

SBRR MAHAJANA FIRST GRADE COLLEGE (AUTONOMOUS), PG WING

BEST PRACTICE – TECH TALK, Department of MCA and MSc (CS)

SL. No	Date	Name of the Faculty	Time	Topic	Synopsis	Faculty Present
1.	18th October 2024	Dr. Anisha Kumar	3:15 PM	AI/ML Implementation in Canara Bank	Canara Bank CEO Mr. Raju highlighted implementing AI, Business analytics and Machine Learning in the day to day business recordings of the bank. The bank has created a cyber security wing with an investment of Rs 70 Crore to observe the accounts exhibiting suspicious patterns of transactions for five times , which will be automatically blocked. This facility can stop the damage in intial stages and recoveries are better than slippages. This implementation has contributed to net profit and operating profit by 60 % of loan recoveries. As published in the Times Of India 17th August 2024 AI and ML has the following features: a) Managing Accounts - to monitor accounts for suspicious transaction patterns and generate early warning signals. b) Improving decision making: It is used in Canara ai1 mobile banking application. It has features like fingerprint for signin, constantly asking if you want to continue using the app while connected in the WIFI network, Balance, OD and related information are all available in one place and not as submenu's, elegantly used integration of cards section without any OTP being sent but taken care by the card mangagement setting. c) Deposit Mobilization : It provides multimode fund transfers and AI tools are used to mobilize deposits especially in CASA accounts with the help of Data and Analytics centre in Bengaluru. Canra bank now with this facility is working with the theme "Customer Satisfaction replaced with Customer Experience and moved to 'Wowness' ". d) Employee training: AI is used to upskill and trainee employees.	Smt. Rachana C.R, Smt. Yashaswini J, Dr. Anisha Kumar, Mrs. R. Eswin Pria Angel, Ms. Likhitha M M, Ms. Sushmita Sheeba Dsa, Smt. Meghana J.
2.	07th October 2024	Mrs. Yashaswini J	3:00 PM	Spiking Neural Network (SNN)	A Spiking Neural Network (SNN) is a type of artificial neural network that more closely mimics the behavior of biological neurons compared to traditional neural networks like feedforward, convolutional, or recurrent neural networks. SNNs are designed to operate using the concept of spikes or impulses, similar to how neurons in the brain	Mrs. Yashaswini J, Ms. Likhitha M M, Mrs. R. Eswin Pria Angel, Ms. Sushmita Sheeba Dsa, Mrs. Meghana J.

					communicate through electrical signals. similar to how neurons in the brain communicate through electrical signals. Learning in SNNs can happen through biologically inspired rules like Spike-Timing- Dependent Plasticity (STDP), where the synaptic strength is adjusted based on the timing difference between the spikes of pre- and post-synaptic neurons. Applications of Spiking Neural Networks: Neuromorphic Computing: SNNs are a key part of neuromorphic chips, which mimic the brain's structure and function for energy-efficient computing. Robotics: Their event-driven nature and ability to process temporal data make SNNs useful in autonomous systems, like robots, that need real-time processing. Time-Series Analysis: SNNs excel in tasks involving temporal patterns, such as speech recognition, sensory data processing, and signal prediction.	
3.	26th September 2024	Ms. Sushmita Dsa	3.00 PM	Neuromorphical Computing :Memristor	Neuromorphic computing is a computing method that uses the human brain as inspiration to design hardware and software. The goal is to create computers that can mimic the brain's structure and function, allowing them to solve problems, recognize patterns, and make decisions more quickly and efficiently. Uses artificial neurons and synapses to simulate how the brain processes information .Uses a variety of technologies, including neuron and synapse circuits, analog/digital circuits, complementary metal-oxide-semiconductor (CMOS) technology, and very large scale integration (VLSI) processes Higher-order memristors can exhibit complex dynamical behavior, which can help them encode temporal information. This is because they have multiple internal state variables that influence their conduction mechanism. memristor is a combination of the terms memory and resistor.	Smt Rachana C.R, Smt. Yashaswini J, Dr. Anisha Kumar, Mrs. R. Eswin Pria Angel, Ms. Likhitha M M, Smt. Meghana J.
4.	18th September 2024	Mrs. Rachana C R	3:15 PM	iCall	iCALL – Initiating Concern for All is a pioneering and an empowering mental health project which was started in 2012 by School of Human Ecology, TISS – Mumbai. iCALL endeavours to provide professional and free counseling through technology assisted mediums such as, telephone, email and chat to anyone in need of emotional support, irrespective of age, gender, sexual orientation or race, and transcending geographical distances while ensuring confidentiality. iCALL's ReYou is a chat-based initiative for youth suicide prevention by iCALL with support from Zoom Cares. The broad objective of this initiative is to create a safe, effective, accessible, and affordable service delivery	Smt Rachana C.R, Smt. Yashaswini J, Dr. Anisha Kumar, Mrs. R. Eswin Pria Angel, Ms. Sushmita Sheeba Dsa, Ms. Likhitha M M, Smt. Meghana J.

					response for addressing youth mental health concerns with a focus on crisis concerns such as suicide and self-harm. Through a web-based chat line, the service aims to provide immediate psychosocial and therapeutic support to youth who might be in a crisis or a situation where their safety is threatened or experience overwhelming emotions.	
5.	30th August 2024	Mrs. Meghana J	3.15 PM	Glasswire	GlassWire is a modern personal firewall and network monitor. It provides internet security to our computer or server by vizualizing past and present network data in an easy to understand graph. Whenever anything new on our computer accesses the network Glasswire lets us know with a alert that won't interrupt our computer workflow. It can be downloaded on android mobile phone where in it helps in providing privacy. It provides us with graph to see which all apps used mobile data erlier in the week or month. It helps us to instantly know every time a new app accesses the network and begins using Wi-Fi or mobile cellular dara. It allow or deny app connections. Block app which looks suspecious in nature. It's application include: Visual network monitoring, Internet security, Anomaly Detection, Who's on our Wi-Fi or Network, Multiple server monitoring, Bandwidth usage monitor, Discreet alert, Evil twin detection.	Smt Rachana C.R, Smt. Yashaswini J, Dr. Anisha Kumar, Ms. Sushmita Sheeba Dsa, Ms. Likhitha M M, Mrs. Eswin Pria Angel , Smt. Meghana J.
6.	8th August 2024	Ms. Likhitha M M	3.30 PM	Lian Spyware	LianSpy is a new spyware that hides itself by blocking Android's security feature. Every month, Google releases security patches for Android that help block several malwares and spywares before they can damage your phone or tablet But a new report by Kaspersky, the security firm that was recently banned in the United States recently discovered a spyware dubbed "LianSpy" that steals all your files, takes screenshots of what you are doing and even harvests call logs. Kaspersky says "LianSpy uses su binary with modified name to gain root access", which means that the malware may be using an unknown exploit or requires physical access to the device. LianSpy can easily evade that by adding a "cast" value so that the cast notifications are blocked, meaning you won't see any indicator when the spyware is using your camera or microphone. Some apps that are captured by LianSpy include WhatsApp, Telegram, Chrome, Facebook, Instagram, Gmail, Skype, Snapchat and Discord. While Kaspersky suggests that the	Smt Rachana C.R, Smt. Yashaswini J, Dr. Anisha Kumar, Mrs. R. Eswin Pria Angel, Ms. Sushmita Sheeba Dsa, Ms. Likhitha M M, Smt. Meghana J.

					spyware is currently targeting Russian users, the hardcoded phrases are present in English as well, which means the actors behind the spyware might target users in other regions as well.	
7.	1st August 2024	Mrs. R. Eswin Pria Angel	3.15 PM	BERT	BERT (Bidirectional Encoder Representation from Transformers). Its a specific language model under NLP developed by Google AI researchers in 2018 and widely adopted in 2020. It is a type of NLP model focuses on learning deep contextualized representataion of words and their relationships in a sentence. The transformer encoder of BERT uses mechanism called multi headed mechanism which gives multiple attention that focus on different parts of the sentence. So it can capture various aspects of the context such as local relationship between nearby words, long range dependencies between distant words, syntatic and semantic relationship. This encoder processes the input sentence in both forward and backward direction, resulting in a more comprehensive understanding of the sentence	Smt Rachana C.R, Smt. Yashaswini J, Dr. Anisha Kumar, Ms. Sushmita Sheeba Dsa, Mrs. R. Eswin Pria Angel. Ms. Likhitha M M, Smt. Meghana J.
8.	24th July 2024	Dr. Anisha Kumar	12.30 PM	Human Augmentation	Human Augmentation is the upcoming transformation where advance technology will replace human capabilities through brain chip and wearables. This technology will improve the human capabilities such as human performance, health and quality of life. for example cochlear impants and robotics limbs. Elon Musk, CEO Of Neurolink, has recieved approval to initiate trials for implanting brain chips in humans. It has Successfully implanted one of its wireless brain chip in a human with regard to the reports on January 2024. The goal is to connect human brains to computers and help to tackle complex neurological conditions. Norland Armagh , the first recipient shared his emotional journey and he can control a computer and phone by thinking, demonstrating the chips ability to faciltate " Telepathic" communication. Musk next work is implementing the second chip in the spine ultimately to enable complete mobility of an paralytic patient.	Smt Rachana C.R, Smt. Yashaswini J, Dr. Anisha Kumar, Ms. Sushmita Sheeba Dsa, Ms. Likhitha M M, Smt. Eswin Pria Angel.
9.	15th July 2024	Mrs. Rachana C R	12:30 PM	Binary Large Object	"BLOB" stands for Binary Large Object. It is a data type used to store binary data in databases. BLOBs are typically used to store large pieces of data, such as images, audio/video files, documents, or any other binary data that needs to be preserved in its original format without being altered or interpreted by the database system. Handling BLOBs: Retrieval and manipulation of BLOB data typically involve using SQL queries or programming	Smt Rachana C.R, Smt. Yashaswini J, Dr. Anisha Kumar, Ms. Sushmita Sheeba Dsa, Ms. Likhitha M M, Smt. Eswin Pria Angel.

					<p>interfaces provided by the DBMS to read and write binary data into BLOB fields. DBMSs often provide functions or APIs to handle BLOB operations efficiently, including streaming data for large BLOBs.</p> <p>Product Images: BLOBs store product images and thumbnails for e-commerce platforms, facilitating visual presentation and marketing of products.</p> <p>Product Specifications: BLOBs store product specification sheets, user manuals, and documentation related to products sold online.</p> <p>Medical Images: BLOBs store medical images (e.g., X-rays, MRI scans, CT scans) in electronic health records (EHR) systems and medical imaging databases for patient diagnosis and treatment planning.</p> <p>Patient Documents: BLOBs store patient forms, medical histories, and scanned documents related to healthcare records.</p>	
10.	11th June 2024	Mrs. Preethi Lakshmi R	3.00 PM	Lenovo's Rollable Laptop	<p>The rollable laptop was first teased online in October and this marked the first time it was shown to the public. The rollable laptop has an OLED screen that has two different sizes and resolutions. The rollable screen that goes from 12.7 inches to 15.3 inches. The rollable prototype's screen can offer 2024x1604 pixels with a 12.7-inch size and aspect ratio of 4:3 or 2024x2368 pixels over 15.3 inches with 8:9 aspect ratio. OLEDs enable emissive displays - which means that each pixel is controlled individually and emits its own light (unlike LCDs in which the light comes from a backlighting unit). OLED displays feature great image quality - bright colors, fast motion and most importantly - very high contrast.</p>	<p>Smt Rachana C.R, Dr. Anisha Kumar, Ms. Sushmita Sheeba Dsa, Smt. Preethi Lakshmi R, Ms. Likhitha M M, Smt. Eswin Pria Angel.</p>
11.	30th May 2024	Ms. Likhitha M M	3:15 PM	DALL -E: Text to image AI model (Neural Network)	<p>DALL-E, DALL-E 2, and DALL-E 3 are text-to-image models developed by OpenAI using deep learning methodologies to generate digital images from natural language descriptions known as "prompts".</p> <p>DALL-E was revealed by OpenAI in a blog post on 5 January 2021, and uses a version of GPT-3 modified to generate images. DALL-E's model is a multimodal implementation of GPT-3 with 12 billion parameters which "swaps text for pixels", trained on text-image pairs from the Internet. In detail, the input to the Transformer model is a sequence of tokenized image caption followed by tokenized image patches.</p>	<p>Mrs. Eswin Pria Angel, Ms. Likhitha M M, Ms. Sushmita Sheeba Dsa, Smt. Preethi Lakshmi R.</p>

					DALL-E was developed and announced to the public in conjunction with CLIP (Contrastive Language-Image Pre-training). CLIP is a separate model based on zero-shot learning that was trained on 400 million pairs of images with text captions scraped from the Internet.	
12.	16th May 2024	Mrs. R. Eswin Pria Angel	3.30 PM	Google's underocean Data Center	Data center is the physical location that stores computing machines and related hardware equipments like server, data storage device and network equipments. And google has 29 data centers with about 2.5 million servers, strategically placed to optimize performance and efficiency. This data center needs more cooling system to ensure efficient operation of network. So google introduced underocean data center in 2020 which can leverage natural cooling from ocean and enhance enery efficiency. Google has installed the data center near port Angeles in pacific ocean, which can have 800 servers just over 9 meters. It is kept 3-7 miles off shore. It uses the motion of ocean waves to generate power and communicates to the outside world through underwater cables.	Smt Rachana C.R , Smt. Shobha D, Dr. Anisha Kumar, Ms. Sushmita Sheeba Dsa, Smt. Preethi Lakshmi R, Ms. Likhitha M M.
13.	29th April 2024	Mrs. Yashaswini J	3:15 PM	Nvidia's AI Chip	Nvidia's innovative AI chips have revolutionized the landscape of AI development, providing unparalleled performance and efficiency. This has enabled developers to push the boundaries of what's possible in AI, from creating cutting-edge algorithms to powering complex neural networks that underpin applications in various domains such as natural language processing, computer vision, and autonomous vehicles. The widespread adoption of Nvidia's AI chips reflects their effectiveness in accelerating AI workloads, which has become increasingly crucial in today's data-driven world. As AI continues to permeate various industries and applications, Nvidia remains at the forefront, driving innovation and shaping the future of artificial intelligence.	Smt Rachana C.R , Smt. Shobha D, Smt. Yashaswini J, Dr. Anisha Kumar, Ms. Sushmita Sheeba Dsa, Smt. Preethi Lakshmi R.
14.	25th April 2024	Dr. Anisha Kumar	1.00 PM	Meta Horizon OS	Meta Horizon OS was developed by Meta Platforms. It is written in Java,C(core),C++,Rustand Kotlin, it belongs to the OS family Unix like (modified Linux kernel),Anaroid and is currentlya working model. In the 90's Microsoft won the PC's era with an open approach to windows allowing Dell and Lenova to build computers using Microsoft OS, later it was Apple which won using its IOS mobile OS for iPhones.,similarly the next generation is computing of virtual reality and mixed eality defined by open model, by meta providing the Horizon OS for third party developers.	Smt Rachana C.R , Smt. Shobha D, Smt. Yashaswini J, Dr. Anisha Kumar, Ms. Likhitha M M, Smt. Eswin Pria Angel, Ms. Sushmita Sheeba Dsa, Smt. Preethi Lakshmi R,

					Meta platform opens new tab in sharing its Quest headsets operating system with rival device maker's including Microsoft,ASUS,Lenova. Meta Horizon OS is an extended reality OS which is used to build headsets by partners companies with capabilities like gesture recognition, Pass through, Scene understanding and Spatial. The features of new hardware developed by Meta partners are light weight headset with pairing to computer on the user desk by Lenova, optimised with peripherals by ASUS and controllers by Xbox brand.	
15.	20th April 2024	Ms. Sushmita Sheeba Dsa	12:00 PM	Extended Reality	<p>Extended Reality (XR) is an umbrella term that encompasses various immersive technologies, including virtual reality (VR), augmented reality (AR), and mixed reality (MR). These technologies blend the physical and digital worlds, allowing users to interact with digital content in real-time.</p> <p>XR technologies have applications across various industries, including gaming, entertainment, education, healthcare, architecture, and manufacturing. They offer new ways to visualize information, train employees, simulate environments, and enhance user experiences. As XR continues to evolve, it has the potential to revolutionize how we work, play, and interact with digital content. Extended reality works by using visual data acquisition that is either accessed locally or shared and transfers over a network and to the human senses. By enabling real-time responses in a virtual stimulus these devices create customized experiences. Advancing in 5G and edge computing – a type of computing that is done "at or near the source of data" – could aid in data rates, increase user capacity, and reduce latency. These applications will likely expand extended reality into the future.</p>	Smt. Rachana C R, Smt Shobha D, Smt. Yashaswini, Ms. Likhitha M M, Smt. Preethi Lakshmi R,
16.	6th April 2024	Shobha D	12:00 Noon	Deepfake AI	<p>Deep Deepfake AI (deep fake)</p> <p>Deepfake AI is a type of artificial intelligence used to create convincing images, audio and video hoaxes. Generative AI video and audio tools are getting deployed and getting better, quickly. OpenAI released its video generation tool Sora in February and, at the end of March, it introduced an audio tool called Voice Engine that can realistically recreate an individual speaking from a 15-second soundbite.</p> <p>Deepfakes often transform existing source content where one person is swapped for another. They also create entirely original content where someone is represented doing or</p>	Smt. Rachana C R, Smt Shobha D, Smt. Yashaswini, Ms. Likhitha M M, Ms. Shushmita Sheeba Dsa, Smt. Preethi Lakshmi R.

				<p>saying something they didn't do or say.</p> <p>Deepfakes uses two algorithms to create and refine fake content</p> <p>i) Generator ii) Discriminator.</p> <p>The generator builds a training data set based on the desired output, creating the initial fake digital content, while the discriminator analyses how realistic or fake the initial version of the content is. This process is repeated, allowing the generator to improve at creating realistic content and the discriminator to become more skilled at spotting flaws for the generator to correct.</p> <p>The combination of the generator and discriminator algorithms creates a generative adversarial network (GAN). A GAN uses deep learning to recognize patterns in real images and then uses those patterns to create the fakes. When creating a deepfake photograph, a GAN system views photographs of the target from an array of angles to capture all the details and perspectives. When creating a deepfake video, the GAN views the video from various angles and also analyses behaviour, movement and speech patterns. This information is then run through the discriminator multiple times to fine tune the realism of the final image or video.</p> <p>The approaches to creating deepfakes are:</p> <ul style="list-style-type: none">• Source video deepfakes.• Audio deepfakes.• Lip syncing. <p>Technology required to develop deepfakes are</p> <p>The development of deepfakes is becoming easier, more accurate and more prevalent as the following technologies are developed and enhanced:</p> <ul style="list-style-type: none">• GAN• Convolutional neural networks• Autoencoders• Natural language processing• High-performance computing and Zao. <p>Deepfakes are commonly used in</p> <ul style="list-style-type: none">• Art.• Blackmail and reputation harm.• Caller response services.• Customer phone support.	
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				<ul style="list-style-type: none"> • Entertainment. • False evidence. Fraud • Misinformation and political manipulation • Stock manipulation. • Texting. <p>Are deepfakes legal? Deepfakes are generally legal, and there is little law enforcement can do about them, despite the serious threats they pose. Deepfakes are only illegal if they violate existing laws such as child pornography, defamation or hate speech. How are deepfakes dangerous?</p> <ul style="list-style-type: none"> • Blackmail and reputational harm that put targets in legally compromising situations. • Political misinformation such as nation states' threat actors using it for nefarious purposes. • Election interference, such as creating fake videos of candidates. • Stock manipulation where fake content is created to influence stock prices. • Fraud where an individual is impersonated to steal financial account and other PII. 	
17.	01st April 2024	Mrs. Rachana C R	3:15 PM	<p>E-waste Management</p> <p>Recycling and proper disposal of electronic products involve several steps to ensure that valuable materials are recovered and hazardous substances are handled safely. Here's an overview of the process:</p> <ol style="list-style-type: none"> 1. Collection: Electronic products, including computers, are collected from various sources such as consumers, businesses, and electronic waste recycling centers. Collection methods may include drop-off centers, curbside collection programs, take-back initiatives by manufacturers, or organized e-waste collection events. 2. Sorting: Once collected, electronic products are sorted based on factors such as type, material composition, and condition. This step helps identify items suitable for refurbishment, reuse, or recycling. 3. Dismantling: In the dismantling phase, electronic products are disassembled into their individual components and parts. This process may involve manual labor or automated machinery. Components like circuit boards, wires, plastics, metals, and batteries are separated for further processing. 4. Material Recovery: After dismantling, various materials recovered from electronic products undergo further 	<p>Mrs. Rachana C R, Smt. Shobha D, Smt. Yashaswini J, Dr. Anisha Kumar, Ms. Likhitha M M, Mrs. Eswin Pria Angel, Ms. Sushmita Sheeba Dsa, Mrs. Preethi Lakshmi R.</p>

					<p>processing for recycling. Commonly recycled materials include:</p> <p>Metals (such as copper, aluminum, gold, silver) are extracted from circuit boards, cables, and other components. Plastics are separated and processed for reuse or recycling into new products.</p> <p>Glass from monitors and screens may be crushed and recycled.</p> <p>Batteries are often sent to specialized facilities for recycling to recover metals and prevent environmental contamination. Other valuable materials like precious metals and rare earth elements are also recovered through advanced recycling techniques.</p> <p>5. Safe Disposal of Hazardous Materials: Electronic products contain hazardous substances such as lead, mercury, cadmium, and flame retardants, which can pose environmental and health risks if not handled properly. Specialized facilities or processes are used to safely dispose of or treat these hazardous materials to prevent pollution and protect human health.</p> <p>6. Refurbishment and Reuse: Electronics that are still functional or can be repaired are refurbished for resale or donated to organizations and individuals in need. This extends the lifespan of the products and reduces the demand for new electronics.</p> <p>7. Certification and Compliance: Responsible recyclers adhere to regulations and standards for environmental and worker safety. Certifications such as e-Stewards and R2 (Responsible Recycling) demonstrate compliance with industry best practices and environmental regulations.</p> <p>8. Data Security: Proper disposal of electronic products also involves ensuring the secure erasure or destruction of any sensitive data stored on devices. Data destruction methods may include data wiping, degaussing, or physical destruction of storage devices to prevent data breaches and protect privacy.</p>	
18.	16th March 2024	Mrs. Preethi Lakshmi R	01.15 PM	Robots Are Coming to the Construction Site	<p>Introduced By: Kendall Jones on February 27, 2024</p> <p>Imagine walking onto a construction site in the near future to find a team of robots doing site grading and layout, laying a brick wall, or even assembling scaffolding trusses. In fact, depending on the type of work you do, you might already be using robots at the construction site. Robotic heat welders and remote-controlled demolition robots have been</p>	<p>Smt. Shobha D, Smt. Yashaswini, Dr. Anisha Kumar, Ms. Likhitha M M, Ms. Sushmita Sheeba Dsa.</p>

					<p>commercially available for a number of years. Robots may never completely eliminate the need for human workers in the construction industry, but there are many applications robots could be used to make work on the construction site faster, safer, easier, and less labor- intensive.</p> <p>The most likely scenario is that robots will be used alongside human workers to augment their work, keep them safer and boost productivity. The current capabilities of existing robots, combined with a growing labor shortage will probably lead to robots handling some of the more menial repetitive tasks, leaving the human worker to focus on other aspects of their job. Brick Laying Robots -> Semi-Automated Masonry (SAM) System</p> <p>The SAM System was developed by ConstructionRobotics and is intended to work with a mason in order to reduce costs, increase productivity and increase the quality of work. The system eliminates the strenuous work by lifting the brick, applying mortar, and placing each brick in place. The mason is responsible for ensuring accurate placement of the bricks, cleaning up excess mortar, and overseeing the overall project is completed correctly.</p> <p>Hadrian X</p> <p>Fastbrick Robotics unveiled Hadrian X last year, a prototype of a bricklaying robot that can lay 1,000 bricks in an hour and can build an entire house in two days complete with pathways for electrical and plumbing and spaces for doors and windows.</p>	
19.	5th March 2024	Ms. Likhitha M M	3:00 PM	Neuralink Telepathy - A Brain Implant	<p>A brain implant, also called a neural implant, is a device that connects to a person's brain, usually on the surface or attached to the cortex. Brain implants can contain electrodes that observe and interpret signals from neurons, which are nerve cells that send signals from the brain to the body to help with movement, breathing, eating, and talking. Telepathy is a product from Elon Musk's company Neuralink that allows users to control devices with their thoughts. The device is about the size of a quarter, and is inserted under the skull with electrodes and wires. It allows users to control their phone, computer, and almost any other device, simply by thinking. The device will first be used to cure quadriplegics, and then to restore vision for the blind. Initial tests have shown promising neuron spike detection.</p>	<p>Smt. Rachana C R, Smt. Yashaswini, Dr. Anisha Kumar, Ms. Likhitha M M, Ms. Shushmita SheebaDsa, Smt. Preethi Lakshmi R.</p>

20.	2nd March 2024	R. Eswin Pria Angel	3.30 PM	Active components and passive components in mobile communication	In mobile network, to receive and transmit the signal two categories of components are used. The main component is called active component and the supporting component is called passive component. The active component contains a Base transceiver station ie. Tower, Duplexer, Amplifier, Transceiver. The tower carries two types of antenna. One is RF antenna and another is microwave antenna. RF antenna helps in receiving the electromagnetic signal and transmit the electric signal as electromagnetic signal. The supporting functions like connecting the network centre, connecting the nearby tower are handled by microwave antenna. The duplexer creates path for two way communication and amplifier Amplifies the signal. The passive components gives power support for the active components	Smt. Rachana C R , Smt. Shobha, Smt. Yashaswini J, Smt. Preethi Lakshmi R, Ms. Likhitha M.
21.	20th February 2024	Mrs. Yashaswini J	3:30 PM	Zero-shot learning and Few-shot learning	Zero-shot learning and few-shot learning are two techniques used in machine learning, particularly in the context of natural language processing tasks like text generation and classification. They both involve training models to perform tasks without extensive amounts of labelled data, but they differ in the amount of training data they require. Zero-shot learning allows models to perform new tasks without fine-tuning on task-specific data, making it highly flexible but often requiring a strong understanding of the task descriptions. Few-shot learning is a more constrained version of zero-shot Learning, where the model is trained on a small number of examples or labelled data points for each task. Both zero- shot and few-shot learning are powerful techniques for enabling models to generalize to new tasks or domains with minimal additional training, making them particularly useful in settings where collecting large amounts of labelled data is impractical or infeasible.	Smt. Rachana C R , Smt. Shobha, Smt. Yashaswini J, Smt. Preethi Lakshmi R, Smt. Eswin Pria Angel, Dr. Anisha Kumar, Ms. Likhitha M.
22.	16th February 2024	Dr. Anisha Kumar	3.30PM	Solar Roadway using Green Technology	A series of engineered solar pannels are driven with each size of 12ftX12ft is interlinked with neighbouring panels to form solar roadway system. The photovoltaic(PV) panel convert sunlight to electricity. Solar road panel is the important element, as in India consistent sunlight is available about 300 days, so this unique proposal was implemented. GERMI, Gujarat has installed the solar panels across 205 Km from Ahmedabad to Rajkot , highway to generate 104 megawatts of electricity. this energy can be used to power up the highway infrastructure, light the roads and also run a bit of adjoining buildings. Green Technology	Smt. Rachana C R , Smt. Shobha, Smt. Yashaswini J, Smt. Preethi Lakshmi R, Smt. Eswin Pria Angel, Dr. Anisha Kumar, Ms. Likhitha M M, Ms. Sushmita Sheeba

					which involves in environment friendly component is used in this project.	Dsa.
23.	8th February 2024	Ms. Sushmita Dsa	3.30 PM	Black Box AI	<p>BLACKBOX AI is an AI coding assistant that helps developers by providing real-time code completion, documentation, and debugging suggestions. BLACKBOX AI is also integrated with a variety of developer tools, making it easy to use within your existing workflow. Write and Review Code with the help of our AI-powered Code Autocomplete and Code Chat. Seamlessly integrate BLACKBOX AI into your existing workflow to Supercharge your Coding Experience. Blackbox code autocomplete is build to make developers faster while writing code.</p> <p>Blackbox code autocomplete is available in 20+ programming languages including Python, JavaScript, TypeScript, Go, and Ruby. With a click of a button, you can generate a commit message for your projects. With a click of a button, you can generate a code suggestions for your code</p>	<p>Smt. Shobha D, Smt. Yashaswini J, Smt. Preethi Lakshmi R, Smt. Eswin Pria Angel, Dr. Anisha Kumar, Ms. Likhitha M M, Ms. Sushmita Sheeba Dsa.</p>
24.	1st February 2024	Mrs. Shobha D	3:30 PM	Nuclear battery	<p>Nuclear battery is the first in the world to realise the miniaturisation of atomic energy, placing 63 nuclear isotopes into a module smaller than a coin. Already entered the pilot testing stage. Nuclear battery can meet the needs of long-lasting power supply. The battery works by converting the energy released by decaying isotopes into electricity. It uses 63 nuclear isotopes Atomic energy batteries - also known as nuclear batteries or radioisotope batteries - work on the principle of utilising the energy released by the decay of nuclear isotopes and converting it into electrical energy through semiconductor converters.</p> <p>Scientists in the Soviet Union and United States were able to develop the technology for use in spacecraft, underwater systems and remote scientific stations; however the thermonuclear batteries were both costly and bulky. Research institutions in the US and Europe are also working on their development. Betavolt said its first nuclear battery can deliver 100 microwatts of power and a voltage of 3V, while measuring 15x15x5 cubic millimetres, however it plans to produce a battery with 1 watt of power by 2025.</p> <p>Nuclear battery capable of working in temperatures ranging from -60C to 120C. It has no external radiation, and is suitable for use in medical devices such as pacemakers,</p>	<p>Smt. Rachana C R , Smt. Yashaswini J, Smt. Preethi Lakshmi R, Smt. Eswin Pria Angel, Dr. Anisha Kumar, Ms. Likhitha M M, Ms. Sushmita Sheeba</p>

					artificial hearts. Atomic energy batteries are environmentally friendly. After the decay period, the 63 isotopes turn into a stable isotope of copper, which is non-radioactive. Nuclear battery is used such as aerospace, AI equipment, medical equipment, microprocessors, advanced sensors, small drones and micro-robots.	
25.	25th January 2024	Mrs. Rachana C R	3:30 PM	Serverless Architecture	Serverless architecture is a cloud computing paradigm that allows developers to build and run applications without managing the underlying infrastructure. At the heart of serverless architecture is the concept of FaaS. Functions are small, stateless units of code that are designed to perform a specific task. These functions are triggered by events and are automatically scaled based on demand. FaaS is a subset of serverless computing and is designed to simplify the deployment and scaling of small units of code. Examples of Function as a Service platforms include AWS Lambda (Amazon Web Services), Azure Functions (Microsoft Azure), Google Cloud Functions (Google Cloud), and others. Serverless architectures can be applied to a variety of use cases- Web Application Backend, Real-time File Processing, Chatbots, Event-Driven Data Processing and many more.	Smt. Rachana C R, Smt. Shobha D, Mrs. Yashaswini J, Ms. Likhitha M M, Ms. Sushmita Sheeba Dsa, Smt. Preethi Lakshmi R.
26.	16th January 2024	Mrs. Preethi Lakshmi R	3.00 P.M	Rally	Rally is an application which allows users to manage the work for one or many teams on one page. Teams, Product Managers and Product Owners can find work faster and easier. It is a Agile Methodology. Work with bcklogs across multiple teams and save a single view of all work with one or multiple teams. Can track your backlog or the work that you want to accomplish. Teams identify the work to be done, dependencies and challenges. Capacity planning allows to see how highest business priorities stack up against the capacity of the teams and help to balance work allocations and team delivery. Teams break down features into stories and plan them into (typically) two -week iterations / sprints. Release tracking allows teams and team leaders to keep their finger of the pluse of their work without unpleasent surprise. Create user stories and issues, plan sprints and distribute task across your software team. Agile methodology is a project management approach that involves breaking the project into phases and emphasizes continuous collaboration and improvement. Agile teams break large complex projects. Sprint is a set period of time during which specific work has to be completed and made	Smt. Rachana C R, Smt. Shobha D, Smt. Yashaswini, Dr. Anisha Kumar, Ms. Likhitha M M, Ms. Shushmita Sheeba Dsa, Mrs. R. Eswin Pria Angel.

					ready for review. Scrum is a framework for getting work done within agile.	
27.	5th January 2024	Mrs. R. Eswin Pria Angel	1.20 P.M	Basics about frequency	There are two types of waves existing around the earth. One is Gravitational waves and another one is electromagnetic waves. The three components of electromagnetic wave is energy, frequency and wavelength. If the wavelength between the frequency is more, then it can travel more. This frequency exist naturally which cannot be modified by humans What is human made signal? This may be the audio signal to be send from radio station, or the videos send from TV stations. The raw signal must be modulated first and will be converted into electromagnetic wave with required frequency (but it should not exceed the defined limit) and will be transmitted.	Smt. Rachana C R, Smt. Shobha D, Smt. Yashaswini, Dr. Anisha Kumar, Ms. Likhitha M M, Ms. Shushmita Sheeba Dsa, Smt. Preethi Lakshmi R.
28.	20th December 2023	Ms. Likhitha M M	3:00 PM	Microsoft Copilot - AI chatbot by Microsoft	Microsoft Copilot is a chatbot developed by Microsoft. It was launched as Bing Chat, as a built-in feature for Microsoft Bing and Microsoft Edge. It is based on a large language model, and has been suggested by Microsoft as a supported replacement for the discontinued Cortana. Over the course of 2023, Microsoft began to unify the Copilot branding across its various chatbot products. Copilot utilizes the Microsoft Prometheus model, which was built on top of OpenAI's GPT-4 foundational large language model, which in turn has been fine-tuned using both supervised and reinforcement learning techniques. Copilot's conversational interface style resembles that of ChatGPT. Copilot is able to cite sources, create poems and songs, and use its Image Creator to generate images based on text prompts. It is able to understand and communicate in numerous languages and dialects. At its Build 2023 conference, Microsoft announced its plans to integrate Copilot into Windows 11, allowing users to access it directly through the taskbar.	Smt. Rachana C R, Smt. Shobha D, Smt. Yashaswini, Dr. Anisha Kumar, Ms. Likhitha M M, Smt. Eswin Pria Angel. Ms. Shushmita Sheeba Dsa, Smt. Preethi Lakshmi R
29.	16 th December 2023	Dr. Anisha Kumar	1.20 PM	XERO Accounting Application	Xero Accounting application is used to run a small business accounts from anywhere and remain productive in otherwise unproductive moments. It is very much similar to quickbooks with features of accounting and bookkeeping for small business. it can be used in mobile android version and web portals. It is used to send invoices to get payments, to keep track of what is owed, reconcile, see the cash flow in and out at a glance. It allows to add new customer, create new invoice, send invoice or convert quote to invoice,	Smt. Rachana C R, Smt. Shobha D, Smt. Yashaswini, Dr. Anisha Kumar, Ms. Likhitha M M, Smt. Eswin Pria Angel, Smt. Preethi Lakshmi R.

					specify invoice of a customer, payments of customer tracked through invoice and the status. This app will be connected to the bank accounts and reconcile these transaction on time that suits us. Profit and Loss, overdue bills can be generated by this App.	
30.	2nd December 2023	Ms. Sushmita Sheeba Dsa	1.00 PM	Microservices	"Microservices is an architectural style that structures an application as a collection of small, independent services, each focused on a specific business capability. These services communicate with each other through well-defined APIs, often using lightweight protocols such as HTTP or message queues. Each micro service operates independently and can be developed, deployed, and scaled independently of other services in the system. This decentralized approach provides several advantages, including improved fault isolation, easier maintenance, and the ability to use different technologies for different services based on their specific requirements. Popular technologies like Docker and Kubernetes are often used in conjunction with micro services to facilitate containerization and orchestration, making deployment and scaling more efficient. Additionally, micro services can contribute to an organization's agility, allowing teams to work independently on different services, enabling faster development cycles and quicker adaptation to changing business requirements. Despite its benefits, the adoption of micro services requires careful consideration of factors such as team expertise, operational overhead, and the specific needs of the application. Successful implementation often involves a cultural shift, emphasizing collaboration, automation, and a DevOps approach to development and operations. In conclusion, microservices have become a prominent architectural choice for building scalable, flexible, and maintainable software systems. While it comes with challenges, the potential benefits make it an attractive option for organizations seeking to enhance their development practices and adapt to the demands of modern, dynamic business environments."	Smt. Rachana C R, Smt. Shobha D, Smt. Yashaswini, Dr. Anisha Kumar, Ms. Likhitha M M, Smt. Eswin Pria Angel.
31.	31st October 2023	Mrs. Yashaswini J	3:00 PM	Quillbot AI	An online paraphrasing tool called Quillbot AI employs artificial intelligence to assist writers in developing their writing abilities. It is intended to assist users in changing the wording of sentences, paragraphs, and entire documents while preserving the context and original meaning. Quillbot AI analyses the text using machine learning (ML) and	Smt. Rachana C R, Mr. Basanth Kumar H B, Smt. Shobha D, Smt. Yashaswini, Dr. Anisha Kumar,

					<p>natural language processing (NLP) algorithms to recommend ways to improve sentence structure, vocabulary, and flow. It can also aid in pointing out places that can benefit from more background information or clarification. Two options with varied payment terms are available from Quillbot. The free plan includes a restricted version with a summarizer word limit of 1,200 and a restriction of 125 words per paraphrase. Features of QuillBot- • Grammar Check Tool, Paraphrase tool, Tool to Generate Citations, Summarizer Tool, Translator. The app is made to support content creators and writers. Using its features, we can modify a prewritten article so that it is appropriate for another website, simplifying the language as needed.</p>	<p>Ms. Likhitha M M, Smt. Eswin Pria Angel.</p>
32.	12th October 2023	Mrs. Shobha D	3:30 PM	Top 10 Data Extraction Tools	<p>Data Extraction is the Process of Converting Data From its Source into a Structured Format for Enhanced Analysis & Usability. This Involves Organizing Data into Columns & Rows it Involve Extracting Specific Data Element, Such as Contact Details or Financial Information within Large Dataset. Top 10 Data Extraction Tools in 2023 are: 1: Apify-Apify Offers a Vast Repository of Readymade Tools for Web Scraping and Automation Project. 2. Octopuses-It is Suitable for Both Professionals Without Loading Coding Skills. It is Highly Versatile and Finds Application in Market Insights, Price Monitoring and Much More. 3. Rossum-Rossum's AI System Reads and Comprehends Documents with Human Like Cognition it extracts text from Scanner Image, Transforming them into actionable Business Data. 4. Integrate.IO-It Offers All in One platform. Its Feature is a drag and drop interface and a wide Array of connectors. 5. Data mines-It is a Chrome Extension using this Information's are directly from webpage into CSV, Excel files or Google Sheets. This Tool Eliminates the Manual Data Entry. 6: Air Byte-It is a Pen Source Platform its having a Tool ELT (Extract, Load, Transform) It is a Data Pipeline Creation. It is a Connector Development Kit.7: Diffbot-It is in depth web data extraction. Its expertise is in transforming unstructured internet data into structured. it is context rich databases. 8: Stitch-Stitch is a Fully Managed ETL Solution.9: FiveTran-it is also ELT Domain; it is 300 Built in Connectors. Users can Craft Functions for personalized Data extraction. 10: Hevadata-its automated Schema management its Support Both Preload and Postload Data Transformations.</p>	<p>Smt. Rachana C R, Mr. Basanth Kumar H B, Smt. Shobha D, Smt. Yashaswini, Dr. Anisha Kumar, Ms. Likhitha M M, Smt. Eswin Pria Angel.</p>

33.	30th September 2023	Mrs. Rachana C R	1:15 PM	Google Lens	<p>Google Lens lets you search what you see. Using a photo, your camera or almost any image, Lens helps you discover visually similar images and related content, gathering results from all over the internet. As a smartphone camera-based tool, Google Lens has great potential for helping people who struggle with reading and other language-based challenges. Lens uses computer vision, machine learning and Google's Knowledge Graph to let people turn the things they see in the real world into a visual search box, enabling them to identify objects like plants and animals, or to copy and paste text from the real world into their phone. Google Lens uses Tensor Flow which is Google's open-source machine learning framework. Tensor Flow helps connect images to the words that best describe them. The algorithms then connect those labels to Google's Knowledge Graph, with its tens of billions of facts of image clicked and available over the Google search engine. First announced during Google I/O 2017 October 4, it was first provided as a standalone app, later being integrated into Android's standard camera app.</p>	<p>Smt. Rachana C R, Mr. Basanth Kumar H B, Smt. Shobha D, Smt. Yashaswini, Dr. Anisha Kumar, Ms. Likhitha M M, Smt. Eswin Pria Angel.</p>
34.	8th September 2023	Ms. Likhitha M M	4:00 PM	Apple Vision Pro	<p>Apple Vision Pro is an upcoming mixed-reality headset developed by Apple Inc. It was announced on June 5, 2023, at Apple's Worldwide Developers Conference, The Vision Pro can display 3D objects in your current space or even transport you to new spaces. Apple Vision Pro has a laminated glass display front, an aluminum frame covered by a flexible cushion, and an adjustable headband. The frame contains five sensors, six microphones and 12 cameras. The user's face is scanned by the headset during setup to generate a persona—a realistic avatar used by OS features. Apple Vision Pro runs visionOS (internally called xrOS), which is derived primarily from iOS core frameworks (including UIKit, SwiftUI, and ARKit), and XR-specific frameworks for foveated rendering and real-time interaction. The operating system uses a 3D user interface navigated via finger tracking, eye tracking, and speech recognition. Its availability is scheduled for early 2024 in the United States and later that year internationally.</p>	<p>Smt. Rachana C R, Mr. Basanth Kumar H B, Smt. Shobha D, Smt. Yashaswini, Ms. Likhitha M M , Smt. Eswin Pria Angel.</p>
35.	30th August 2023	Mrs. R Eswin Pria Angel	3.00PM	GAN and Slice GAN	<p>GAN stands for "Generative Adversarial Network."Its a type of artificial neural network architecture used in machine learning and deep learning. A GAN consists of two neural networks: Generator: The generator network's role is to create fake data samples that resemble real data. It takes</p>	<p>Smt. Rachana C R, Mr. Basanth Kumar H B, Smt. Shobha D, Smt. Yashaswini,</p>

					random noise as input and generates data, such as images, audio, or text, with the goal of making the generated data indistinguishable from real data. The discriminator network, on the other hand, tries to distinguish between real data and fake data generated by the generator. It takes both real and fake data as input and assigns a probability that the input data is real. The training process alternates between these two phases. Over time, the generator and discriminator become better and better at their respective tasks. Ideally, the generator becomes so skilled that it produces data that is nearly indistinguishable from real data. SliceGAN, which is able to synthesise high fidelity 3D datasets using a single representative 2D image. This is especially relevant for the task of material microstructure generation, as a cross-sectional micrograph can contain sufficient information to Statistically reconstruct 3D samples.	Ms. Likhitha M M , Smt. Eswin Pria Angel.
36.	19th August 2023	Mr. Basanth Kumar H B	3:00 PM	Adobe Firefly	Firefly is the new family of creative generative AI models coming to Adobe products, focusing initially on image and text effect generation. Firefly will offer new ways to ideate, create, and communicate While significantly improving creative workflows.	Smt. Rachana C R, Dr. Anisha Kumar , Ms. Likhitha M M , Smt. Eswin Pria Angel.
37.	1 st August 2023	Dr. Anisha Kumar	3:15 PM	Google Feature : Unknown Tracker Detector	Google along with apple was working on a new safety feature called Unknown Tracker Alerts. This notifies the users about unwanted Bluetooth trackers travelling with them. While Bluetooth trackers like AirTags and Tiles are often used to track or find lost items, many have used them for stalking other People and committing crimes like planned car theft. Available on device running Android 6 marshmellow this unknown tracker alerts feature works by sending users a notification if it finds bluetooth tracker that does not belong to them and is travelling with them. It also gives more details like notification to see the location of map, it shows when the tracker started to follow. Here a trigger manual scans by connecting the setting app on the phone, heading over to the Safety and emergency.	Smt. Rachana C R, Smt. Shobha D , Smt. Yashaswini, Dr. Anisha Kumar , Ms. Likhitha M M , Smt. Eswin Pria Angel.

38.	07th July 2023	Smt. Yashaswini J	3:15 PM	Atomic Breathing	University of Washington researchers have discovered they can detect atomic "breathing," or the mechanical vibration between two layers of atoms, by observing the type of light those atoms emitted when stimulated by a laser. The sound of this atomic "breath" could help researchers encode and transmit quantum information. The researchers also developed a device that could serve as a new type of building block for quantum technologies, which are widely anticipated to have many future applications in fields such as computing, communications and sensor development.	Smt. Rachana C R, Smt. Shobha D , Smt. Yashaswini J, Mr. Basanth Kumar H B, Dr. Anisha Kumar , Ms. Likhitha M M , Smt. Eswin Pria Angel.
39.	26th June 2023	Smt. Rachana C R	3:00 PM	Roam Around - world's first viral AI travel planner	Roam Around is the world's first viral artificial intelligence travel planner, forever revolutionizing the way people plan their trips. The days of spending weeks tediously planning trips are long gone. Now, simply enter any destination on Earth, and Roam Around will generate a tailor-made itinerary within seconds. Roam Around is built on OpenAI's ChatGPT. It incorporates a feedback system where users can rate activities with a thumbs-up or thumbs-down, enabling it to learn about their preferences. This data is used to fine-tune the models and adapt to travelers' habits and interactions with AI systems. With over 5 million itineraries and interactions, this model is set to become increasingly travel-specific, ensuring that future recommendations are bespoke to individual user needs based on their feedback history.	Smt. Rachana C R, Smt. Shobha D , Smt. Yashaswini J, Mr. Basanth Kumar H B, Dr. Anisha Kumar , Ms. Likhitha M M , Smt. Eswin Pria Angel.
40.	06th May 2023	Ms. Likhitha M M	1:00 PM	Brain Attention Detection and Analysis Device - "Focus 1"	"Focus 1" is a gadget which is wearable device specifically designed to detect and analyse the user's attention levels, it was developed by the scientists from Harvard's centre of Brain Science, with algorithm based on a formula developed at NASA, it accurately translate Brain signals into attention levels. It uses the EEG sensor that is the "Electroencephalography" sensor. In Focus 1, hydrogel sensor has been used. EEG is a recording of brain activity, where these sensors are attached to the scalp to pick up the electrical signals produced by the brain. The acquired signals go through the feature extraction and are classified, by these methods the mental state is identified and the feedback is given, to make these process, Machine learning tools like 'Super Vector Machines' and most of the other 'Neural network algorithms' are used.	Smt. Rachana C R, Smt. Yashaswini J, Dr. Anisha Kumar, Ms. Likhitha M M.

41.	26th April 2023	Mrs. Eswin Pria Angel	3.00 PM	Robotic Process Automation	<p>Robotic process automation (RPA) is a software technology that makes it easy to build, deploy, and manage software robots that emulate humans actions interacting with digital systems and software. It is a Software robots—instead of people—do repetitive and lower-value work, like logging into applications and systems, moving files and folders, extracting, copying, and inserting data, filling in forms, and completing routine analyses and reports. Advanced robots can even perform cognitive processes, like interpreting text, engaging in chats and conversations, understanding unstructured data, and applying advanced machine learning models to make complex decisions. When robots do these types of repetitive, high-volume tasks, humans are freed to focus on the things they do best and enjoy more: innovating, collaborating, creating, and interacting with customers. Enterprises get a boost too: higher productivity, efficiency, and resilience.</p>	Smt. Rachana C R, Smt. Yashaswini J, Dr. Anisha Kumar, Ms. Likhitha M M.
42.	3rd April 2023	Dr. Anisha Kumar	3.30 PM	Technology of ORCAM Eye For	<p>This technology was invented in Israel and has won the Innovation Award of 2022. It helps the visually impaired unfortunate people to see everything around them. The brand ambassador of the product is the world-renowned football player Messi. It is a portable, artificial vision device that allows visually impaired people to understand the text and identify objects through audio feedback, describing what they are unable to see. This technology reads text from any surface, recognizes a face, and identifies colors, products, and more. This device snaps a picture of the text from any surface and relays the information to the user via a small earpiece. This allows the user to be able to read work emails, medicine labels, and more on their own. Comparatively, with other similar devices, this is small, portable, and discreet.</p>	Smt. Rachana C R, Smt. Shobha D , Smt. Yashaswini J, Mr. Basanth Kumar H B, Dr. Anisha Kumar , Ms. Likhitha M M , Smt. Eswin Pria Angel.
43.	10th March 2023	Smt. Yashaswini J	3:15 PM	Importance of Fibonacci Sequence	<p>The Fibonacci sequence is a set of numbers following the rule that each number, called a Fibonacci number, is equal to the sum of the two preceding numbers. Fibonacci sequences are indeed found everywhere in nature/life. They're useful at modelling growth of animal populations, plant cell growth, snowflake shape, plant shape, cryptography etc. This Fibonacci number provides a model for designing recursive programming algorithms in computer programming, where the time for any routine is the time within it, as well as the time for each recursive call. In Fibonacci heap, the number of children of each node in</p>	Smt. Rachana C R, Smt. Shobha D , Smt. Yashaswini J, Mr. Basanth Kumar H B, Smt. Shruthi Prabhakar, Dr. Anisha Kumar.

					the heap is at most $\log(n)$. Also the sub tree starting a node with m children is at least $(m+2)^{\text{th}}$ Fibonacci number.	
44.	22nd February 2023	Smt. Shruthi Prabhakar	3:15 PM	Find, lock, or erase a lost Android device remotely	The lost device gets a notification. On the map, you'll get info about where the device is. The location is approximate and may not be accurate. If your device can't be found, you may find its last known location, if available. If you get a prompt, tap Enable lock & erase. Select what you want to do: Play sound: Rings your device at full volume for 5 Minutes, even if it's set to silent or vibrate. Secure device: Locks your device with your PIN or password. If you don't have a lock, you can set one. To help someone return your device to you, you can add a message or device number to the lock screen. Erase device: Permanently deletes all data on your device, but may not delete SD cards. After you Erase, Find My Device won't work on the device.	Smt. Rachana C R, Smt. Shobha D, Dr. Anisha Kumar, Mr. Basanth Kumar H B, Ms. Likhitha M M, Smt. Shruthi Prabhakar.
45.	10th February 2023	Smt. Shobha D	4:00 PM	Information about Lithium deposits in our country	The Lithium deposits are very much needed for India, as the country put its focus on electric mobility for both public and private transport. Lithium is used in electric vehicles, phones and laptops solar panel everywhere it is required. To be self-reliant, it is very important for country to find out critical minerals and also process those. Currently, India is importing minerals like lithium, nickel and cobalt etc., to strengthen the critical mineral supply chain for emerging technologies The Geological Survey of India (GSI) was established in 1851 to serve British interest in exploring Coal deposits for the expansion of the railway network in the country. After independence it has come under mining ministry. In this year, India is considering 966 mining programs, including 318 mineral exploration project and 12 marine mineral investigation project. India's mining ministry announced that, it has found 5.9 million tonnes of lithium deposits in Reasi district of Jammu and Kashmir, for the first time that lithium has been found in India.	Smt. Rachana C R, Smt. Yashaswini J, Ms. Likhitha M M, Smt. Shobha D.
46.	08th February 2023	Smt. Rachana C R	3:00 PM	Types of Cloud and Google cloud platform	Private Clouds: A private cloud is a type of cloud computing environment that provides IT infrastructure services to a particular user or organization. There is no interference from third parties in a private cloud. Public Clouds: While private clouds provide computing services only to a single organization, public clouds are managed by third-party vendors that offer on-demand cloud computing services to multiple organizations. Some examples of public clouds are Google, Microsoft Azure, and Amazon Web Services	Smt. Rachana C R, Smt. Yashaswini J, Smt. Shobha D, Dr. Anisha Kumar, Mr. Basanth Kumar H B, Ms. Likhitha M M, Smt. Shruthi Prabhakar.

					(AWS). Hybrid Clouds: Hybrid clouds allow the integration of private and public cloud features into a single IT infrastructure. It brings together private and public cloud environments from multiple vendors and provides users with a flexible and scalable cloud environment. Google Cloud Platform: New customers can use \$300 in free credits to try Cloud Storage. Hosting a static website with Cloud Storage is simple. If you have a web app that needs to serve static content or user-uploaded static media, using Cloud Storage can be a cost-effective and efficient way to host and serve this content, while reducing the amount of dynamic requests to your web app. Google Cloud's hosting services give your WordPress site improved performance, virtually limitless scalability, stronger security, greater control, and more flexibility. Once your free trial ends, you can continue to host your website starting at \$12.71/month with WordPress on Google Cloud. Pricing for Cloud Storage services is based on storage class (location and operation fees apply), network egress, and network usage. Pricing calculator helps the users estimate their monthly Cloud Storage charges, including cluster Management fees.	
47.	25th January 20223	Ms. Likhitha M M	3:30 PM	Sixth Sense Technology	The sixth sense technology employs a sixth sense which is in reality a wearable pendent-like device. This device is actually a mini-projector coupled with a camera and a cell phone, designed for obeying hand gestures. Using simple hand Sixth Sense is a gesture-based wearable computer system gestures, touch screens can be obtained from any surface for various applications. This sixth sense technology provides us with the freedom of interacting with the digital world using hand gestures. This technology has a wide application in the field of artificial intelligence. This methodology can aid in the synthesis of bots that will be able to interact with humans. This technology enables people to interact in the digital world as if they are interacting in the real world. The Sixth Sense prototype implements several applications that demonstrate the usefulness, Viability and flexibility of the system.	Smt. Rachana C R, Smt. Shobha D, Dr. Anisha Kumar, Mr. Basanth Kumar H B, Ms. Likhitha M M
48.	12th January 2023	Mr. Basanth Kumar H B	4:00 PM	Deepfakes: Medical Image Tamper Detection Data Set	Attackers have the ability to intercept and add/remove medical evidence in medical imagery with high realism using deep learning. In this dataset medical deepfakes are presented: 3D CT scans of human lungs, where some have been tampered with real cancer removed and with fake	Smt. Rachana C R, Smt. Yashaswini J, Smt. Shobha D, Dr. Anisha Kumar, Mr. Basanth Kumar H B,

					cancer injected. The objective of this dataset is to distinguish between real and fake cancers, and identify where medical scans have been tampered. Three expert radiologists have evaluated this dataset and could not reliably tell the difference between real and fake cancers, meaning that the fake cancers are realistic And this detection task is very challenging.	Ms. Likhitha M M, Smt. Shruthi Prabhakar
49.	06th January 2023	Dr. Anisha Kumar	3:30 PM	NFT -A Non-Fungible Token	Non-Fungible means that something is unique and cannot be replaced. In contrast, physical money and crypto currencies are fungible, which means they can be traded or exchanged for one another. NFTs are digital representations of assets and can also represent real-world items such as artwork and real estate. Tokenizing real-world tangible assets in this way is considered by some users to make buying, selling, and trading them more efficient as well as potentially reducing the likelihood of fraud. The process of buying NFTs is as follows: First, open a crypto exchange account which is a platform to buy and sell different types of crypto currencies. Secondly, open a crypto wallet that has the keys to grant access to digital assets. There are two types of wallets Hot Wallets and Cold Wallets. NFTs are sold on a block chain called ETH (Ethereum), whichever crypto wallet is brought should be compatible with the Ethereum Block chain.	Smt. Rachana C R, Smt. Shobha D , Smt. Yashaswini J, Mr. G Prasanna David, Smt. Shruthi Prabhakar, Dr. Anisha Kumar, Ms. Likhitha M.M.
50.	07th November 2022	Smt. Yashaswini J	1:30 PM	Mastodon-decentralised Social Networking	Mastodon is an open source social network, similar to twitter or tumblr,. Users can make profiles, post messages, images or videos and follow each other users. Unlike other platforms, Mastodon is decentralized, meaning that there is no one sever, company or person running it. While other social media platforms are owned and operated by a single corporation who has full control over everything, anyone can run their own server of Mastodon. When someone creates their own version of mastodon this called as an instance (My site My rules). Since Matsodon is an open source anyone can create their own instance of Mastodon with their own set of rules. Because of these, all instances are owned, operated and moderated by the community that creates them and not some large corpation which tracks our data to sell to advertisers.	Smt. Rachana C R, Smt. Shobha D , Smt. Yashaswini J, Mr. G Prasanna David, Smt. Shruthi Prabhakar, Dr. Anisha Kumar.

51.	28th October 2022	Smt. Shruthi Prabhakar	4:00 PM	Google to alert parents when their kids leave school	Google has announced new updates to Family Link, which offer a range of options and help keep families safer online. "Location tab", parents can see all of their children on the same map with their children on the same map with their device location. "Highlights tab" will allow the parents to track the usage of their child's device by showing a snapshot of their child's app usage, screen time and recently installed apps. "Controls tab" enables parents to monitor children with the ability to set screen time limits for individual devices or specific apps, as well as set content restrictions. For parents and children, Family Link will also be available on the web. With this, parents will be able to access online features even when they are away from their phones or don't have the app.	Smt. Rachana C R, Smt. Shobha D , Smt. Yashaswini J, Mr. G Prasanna David, Smt. Shruthi Prabhakar, Dr. Anisha Kumar.
52.	19th October 2022	Smt. Shobha D	4:00 PM	New Hybrid Car for Sustainable Development	Ethanol based engine are using in some countries like Canada, Brazil, US etc. According to the analysis ethanol based engines are cheaper and Reduce pollution. So, the Indian Government is encouraging the use of electric vehicle and vehicle that runs on bio fuels like ethanol and methanol. In this regard, Nithin Gadkari launched flex fuel strong hybrid electric vehicle from Toyato in the name of the car is Toyato Corolla Altis Hybrid Car. Flex fule car means which can move on with petrol, methanol, ethanol or the combination of both.	Smt. Rachana C R, Mr. Basanth Kumar, Smt. Shobha D , Smt. Yashaswini J, Smt. Shruthi Prabhakar.
53.	14th October 2022	Mr. G Prasanna David	4:00 PM	Ad-block killer in Google Chrome	News and discussions are going on about "Manifest V3", which is the upcoming updated Google Chrome Extensions platform. According to reports, Manifest V3 will greatly limit what browser extensions could do. More importantly, privacy preserving extensions that block web usage tracking, ad blockers would not work in the near future. It is not surprising since Google's business model and revenue model is dependent on tracking and advertisements.	Smt. Shobha D , Smt. Yashaswini, Mr. G Prasanna David , Smt. Shruthi Prabhakar, Dr. Anisha Kumar.

54.	10th October 2022	Mr. Basanth Kumar H B	4:10 PM	Dataset for Classification	Datasets play a vital role in evaluating the performance of any classification system. Two new datasets, namely JSSSTU CG and PG Image Dataset and JSSSTU PRCG Image Dataset comprise 14000 samples and 2000 samples respectively. The former dataset consists of a diverse collection of graphical contents collected from reliable CG resources and photographic images are collected from various camera models. The latter dataset consists of only surrealistic computer-generated images and is hard to distinguish with the naked eye.	Smt. Rachana C R, Mr. Basanth Kumar, Dr. Anisha Kumar Mr. Prasanna David, Smt. Yashaswini J, Smt. Shobha D, Smt. Shruthi Prabhakar.
55.	29th September 2022	Dr. Anisha Kumar	4:10 PM	Apple Watch SE2	Apple Watch SE2 "Essential Smart watch" is like a pair of denim and jeans as casual to wear. This watch series cost 29900/- in the market.it looks similar to the Apple Watch of series 8 but is available in an aluminium finish and it comes with 40mm and 44mm options with GPS. It uses the feature of Retina deduction. It is available in the market in three different colors, trendy for sports persons. It has outstanding features like Retina OLED display, Digital crown facility and water resistance of 50 meters.	Smt. Rachana C R, Mr. Basanth Kumar, Dr. Anisha Kumar, Mr. Prasanna David, Smt. Yashaswini J, Smt. Shobha D.
56.	26th September 2022	Smt. Rachana C R	4:00 PM	5G and JIO	5G is the 5th generation mobile network. It is a new global wireless standard after 1G, 2G, 3G, and 4G networks. 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices. 4G LTE has a peak speed of 1GB per second; 5G could theoretically achieve speeds of 20GB per second. Reliance Jio announced its 5G services called Jio True 5G. However, Jio will roll out 5G services based on standalone (SA) architecture in several cities including Delhi, Mumbai, Chennai and Kolkata. The rollout will begin by Diwali 2022 i.e. October 24, 2022. The telecom company further said that they will deliver 5G to every town in India by December 2023. Plans- Rs 149 - 24 GB (1 GB per day)- 24 Days, Rs 199 -42 GB (1.5 GB per day)	Smt. Rachana C R, Mr. Basanth Kumar H B, Dr. Anisha Kumar, Smt. Yashaswini J.