other form of intelligence will lack many qualities that are pure gifts safe in the hands of homo sapiens, say for example qualities and skills like empathy, creative thinking, imagination, vision, etc. So the analysis of jobs and skillsets that AI cant take-over can be investigated by going through these traits.

A team of researchers from the University of Oxford and Yale University received 352 responses to a survey they'd sent out to over 1,600 academics who had presented at conferences on machine learning and neural information processing in 2015. They conclude that there's a 50 percent chance robots will be better than us at folding laundry in about six years, followed very soon by AI writing computer games. If you drive a truck for a living, there's a slim chance you'll be competing with automated drivers in just over five years, but you can be fairly sure they'll give up the road to driverless trucks in just over 20 years. And frighteningly the experts think there's a slim chance that machines will be the ones developing AI within half a century, and odds-on they'll be running the show in about 80 years.
Here are 10 jobs which experts believe can never be replaced by robots or AI's:
1.	Human Resource Managers
2.	Sales Managers
3.	Marketing Managers
4.	Public Relations Managers
5.	Chief Executives
6.	Event Planners
7.	Writers
8.	Software Developers
9.	Editors
10.	Graphic Designing
And here are 10 jobs that AI imp will be commanding over soon.
1.	Telemarketing
2.	Bookkeeping Clerks
3.	Compensation and Benefits Managers
4.	Receptionists
5.	Couriers
6.	Proofreaders
7.	Computer Support Specialists
8.	Market Research Analysts
9.	Advertising Salespeople
10.	Retail Salespeople
And finally, to the question - "whether AI will eat you up or not ?", well let us say that AI won't be reaching that maturity any time soon (hopefully).

RANJUL ARUMADI

UI AND UX

DAVIS SABU
S8 CSE

Any modern software application or professional website is built using UX (user experience) design principles. The field focuses on three main areas that include user retention, credibility, and ease-of-access. The goal of a UX designer is to ensure the customer has a positive experience and doesn't become frustrated while using the app or website. A good interface with a system that is aesthetic and user friendly is the prime requirement of today's web industry. Around 4 billion internet users with a whopping of 1.94 billion websites and 4 million apps around the world, the UX/UI sector is blossoming like never before. As a result, the number of UI UX designing jobs and demand of UI/UX designers are escalating to the skies. Hence, no matter what business, UX/UI has now become a crucial part.

The main job objective of User Interface (UI) and User Experience (UX) designer is to build an end product which is simple to operate and appealing to eye. UI and UX designing are two different functions, which may or may not be performed by the same individual.

The main focus of UI design is n the visual aspect of a product. It mostly deals with the design, color and placement of various elements of the websites to make the website design look fresh and pleasing. Whereas, the main focus of UX is on usability, experience and functionality of those designs. It aims at understanding the minds of the users and build the designs accordingly.
A UI/UX designer has to frequently think from more than one perspectives for a design. While the design should be aesthetically pleasing to the eye, which is important to the business stakehold

ers, it should also take into account how the user or consumer will feel when using or consuming it. A good looking mobile app may be very difficult to use and functional design may not be very appealing to the eye.

Important skills required:
- Ability to understand what business expects from a design.
- Good creative visualization.
- Excellent command over relvant tools for wireframing and graphic design.
- An eye for detail.
- Ability to think and critique the design like an end user.
- Good analytical skills.
- Basic programming skills are useful but are not mandatory.

Now that designing jobs are increasing day by day, so are their salaries. According to Glassdoor, the average base pay for UI/UX designers is Rs.6,73,247/- per annum for freshers. Numerous companies including Microsoft, Cognizant, Tata, and IBM who hire UX/UI designers who pay from INR 55,000 to INR 1,20,000/- per month. Also, qualified UX/UI designers can list themselves on various freelancing websites and work with foreign clients and be paid in a stronger currency.

Thus, the combination of the potential of designing jobs and their handsome salaries show significant room for growth in the UX/UI industry. If you are aiming for a career in this area, make sure you are strong at your design foundations. These include knowing basic designing software like Axure, Figma, XD and Illustrator.

Davis Sabu

Software Development Cell

T echnical skill is a mastery of complexity while creativity is a mastery of simplicity. Software development takes immense intellectual effort. The faculty members and the students of CSE department put Vimal Jyothi Engineering College into the spotlight by developing different softwares that are given below.
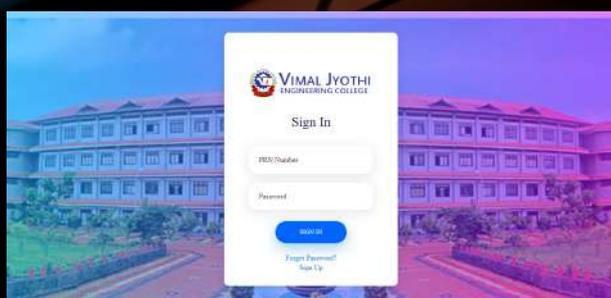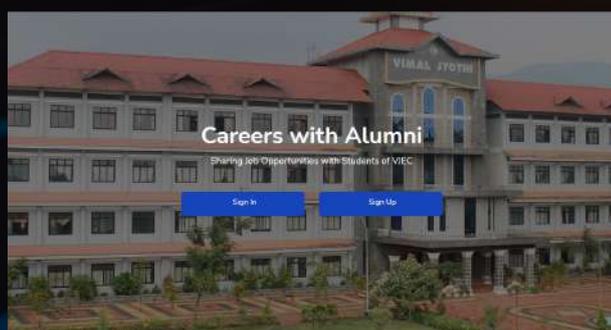
1. SYNC VJ

It is an android application to manage contact information of the staff in Vimal Jyothi Institution.
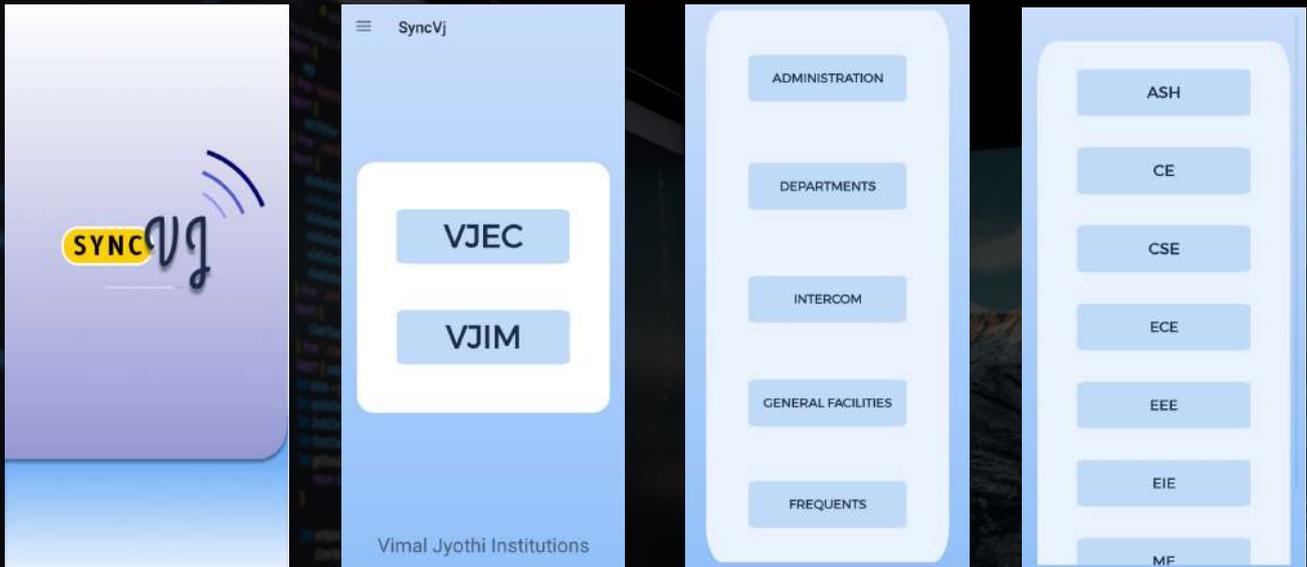

2. Students Careers Portal

It is a web-based application to post career oppurtunities with discussions forums for the students and alumni of Vimal Jyothi Engineering College.

3. Census Data Collection and Analysis

It is a web-based application for the Archdiocese of Tellicherry. During the first phase of the web app project, we collected data of around 2.4 lakh persons from 56+ families under the Archdiocese of Tellicherry spread across Kannur and Kasargod districts.
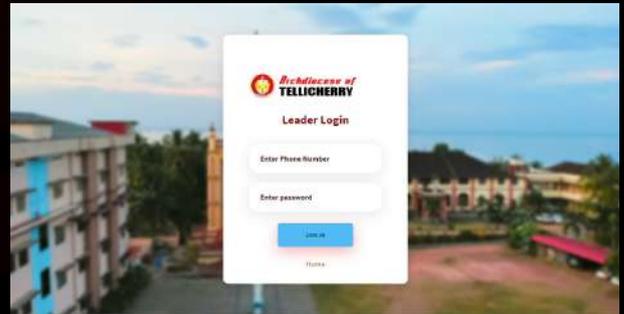
4. Covid Buster

It is an Automatic QR code-based thermal scan system for checking the temperature of VJEC students.

THE TEAM BEHIND

Faculty Coordinators

Dr. Jeethu V Devasia
HOD CSE

Ms. Vidhya SS
Asst. Prof, CSE

Ms. Akhila Mathew
Asst. Prof, CSE

Ms. Divya B
Assoc. Prof, CSE

Students Participated

Rohith P.R
1. Sync VJ

Akshay Mohan
1. Sync VJ

Agin Chandran
1. Sync VJ

Ashly Ranjith
1. Covid Buster

Josekutty George
1. Careers portal
2. Census data col.
3. Covid Buster

Robin Jose
1. Covid Buster

Aromal Joseph KM
1. Careers portal
2. Census data col.
3. Covid Buster

Jewel Joseph
1. Careers portal
2. Census data col.

Robin Jose
1. Careers portal

Anamika Prasanth
1. Careers portal

Ankitha K
1. Careers portal

Ramdev CM
1. Sync VJ
2. Censu data col.

Nihal Manoj
1. Sync VJ
2. Censu data col.

Sreevedh Hareesh
1. Sync VJ

Joshua Mathew
1. Sync VJ
2. Censu data col.

Snigdha Sathyanathan
1. Careers portal
2. Census data col.

Aneesha S
1. Census data col.
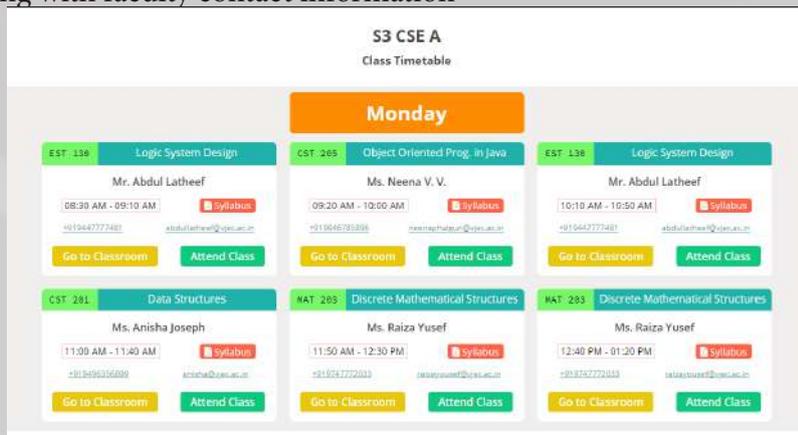
Ranjul Arumadi
1. Census data col.

Akash Ajith
1. Census data col.

Kiran Valsalan Nair
1. Careers Portal

- **Class timetable website with useful links**

  Simple website for class timetable. Contain links for Google Meet classes and Google Classrooms, along with faculty contact information
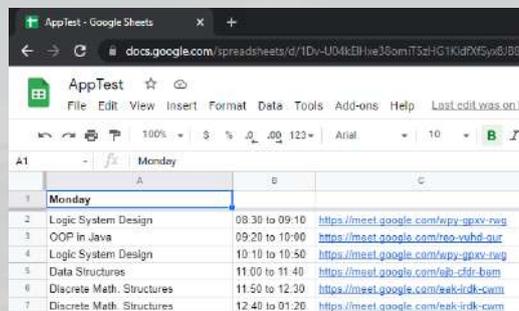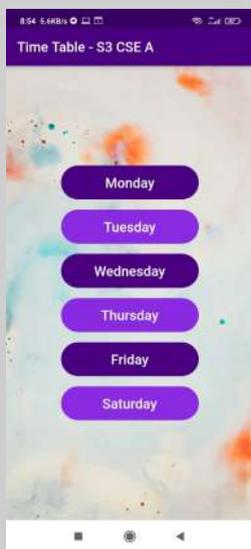

Developed by,
Uvais Hassan
S4 CSE A

- **TimeTable App - Linked with Sheets**

  This android application retrieves data from google sheets and displays it as a timetable .

Developed by,
Joshua Mathew
S4 CSE A

- **TimeTable App**

  Class Timetable is developed using Unity Engine, along with firebase realtime database.

Developed by,
Akash Ajith
S4 CSE A

AUTHORISING THE FINGER

NIPUN DAS
S1 CSE A

OPTICAL AND CAPACITIVE FINGERPRINT SCANNING

Fingerprint Authentication is the act of verifying an individual's identity based on **o**ne or more of their fingerprints. The concept has been leveraged for decades across various efforts including digital identity, criminal justice, financial services, and border protections.

HOW DOES A FINGERPRINT OPTICAL SCANNER WORK?

Optical fingerprint sensors have been in the tech field for a while. The most common example is in smartphones having on-screen fingerprint authentication. The way an optical scanner works is by shining a bright light over your fingerprint and taking a digital photo. The light-sensitive microchip makes the digital image by looking at the ridges and valleys of the fingerprint, turning them into 1's and 0's, and creates the user's own personal code. Just like smartphone cameras, these sensors have a finite resolution. The higher the resolution, the finer details the sensor can recognize about your finger, increasing the level of security.

HOW DOES A FINGERPRINT CAPACITIVE SCANNER WORK?

In today's world, capacitive fingerprint scanners are more common and found on phones. Similar to the capacitive touchscreen, it measures your finger by using human conductivity, creating an electrostatic field, and creating a digital image based on the electrostatic field. The capacitive fingerprint scanner uses tiny capacitor array circuits that track the detail of a fingerprint. It uses the ridges of your fingerprint that is placed over the conductive plates which changes the charge stored in the capacitor, while the air gaps leave the charge on the capacitor unchanged. An operational amplifier integrator circuit tracks these changes that can then be recorded by an analog to digital converter, where this digital data can be analyzed.

BENEFITS OF FINGERPRINT BIOMETRICS

- Considered one of the most secure authentication methods.

- Much harder to fake than identity cards.

- Convenient and easy for the user.

- Can't be guessed, forgotten, or misplaced.

- Most accepted and mature biometric authentication method

Nipun Das

ETHICAL HACKING
AN
INTRODUCTION

AALAP RAGESH
S4 CSE A

INTRODUCTION

Hacking is the process of finding vulnerabilities in a system and using these found vulnerabilities to gain unauthorized access into the system to perform malicious activities ranging from deleting system files to stealing sensitive information. Hacking is illegal and can lead to extreme consequences if you are caught in the act. People have been sentenced to years of imprisonment because of hacking. Nonetheless, hacking can be legal if done with permission. Computer experts are often hired by companies to hack into their system to find vulnerabilities and weak endpoints so that they can be fixed. This is done as a precautionary measure against legitimate hackers who have malicious intent. Such people, who hack into a system with permission, without any malicious intent, are known as ethical hackers and the process is known as ethical hacking.

TYPES OF HACKERS

1. White Hat Hacker

It is another name for an Ethical Hacker. They hack into a system with prior permission to find out vulnerabilities so that they can be fixed before a person with malicious intent finds them

2. Black Hat Hacker

They are also known as crackers, who hack in order to gain unauthorized access to a system & harm its operations or steal sensitive information. It's always illegal because of its malicious intent which includes stealing corporate data, violating privacy, damaging the system etc.

3. Gray Hat Hacker

They are a blend of both black hat and white hat hackers. They mostly hack for fun and exploit a security weakness in a computer system or network without the owner's permission or knowledge. Their intent is to bring the weakness to the attention of the owners & earning some bug bounty.

4. Suicide Hacker

A suicide hacker is a person who works with the intent to bring down major corporations and infrastructure. These kinds of hackers are not scared of the consequences of their actions as they mostly work with a vengeance in their mind. These people are also known as hacktivists

HOW TO BECOME A HACKER

- Learn to use Linux
- Learn about Computer Science and Coding.
- Learn about Cryptography –Hashing/Salting.
- Don't be a script kiddie!!.
- Don't look for a quick way.
- Have a good hold on Networking Concepts.v

HACKING PROCESS

The Hacking process has five phases :
- Reconnaissance
- Scanning
- Access
- Maintaining access
- Clearing tracks

JOBS AS A HACKER

- Threat Modeller
- Application Security Engineer
- Vulnerability Assessment
- Vulnerability Management
- Devsecops Engineer
- Governance
- Design Review
- Secure Code Reviewer

CONCLUSION

The word "hacker" carries weight. People strongly disagree as to what a hacker is. Hacking may be defined as legal or illegal, ethical or unethical. The media's portrayal of hacking has boosted one version of discourse. The conflict between discourses is important for our understanding of computer hacking subculture. Also, the outcome of the conflict may prove critical in deciding whether or not our society and institutions remain in the control of a small elite or we move towards a radical democracy (a.k.a. socialism). It is my hope that the hackers of the future will move beyond their limitations (through inclusion of women, a deeper politicization, and more concern for recruitment and teaching) and become hacktivists. They need to work with non-technologically based and technology-borrowing social movements (like most modern social movements who use technology to do their task more easily) in the struggle for global justice. Otherwise the non-technologically based social movements may face difficulty continuing to resist as their power base is eroded while that of the new technopower elite is growing – and the fictionesque cyberpunk-1984 world may become real.

AALAP RAGESH

QUANTUM
COMPUTING

A QUANTUM COMPUTING EXPLORATION

ABHINAV VISWANATH
S1 CSE B

One Sentence Definition:

A quantum computer is a type of computer that uses quantum mechanics so that it can perform certain kinds of computation more efficiently than a regular computer can.

Difference from conventional computers:

Conventional ones use BITS, i.e. 0 & 1 to represent states(like on & off switch) to perform calculations & take decisions whereas Quantum computers use QUBITS.

What's a " QUBIT"?:

A quantum computer uses qubits to represent states. Each qubit can not only be set to 1 or 0, but it can also be set to 1 and 0. It may not seem intuitive but that's how stuff works at the quantum level (where the traditional laws of physics no longer apply).

Example Situation:

Imagine a sphere. A bit can be at either of the 2 poles of it whereas a qubit can exist at any point on the sphere. Wow! That's incredible. If bits can do so much to transform the world, just imagine how much information can be stored and processed by qubits. Also, it uses less energy.

Buts:

Quantum computers are not intended to replace classical computers, they're expected to be a different tool which can help us solve complex problems that are beyond the capabilities of a classical computer. The power of the device in our pocket is amazing compared to the tech we had 50 years ago. But what if there are problems that classical computers & mobile phones can't solve. So here comes the future tech to the rescue. Even though today's smartphones have the computing power of 50 year old military computer having the size of an entire room, transistors have been made as small as an atom. There are situations when their computational power is of little help/helpless. That's when quantum computing comes to the rescue. We'll be able to create processors that are a million or more times faster than the ones in existence today. In fact, quantum computers can outperform classical supercomputers in terms of energy efficiency. Everything sounds great, it's super powerful, it's energy efficient, but the challenge is that quantum computing is incredibly complex. The computing industry is racing to make quantum computers work on a commercial scale as we have reached the limits of energy efficiency using classical methods.

According to the semiconductor Industry Association, we'll no longer have the capability to power all of the machines around the world by 2040. So, finding a way to make quantum computers work on a commercial scale will be totally worth it. This article covers just a small part of the introduction to quantum computing. There's a mountain of knowledge left to be covered. I'm limited by my knowledge and the number of pages available. Hope you gain some new information from this.

Abhinav Viswanath

Privacy:

WhatsApp vs Signal

Aurang V
S1 CSE C

Privacy is one of the most important thing in today's cyber world. Most of the people are concerned with it in their day to-day life. Applications help us in almost everything required in are daily life like entertainment, marketing, communication, purchasing etc.Therefore privacy is the most important concern in today's cyber world. Almost all the applications are giving the most secured privacy to their customers, but some of them are not much concerned about it.

WhatsApp!! it is one of the most popular application used for communication through chatting, video calling and also for many other purposes. WhatsApp says that it is an end to end encryption application, but in someways whatsapp can access our photo and files.and the new privacy policy of the whatsapp makes people more panic.so Most of them are going to signal

The impact of the new privacy policy of WhatsApp made them loose most of their customers. Many of them switched to signal application which is a highly protected application. It's first priority is to provide more privacy for their customers. Signal is an open source software while whatsapp needs money for functioning. It has an end to end encrypted protocol,and is very safe as compared to WhatsApp. So we can clearly say that signal is one of the most privacy protected application.

Most of the people among us doesn't know about the end to end encryption. It tells us that the platform we use cannot access private messages or media, for storing them on their server. Signal application provides this facility. Even though Whatsapp also provides an end-to-end encryption for messages, it can also access other private informations like IP address, group details and status. So it makes us more clear that signal provides more privacy for the people.

So security in signal is better than WhatsApp. Both uses an encryption protocol, but signal application is an open source ,therefore it can be examined for vulnerabilities by security researches. So after the new privacy policy of WhatsApp, The most privacy protected user friendly application is signal.If signal may give more features through updates ,it will be a popular application.

*Aurang. V*

CAREERS WITH ALUMNI

ANKITHA K
S6 CSE

We have created a website which serves as a common platform for the alumni as well as the students of Vimal Jyothi Engineering College to post career opportunities and other relevant discussions and also to minimize the gap between industry and students. This is a better platform for the VJEC students and alumni to grab hold of new job opportunities and also be involved in various projects and discussions.

The front end was designed using HTML and CSS and the back end was developed using PHP and JavaScript. The website allows students and alumni to register and login to the site. Users can post jobs and also seek for new jobs as well as everyone can participate in general discussions. There is an option to have a discussion on projects and works with which alumni can help out each other or encourage students to take part in projects. Students or alumni can search for jobs based on CGPA or experience. There is a feature called referral, by which alumni or students can directly get a mail about the job postings. This is the best interactive site to keep in touch with everyone and do some help to others to build their career, exclusively for vjecians.

Ankitha K
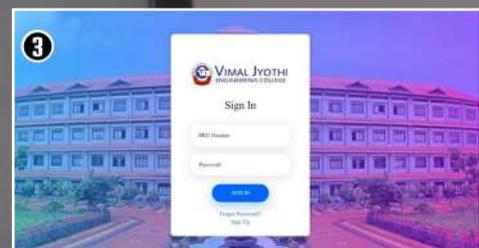
TECHNOLOGICAL

IMPACTS ON LOCKDOWN

INTRODUCTION

Coronavirus, formerly known as 2019-nCoV, has caused disruption around the globe. It was discovered in December 2019, with a report stating that people were suffering from fever and breathing problems after doing their shopping in a seafood marketplace in Wuhan, Hubei, China. In less than a month, the cases of 2019-nCoV infection spread to several countries (Thailand, Japan, Vietnam, and Singapore) and districts (Hong Kong, Taiwan, and Macau). With an increasing number of infected people and deaths daily, most countries in the world have started to take this outbreak seriously. Almost all sectors, such as small and large companies, healthcare, and education, have been forced to electronically convert their services. Schools have been closed and the medium of learning has been converted to distance learning. Companies suspended employees from working in offices and implemented a work-from-home policy. The airline industry has enforced limitations in both international and domestic flights.

ANAMIKA PRASANTH

S6 CSE

When a new pandemic strikes, the first question on everybody's mind is if there's a drug to cure it or a vaccine to prevent it. The world is now desperate to find ways to slow the spread of the coronavirus and to find an effective treatment. Technology is becoming an enabler to make the process faster. AI is playing important role in suggesting components of a vaccine by understanding viral protein structures, and helping medical researchers scour tens of heaps of relevant research papers at an unprecedented pace. The wireless thermometer guns and other similar infrared body temperature measuring devices have become the most important medical equipment that are being used at checkpoints of offices, airports, hotels, hospitals, train stations, shops, and other public places. These technologies assist in measuring the body temperature from a distance hence following covid protocol 'social distancing'.

ONLINE EDUCATION

The lockdown has resulted in most people taking to the internet and internet-based services to communicate, interact, and continue with their job responsibilities from home. Internet services have seen rises in usage from 40 % to 100 %, compared to pre-lockdown levels. Education is another domain in which there a dramatic shift to the online mode of transacting. Since the beginning of the lockdown, schools, colleges, and universities around the world have shifted their classes to video conferencing platforms like Zoom and Google Meet. In response to significant demand, many online learning platforms are offering free access to their services, including platforms like BYJU'S.Also asynchronous platforms like edX and Coursera have also seen

an increase in enrolments. There are, however, challenges to overcome. Some students without reliable internet access and/or technology struggle to participate in digital learning; this gap is seen across countries and between income brackets within countries. Many countries and states provided free laptops, TV, internet connection and classe in TV for poor children who could'nt attend the classes. For those who do have access to the right technology, there is evidence that learning online can be more effective in a number of ways. Nevertheless, the effectiveness of online learning varies amongst age groups.

WORK FROM HOME SYSTEM

While some industries have experienced a downturn due to the pandemic, others have experienced a huge increase in demand as a result. Also this has affected some of the workers in positive way while it is negative for others. The COVID-19 crisis has made many of us shift our perspectives and reorganize our lives, and one of the most important changes that has happened is the fact that more people are working home from ever, and there is much

many people are simply going to continue working from home once the crisis winds down. Before high speed internet connections and affordable personal computers, working from home looked at lot different. While technology has made it easier to work from home, it has also blurred the line between our personal and professional lives. Most work from home employees report higher productivity and reduced stress levels. Also they can access a much larger labor force ith a deeper pool of talent and highly specialized skills.

ADVANCEMENT OF TECHNOLOGY IN THE HEALTH AND MEDICAL FIELD

AI is becoming a vital part of healthcare today. AI-based data analytics and predictive modeling are enabling medical professionals to understand more about a lot of diseases. Using AI platforms, it has become easier for researchers to quickly find relevant studies that can potentially lead to new insights or approaches to address the COVID-19 outbreak. Biochips are developed that can do a complete microbial scan in a couple of hours. Even the need for identifying mutations that make microbes antibiotic-resistant is also there. Soon portable digital tools are going to take position in the diagnostic centers for accurate and speedy analysis. The days are not far when health care will be delivered in a real-world mixed with analysis. The days are not far when health care will be delivered in a real-world mixed with the virtual world. Web-based portals will be in use to analyze and monitor the patients' vital signs. Electronic gadgets are getting popularity among people that can track blood pressure, activity, and other factors as self-care tools.
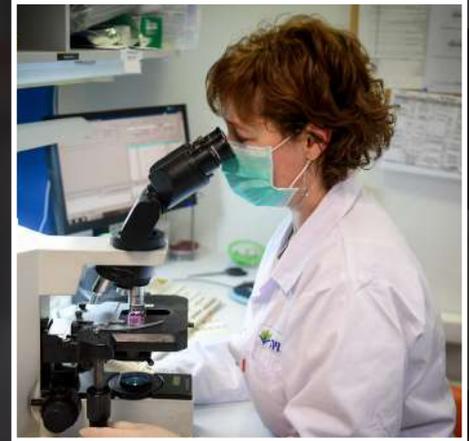
E-COMMERCE AND LOCKDOWN

Social distancing, lockdown, etc. during the pandemic have led the consumers to incline towards online shopping, resulting in spikes in e-commerce. Small scale producers, sellers, and consumers in developing countries also have started to adopt the policies of e-commerce to alleviate the loss during the time. The government has also taken a lot of measures to encourage digital transactions, mobile money transfer as well as e-commerce. This has emphasized the need for efficient and affordable information and communication technology services along with dig ital tools for easy money transfer to keep the e-commerce in the right track. With the adoption of ML and AI technologies the slots ere fixed for the area to deliver the products and the routes mapping were done for fast and safe delivery of the products. Apart from having the safe shopping and access to the essential product in the COVID 19 lockdown situation, E commerce is also known for befitting the farmers, by establishing the block chain technology in which they used to bypass the intermediaries and sell their products directly to the wholesale buyers.

A PEEP TO OUR 'PRIVACY' WHEN WORLD IS DIGITALIZING

When we switch on to a digital world in all the aspects, the term 'security' should not be neglected. Network security is one of the most important aspects to consider when working over the internet, LAN or other method, no matter how small or big your Security is a tradeoff, a balancing act between attacker and defender. Unfortunately, that balance is never static. While there is no network that is immune to attacks, a stable and efficient network security system is essential to protecting client data. A good

network security system helps business reduce the risk of falling victim of data theft and sabotage. Getting connected to the internet means that you will receive lots of traffic. Huge traffic can cause stability problems and may lead to vulnerabilities in the system. Network security promotes reliability of your network by preventing lagging and down-times through continuous monitoring of any suspicious transaction that can sabotage the system. When you think you have a solution to a privacy related problem, there are people on the other end trying to figure out how to invade your personal space. We use many sites were we are prompted to enter our personal details. So if we are vigilant and have right education on all these attacks, definitely we can survive all these issues.

Anamika Prasanth

ISABEL SIEH

"Coding is what powers technology today, and is what will power technology in the future"

A 14 year old philipino girl Isabel Sieh,a self taught programmer who learned programming at the age of 10. Her love for coding was discovered by one of her teachers. He noticed that Isabel excelled in math therefore encouraged her how to code.She used free online courses of codeAcademy to build her potential.Isabel Sieh proves to be an inspiration to the younger generation that it's never too early, nor too late to learn new things. When she was learning she wanted to start a club.With the help of her teacher she started a club with 15 girls signed up with her for her club .

"Girls Will Code is a community that encourages girls to participate in activities related to coding, programming, robotics and engineering. Through this platform, girls can share ideas about their personal projects, promote interest in programming and robotics in a fun learning environment."

While being CEO of girls will code to keep up with her studies was a great task.They were working with Google and Accenture to train girls 10-16 to be Ambassadors for Girls Will Code, so they can help build a community, rather than piling all the teaching on herself.At the age of 12 she started teaching coding at a public school in Antipolo.She lacked equipments to teach children but instead of quitting it urged her to develop her own offline kits .In 2016 she was invited to give a talk at the Rappler Social Good summit 2016 and for the 4th Python Conference alongside with another young Filipino programmer Austin Imperial.

She has been invited from several companies including one from the Google Developers Group in the Philippines. An invitation was sent to her to talk at a Google coding event in the office of Google in the Philippines and was also asked to visit the offices of the said company in California.Many companies were ready to help Isabel with her goals. One of them is Accenture.

At the age of 10 Isabel started learning the basics of HTML and javascript through online courses.Sieh had studied coding even before her parents hired her a tutor to enhance her skills further. At the age of 12, she already knows three programming languages and she also conducted basic coding using the program Scratch Jr. to a group of 10 kids from Bagong Nayon 2 Elementary School.

"When you're in a community, it's easier," Thus she started the club GIRLS WILL CODE .At the age of 14 she is teaching the world it's never too late or too early to learn new things.

Aysha Nahadha
S4 CSE B

John McCarthy

John McCarthy, born on September 4, 1927 was an American computer scientist. McCarthy is considered as the one who coined the term "artificial intelligence", and also as one of the founders of the discipline of artificial intelligence. McCarthy did lot of pioneering research in the mathematical logic for artificial intelligence. He received a Ph.D. in mathematics from Princeton University, USA in 1951. In 1962, McCarthy became a full professor at Stanford University, where he remained until his retirement in 2000.

He developed the Lisp programming language in 1958, which became the programming language of choice for AI applications after its publication in 1960. He also contributed significantly to the design of the ALGOL programming language. In 1959, he introduced the use of recursion and conditional expressions, which subsequently became part of ALGOL. Around 1959, he invented the "garbage collection" mechanisms in the Lisp programming language. He was instrumental in developing early time-sharing systems which revolutionized how computing is being done today. Also, invented garbage collection, and has contributed significantly to the early development of AI. In the year 1961 itself, he suggested the idea of utility computing which is of great relevance today, especially in the field of cloud computing. He received many accolades and honors, such as the prestigious Turing Award from ACM in the year 1971, which is considered as the 'Nobel Prize in Computing', for his significant contributions to the area of artificial intelligence. He was also conferred with Kyoto Prize in the year 1988 which is Japan's highest private award for lifetime achievement for lasting contributions in the field of science. He also received the National Medal of Science in 1990 which is an honor bestowed by the President of the United States for his outstanding contributions in the fields of Mathematical, Statistical, and Computational Sciences. And, the great computer scientist and visionary passed away on October 24, 2011.

Dr. Manoj V Thomas
Prof., Dept of CSE

NEW TECH GADGETS

R GAYATHRI
S6 CSE

1) BREATHE SMART 2 AIR QUALITY MONITOR

91% of people live in places where air quality is below WHO guidance limits. Salient features of BREATHE Smart 2 air quality monitor:

- Know what's in the air, reduce your exposure by as much as 50% .
- Identify pollution hotspots- History function stores data for up to 30 days.
- Portable- compact size protects you wherever you go, clips to bags, bikes and buggles. Laser sensor- laser diffraction technology accurately measures practice size and concentration every second.

2) VIVOSUN 3 IN 1 HIGH ACCURACY WATER QUALITY TESTER

Salient features:

- Provides accurate and reliable test readings
- 3-In-1 Digital TDS meter provides accurate readings for TDS (Total Dissolved Solids) EC (Electrical Conductivity) and temperature
- Long battery life and lower power consumption
- Auto-off function saves on battery usage and our TDS meter has lower power consumption than HM TDS meter
- Measurement Range:0-9990ppm, 0-9990µs/cm; Accuracy: ± 2%, 0.1-80.0°C, 32.0-176.0°F.; Factory calibrated; Automatic Temperature Compensation (ATC)

3) PADRON RING

      We are all born with the ultimate pointing device, our fingers. The Padron ring magically gives your fingers the power to use your desk as a giant touchpad.

4) MOOREBOT SCOUT

- In a confluence of the surveillance state, heightened home security concerns, and consumer interest in baby cams and robot vacuums, Moorebot revealed a robot that functions as an autonomous surveillance camera on wheels, powered by AI tech.
- Basically, those Monster Truck-looking tires give it the self-driving mobility advantage over mounted cameras.

5) WRISTCAM MADE FOR APPLE

- Capture and share moments in a whole new way, straight from your wrist.
- Bright LEDs next to both cameras help keep everybody aware whenever Wristcam is capturing, with a single pulse for photo, and continuous pulse for video.
- 2 Sony Cameras: 8MP World-Facing + 2MP Self-Facing
- 1080p HD Video + 3840x2160 High Resolution Photo
- 1080p HD Video + 3840x2160 High Resolution Photo

R Gayathri

IMPACT OF TECHNOLOGY DURING LOCKDOWN

ADITHYA TK

ANUSREE VENU

We have all experienced a sudden surge in the duration of screen time. Adding to the time spend in surfing the internet we have also spent our eyes glued to the screen for online classes and assignments. Technology seemed like the only lifeline that connected family and friends. With all the outdoor activities shut down, technology was our only companion. This technology had both ups and downs during the lockdown. It provided a new platform for learning and improved computer literacy. This prevented the disruption of education. The drawback of this form of learning is failure to read the visual cues. Humans' being social beings learns a lot from the other person via eye contact and body language. But during online classes since we don't see the teacher or the students this form of interaction is hindered. Work at home, a very major step towards social distancing was made possible in many jobs. There was an increase in the number of productive apps like lucid chart etc. These were saviours that reduced the number of unemployed due to lockdown. The drawback of this was it demanded 24 hours availability which caused stress. Humans being social animals cannot stay sane or happy without social interaction. It was especially difficult for people living alone or who lived far away from the family. Video chats and social media allowed us to stay connected. These did a good deal in strengthening relationship even during a pandemic.

Another visible trend was films shifting to OTT (Over-the-top) platforms. Although this caused a bit of difficulty in the entertainment industry all was handled well in time. Thus many who earlier hadn't been familiar with popular online platforms like NETFLIX, AMAZON PRIME shifted their attention to them instead. This increased the profit of such companies and they began improving to meet the needs of the people by providing them with variety of contents. The positive side of them was that one doesn't need to subscribe to traditional cable or satellite TV service. OTT platforms were easy to access and handle. To reduce their boredom, one of the activities people resorted to was online gaming. Many gaming companies thus came up with varying and addictive contents. This saw a rise in the number of gaming app downloads. Due to postponement of IPL and other live sporting events, fantasy sports gaming players like Dream11 and MPL have seen a major hit, while some of the trending gaming mobile apps during the lockdown were Ludo King, Caroms and Hello. As COVID 19 refrained people from going outside for workouts, many fitness apps came into play. They came up with new alternatives for people to remain fit and stay indoors. In between, many revolutionary ideas and popular uprising came through social Medias. Much was focused on women empowerment. Many social issues that otherwise would have unheard were voiced through social media. People saw to it that the case saw justice. Start-ups, YouTube channels and many other businesses were started and gained much popularity during this time. It seems that people weren't short of innovative ideas. They made much use of the technology. Whatever the benefits are, the downside of this hype must also be considered. Security has been a major topic in this period. With many people engaging themselves in the online world, the line drawing the boundaries slowly started to disappear. As a result of which hackers and other fraud people were able to lure others into their traps.

Since investments through submission of physical applications got disrupted during lockdown, people resorted to online platforms to invest in Mutual Funds, National Pension System etc. Investors got more time to follow the market trend as they spend their time indoors. Even online grocery apps were a huge help to people as they provided household with neat and healthy foods without having them go out and spend time choosing the food products. Everything was one call away.

Even if all seems well, the digital divide falls along existing lines of socioeconomic inequality. Those who are poorer and live in less affluent areas pay more for less reliable service. And while smartphones are more prevalent across all socioeconomic groups, they're a poor alternative for broadband internet access for tasks like working from home or attending classes online. With a rapid need for internet access – the source of all information during this pandemic, authority weren't able to provide cost effective and faster means of communication to the financially backward people. Bad internet connections were a constant issue.

Most of the time fake news was propagated through social Medias regarding important public cases. People could never go out and verify the truth behind the allegations and therefore blindly believed those that were written. But whatever might be the bad side, this Global Pandemic gave us new views about life and helped us cross our comfort zone. We got more knowledge on technology and as a result, many brought out great innovations. The timing has never been better for using technology to enable and improve learning at all levels, in all places, and for people of all backgrounds. Although the presence of technology does not ensure equity and accessibility in learning, it has the power to lower barriers to both in ways previously impossible that can set the learners on a path to acquiring expertise unimaginable a generation ago. This is a time of great progress and use of technology to bring out the best in ourselves.

Adithya TK   *Anusree Venu*

Newbies

An article about new technologies and softwares

ADILA FARHA
S3 CSE B

DEVIKA C
S3 CSE B

ADWETHA FALGUNAN
S3 CSE B

Technology is constantly updating at such a rapid pace that it seems it is might be faster than light! A technology or a programming language that is making the rounds this week may be obsolete by the next few days! As more and more funds are invested in research and development, computer scientists and professionals are constantly tweaking and improving existing technologies to get the most out of them. As a result, a new programming language, library, patch, or plug-in gets released almost every hour. To keep up with this crazy pace of development, you have to keep learning the latest technology concepts.

Big Data Hadoop
Apache Hadoop which is commonly called as Hadoop or Big Data Hadoop is an open source framework developed by Apache Software Foundation. Big Data Hadoop is a trending field in Information Technology, even NDTV news states that Big Hadoop Jobs are in High demand. Companies like HCL, Amazon, IBM are among the top recruiters of Big Data Hadoop Developers.Domains Hiring BigData Developers

BigData Developer Skills
The skills that companies are expecting from a Hadoop developer is as follows,
        Apache Hadoop
        Apache Spark
        Machine Learning
        General Purpose Programming Languages
Our Hadoop training program will help you learn Apache Hadoop from the basics with practical. You can easily be a Professional Hadoop Developer with all the above skills after the completion of the course.


1.05% 0.76%	Professional, Scientific and Technical Services
0.62%	Information
1.22%	Manufacturing
1.71%	Retail Trade
3.04%	Sustainability, Waste Management & Remediation Services
27.14%	Finance & Insurance
5.70%	Wholesale Trade
8.13%	Educational Services
8.20%	Other Services (except Public Administration)
9.62%	Accommodation and Food Services
12.35%	Health Care and Social Assitance
18.89%	Real Estate and Rental and Leasing
	Construction

Top Domains Hiring Big Data Hadoop Developers

Internet Of Things(IOT)

We know IoT has return an extended means, from normal mobile devices to the vehicle, everything is connected with sensors that change associate object to be monitored or knowledge gathered. So finally, we will say that the net of Things has penetrated deeply into the everyday human routine. Of course, it's only possible to induce the most effective out of IoT by combining it with alternative revolutionary innovations like AI and massive knowledge, however it's among the numerous developments within the computing trade. Also, the on-going COVID pandemic has accelerated the adoption of tech-driven attention. Looks like it'll stand fragmented even after fifty years.

Adila Farha D.K   *Adwetha Falgunan*   *Devika C*
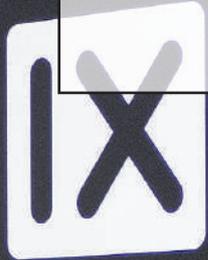
YOUNGEST INDIAN IT ENTREPRENEUR

RANA FATHIMA
S6 CSE

Today India is producing business minds in mass numbers. However, a large pie of this portion is contributed by those aggressive teens, who face the barrier of being a young entrepreneur. In recent times, there has been an increase in the amount of young adults coming forth to set up their own businesses. The government has stepped in to provide aid in the form of various funds and aid schemes. During the pandemic many youngsters has emerged with brilliant ideas in various fields

Let's go back to our childhood. What did we do in our childhood? Most probably fighting with our parents, siblings and playing so on. Let's meet a young entrepreneur who must be an inspiration for all the youngsters as well as adults. Most surprisingly this inexplicably talented guy is from god's own country Kerala. Aadithyan Rajesh is nothing short of a prodigy. He is young and actively in pursuit of his dreams. He was born in Thiruvilla, Kerala, and then family moved to Dubai when he was five. He was only nine when he developed his first mobile application as a hobby to beat boredom. Apart from owning a company and being an app developer, he also designed logos and websites for clients.

"The first website my dad showed me was BBC Typing, a website for kids where young students can learn typing", Aadithyan said. He was just six when he got his first computer. Most of the teens have a problem in pursuing their dreams even though they have great idea and confidence tolaunch it but people ignore due to their age. And the same thing happened to Aadithyan too.

Now at the age of 13 Aadithyan is a public speaker, developer, algorithmist and rather than this most influencing teen of 2018. At 9 years of age he learned basics of programming like

But the craving for doing more encouraged him. He wanted to meet people like him, wanted to learn, wanted to connect with more people so he attended various workshops so that many ideas can be shared and technical helps can be solved.

Aadithyan introduced OGT store or Online Gadget Traders and this took place when he was 9 years old. This is a site where electronic gadgets are sold through online. The first delivery was done in a cycle by this boy and his friend and he could hardly get pocket money by this small venture. The second one was Trinet solution, three people trinet solutions, kicked off on December 17, 2017 and has a total of three employees, who are friends and seniors from Aadithyan's school. The very first app he developed was named 'Ashirwad', a web browser akin to Google Chrome. But it was not as customized as Chrome. He used Android Studio to develop the app. He chose Aptoide marketplace over Google Play Store to upload the app as the former is free and the latter charges a base fee of $25 for uploading an app. Further, it enhanced his appetite for learning about software, hardware, gaming technology, cyber security, etc. What made this Indian child prodigy experience the virtual world beyond his school books and explore possibilities there is a lot more interesting than his plunge into entrepreneurship.

Dubai-based Aadithyan Rajesh runs his IT Company in partnership with three of his school friends. They have successfully worked on projects from over 12 clients. Currently, Trinet Solutions is not a registered company. One must be 18 in age to own a company in Dubai. The India-born IT prodigy aspires to develop apps on the iOS platform and develop his business into a multinational entity. He shares his success as a YouTuber with his 6-year-old sister who shoots videos for the YouTube channel 'A Craze.' He has faced obstacles along the way, but his sheer determination has helped him pull through each time. He has proved time and again that age certainly is no barrier to fulfilling your dreams. He is adding an extra layer of youth to diversity to tech which will allow many new innovations to emerge.

This boy dreams to make his company a multinational one and start developing apps on the IOS platform. His ambition is to explore more horizons in the area of cybersecurity and would like to work closely with Cyber Security field.

Aadithyan earns pocket money by developing apps and branding for companies but much of his work is voluntary and inspired by what he sees around him. For his teachers, he developed a scheduling app. "When I saw teachers struggling to do that, I helped them." When his family was affected by the Kerala floods last August, he used his YouTube channel to raise awareness among his 2,800 global subscribers and called on them to donate to the government of Kerala's distress relief fund. He is currently developing an android app that matches blood donors with those in need of transfusion. He hopes it will be picked up by local hospitals and clinics. At the same time, he is pressing ahead with a commercial app requested by a local company that publishes articles directly to clients.

He has set himself a 15 year plan. He wants to be the best coder in the region within five years, to be one of the leading keynote speakers in the Middle East within a decade and be one of the premier entrepreneurs in the world within 15 years. In the short term, he wants to help other children learn programming and graphic design through YouTube tutorials and public speaking events.

"If you have a dream in programming you can just get started up," he said. "Coding is never perfect. If I code something today, in three months I will see that it could be better."

Rana Fathima

10 THINGS YOU SHOULD NOT SEARCH IN Google

ROSE ALPHONS BENNY
S6 CSE

1) ONLINE BANKING WEBSITES

There are lots of fraud banking sites that may end up you in trouble. So it's better to not Google banking websites unless you have the correct URL. This is because chances of phishing increasing drastically in which you might enter your bank's login ID and password on a website that may just look like the bank's official website and could be a phishing site instead.

2) MEDICATION

Seeking the help of online doctors and buying medication has become a trend in recent years. Although Google is a great source to know about the symptoms and diseases, it's highly recommended to skip the search engine and head on over to the actual doctors to get the right information about any illness you have.

3) SHOPPING OFFERS

Google is flooded with many false WebPages with offers on E-commerce platforms. Clicking on fraud links might steal your personal information including name, password and banking details.

4) ANYTHING CRIMINAL

Things like how to make a bomb or any exploding items or about drugs should not be searched in Google as security and drug control services always track such kind of searches.

5) DOWNLOADING APPS

We can install apps in our mobile phone using play store. So it's better to avoid downloading apps by searching in Google as it may be some kind of malware to steal personal information. A third party can hack any of our information even the call recordings, gallery etc.

6) PERSONAL FINANCE AND STOCK MARKET

There can never be one investment plan that will make everyone rich. So kindly avoid searching about best financial platforms.

7) HUMAN BIRTH

There may be videos of woman crying and doctors all around which may discourage people from having children. The real process may be entirely different from those videos.

8) CANCER

There are so many types of this disease, and most of them occur with symptoms that could be very common for many other harmless conditions. Most people experience such things as dizziness, weakness, nausea, etc, so you'll probably mistake something else for cancer and start panicking.

9) SKIN CONDITIONS

There are hundreds, if not thousands diseases related to skin and the internet is full of images describing all these skin disorders. Some of them can be bearable to look at, while some can be extremely horrifying and unsightly. So, In case you have any skin related problem, it's better to go to a doctor rather than searching for it on the Internet.

10) DANGEROUS ANIMALS

There are a lot of really terrifying animals on our planet. Moreover, such a phobia may discourage you from traveling.

Rose Alphons Benny

- A programmer's wife tells him, "While you are at the grocery shop,buy some eggs." He never comes back

- !false - It's funny because it's true.

- Why do app developer's have such big insurance rates?
    They're always crashing.

- What do hackers do on a boat?
    Phishing.

- What's the best way to learn about computers?
    Bit by bit.

- Why do people on Twitter always tell me I'm always confused?
    Because I don't follow.

- Why is everyone who works at the keyboard factory so rich?
    They put in lots of shifts.

UVAIS HASSAN
S4 CSE A

- GPS is free... for some.
Even though it is free to use GPS globally, it costs $2 million dollars to operate every day. This money comes from American tax revenue.

- Finding a security bug in Facebook's code will pay off.
To be exact, Facebook pays $500 for reporting any vulnerability in their security. Even better, $500 is just the minimum that it starts at, so you could potentially earn more!

- The government used PlayStation 3's... but not for gaming.
In 2010, the United States Air Force used 1,760 PlayStation 3 consoles to build a supercomputer for the Department of Defense. They used PS3's because it was more cost efficient and "green."

- Everyone uses Google as a spellcheck
Most everyone, anyway! 97% of people type in words to Google just to see if they spelled it right. I know I'm definitely among that 97%!

- "Android" is gender specific.
The word "Android" literally means a human with a male robot appearance. The female equivalent of this word is a "Gynoid."
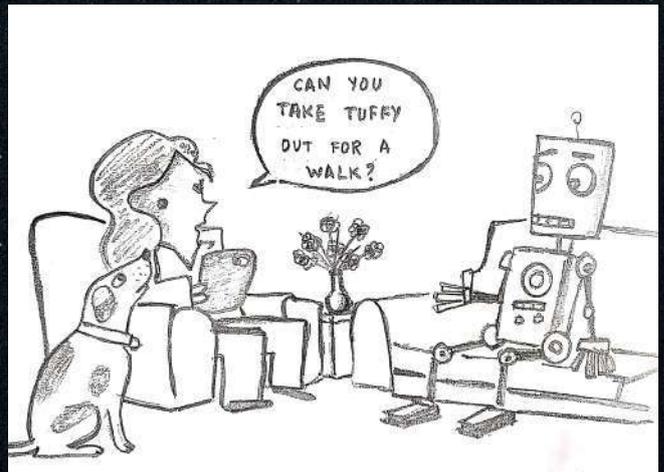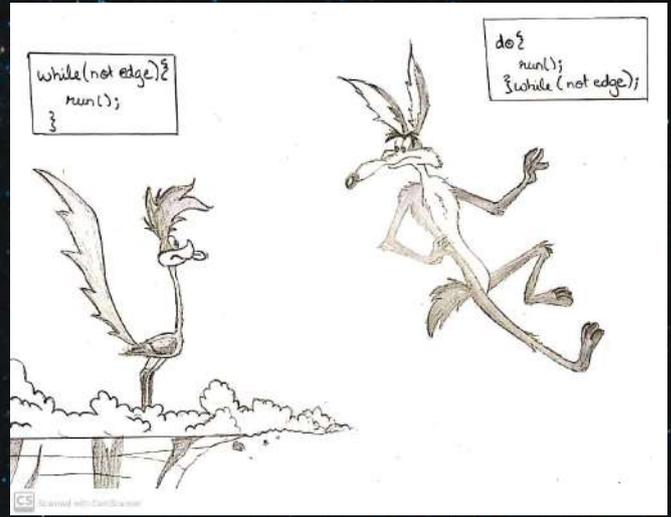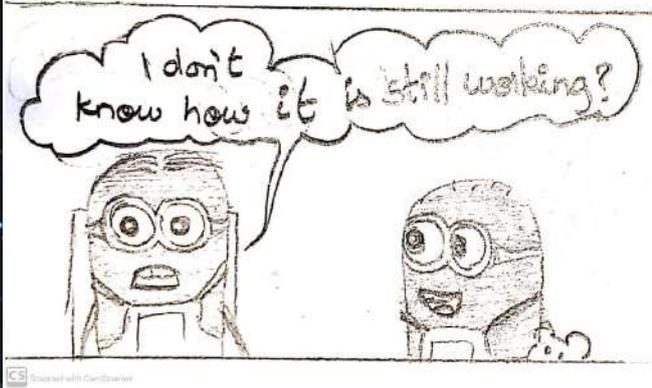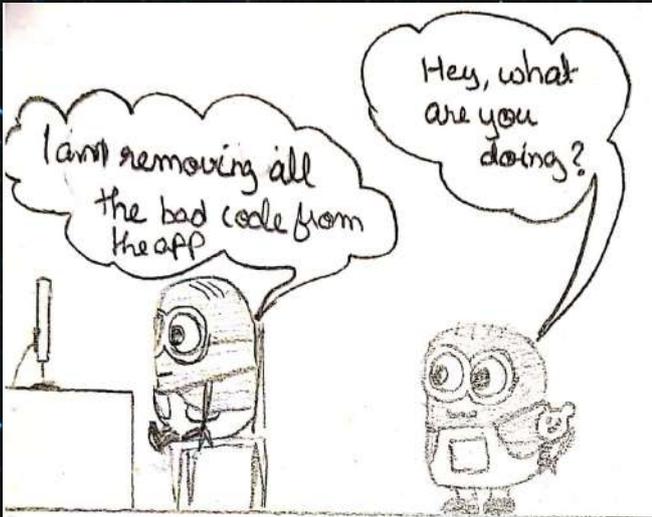
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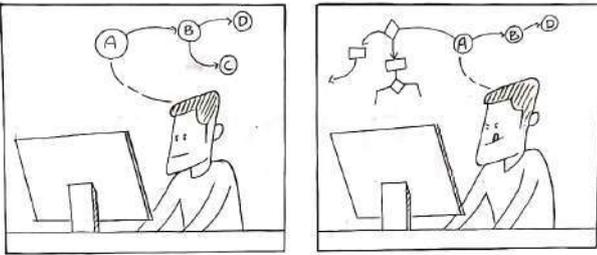
NIKHIL RAMESH
S4 CSE
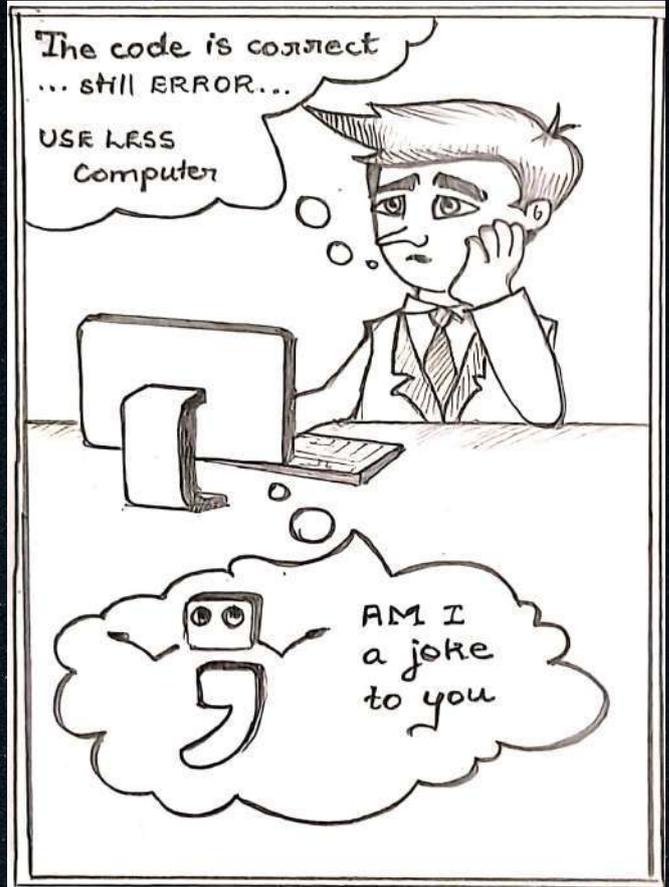
SANGEETH K
S4 CSE

SHARON ROSE BABU
S4 CSE

V R ARYA
S4 CSE A

SHARON ROSE BABU
S4 CSE A

COVID-19 AWARENESS

1. Always wear mask

2. Do not throw masks carelessly after use

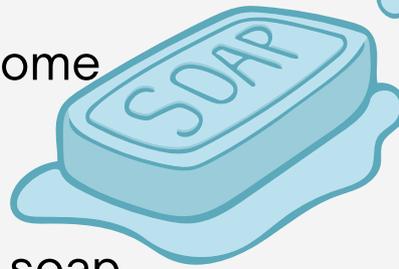3. To protect your family from covid 19, take a shower when you first come home from outside
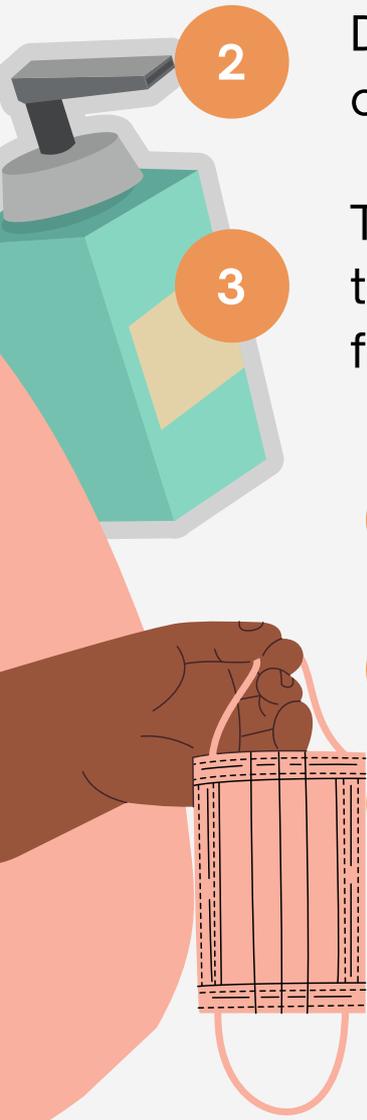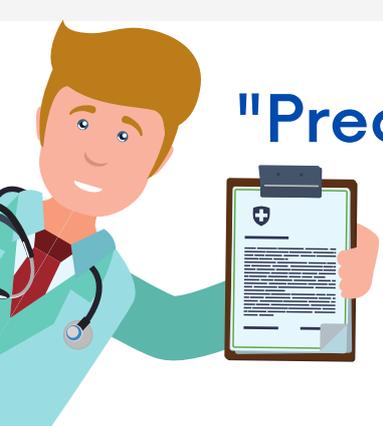
4. Always wash your hands with soap or sanitizer

5. Always maintain social distance

6. Get vaccinated immediately and persuade others to get vaccinated

1 meter

"Precautions are needed, not fears"

For more information and vaccine registration visit:

cowin.gov.in

or

covid19jagratha.kerala.nic.in

#DreamBigger