KCG
COLLEGE OF TECHNOLOGY

CODER'S CONNECT

DEPARTMENT OF CSE

TO MAKE EVERY MAN A SUCCESS AND NO MAN A FAILURE

Volume : 06 Edition : 01 Month & Year: July 2022

TABLE OF CONTENTS

VISION

The Department of Computer Science and Engineering desires to become a prominent centre of excellence for producing competent IT professionals for providing software and software enabled solutions.

MISSION

Provide Quality education in the field of Computer Science and Engineering & related domains. Facilitate socially responsive research and innovation. Inculcate professional behaviour, a spirit of entrepreneurship and commitment to the progress of the nation.

EDITORIAL'S DESK

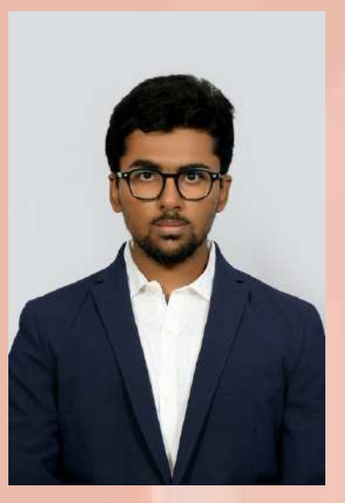
Welcome to the office of the Head of the Department at KCG College of Technology. Our department is dedicated to providing a stimulating and supportive learning environment, where we not only focus on academic growth but also on nurturing the holistic development of our students. Through a blend of rigorous academics, practical exposure, and character building, we aim to equip our students with the skills and mindset to excel in their chosen paths and contribute positively to the global community. We are committed to upholding the college's vision of fostering future leaders and are excited to work together towards achieving excellence in education and research.

CODER'S CONNECT|TEAM

MR. SAI ARVIND,
2ND YEAR

GEORGE BRITT ,
2ND YEAR

SHYAMILY R,
2ND YEAR



MAZIN MUHAMMED IQBAL,2ND YEAR

FACULTY - RESEARCH ACTIVITIES

FACULTY RESEARCH PUBLICATIONS :

"Research and action are two sides of the same coin, each driving the other. They are the twin engines propelling society towards progress and enlightenment. Research, in particular, stands as a relentless pursuit, pushing humanity's boundaries and opening new horizons. It is the key that unlocks the door to hidden truths and broadens the expanse of human knowledge.Researchers, armed with curiosity and a commitment to discovery, venture into uncharted territory. They meticulously investigate the unknown, seeking to shed light on mysteries that have long baffled us.

DR.R DHANALAKSHMI

- Dhanalakshmi R, “A Novel Technique using IoT Based Automated Irrigation System for Smart Farming” Published by Tamkang University Press1.30 2022 - Volume 25, Issue 4 https://doi.org/10.6180/jase.202208_25(4).0009 .
- Dhanalakshmi R,"Abnormality identification in video surveillance system using dct," Intelligent Automation & Soft Computing, vol. 32, no.2, pp. 693–704, 2022.
- Dhanalakshmi, R. (2021, July). Stock price prediction based on LSTM deep learning model. In 2021 International Conference on System, Computation, Automation and Networking (ICSCAN) (pp. 1-4). IEEE.
- Dhanalakshmi, R.Dhanalakshmi, R. A. B, D. P. M, K. M, M. N. Joseph and D. R, "Spam Detection System Using Supervised ML," 2021 International Conference on System, Computation, Automation and Networking (ICSCAN), Puducherry, India, 2021, pp. 1-5, doi: 10.1109/ICSCAN53069.2021.9526421.
- R. Dhanalakshmi, "Implementing QR Code–Based Contact Tracing Framework," 2021 International Conference on System, Computation, Automation and Networking (ICSCAN), Puducherry, India, 2021, pp. 1-6, doi: 10.1109/ICSCAN53069.2021.9526486.
- Dhanalakshmi R,”Survey on Erythema Migrans, and Basal Cell Carcinoma in Computer-Aided Diagnosis”10.3233/APC210135,Volume 40: Advances in Parallel Computing Technologies and Applications.
- Dhanalakshmi R,”Sentimental analysis on twitter data of the political domain”January 2021 DOI:10.1007/978-981-16-0965-7_17 In book: Computer Networks, Big Data and IoT (pp.205-216)

DR.SANKAR S

- Dr.S.Sankar,"Detection of Anomalous Behavior in Online Exam towards Automated Proctoring," 2021 International Conference on System, Computation, Automation and Networking (ICSCAN), Puducherry, India, 2021, pp. 1-5, doi: 10.1109/ICSCAN53069.2021.9526448.
- Dr.S.Sankar, “Sign language translator using YOLO algorithm” November 2021 DOI:10.3233/APC210136 License CC BY-NC 4.0 In book: Advances in Parallel Computing Technologies and Applications
- Dr.S.Sankar,”Sentimental analysis on twitter data of the political domain”January 2021 DOI:10.1007/978-981-16-0965-7_17 In book: Computer Networks, Big Data and IoT (pp.205-216)

DR.PRAVEEN JOE, I.R

- Dr.Praveen Joe I.R,”Hybrid cuckoo–red deer algorithm for multi-objective localization strategy in wireless sensor network", November 2021 https://doi.org/10.1002/dac.5042 Volume35, Issue4.
- Dr.Praveen Joe I.R,”Miniaturized Dual-Band Metamaterial-Loaded Antenna for Heterogeneous Vehicular Communication Networks” https://doi.org/10.1080/03772063.2021.1892539 Volume 69, 2023 - Issue 5
- Dr.Praveen Joe I.R,V. "A Chatbot to promote Students Mental Health through Emotion Recognition," 2021 Third International Conference on Inventive Research in Computing Applications (ICIRCA), Coimbatore, India, 2021, pp. 1412-1416, doi: 10.1109/ICIRCA51532.2021.9544838.

MRS.MINU SUSAN JACOB:

- Mrs.Minu Susan Jacob,”Fuzzy artificial bee colony-based CNN-LSTM and semantic feature for fake product review classification” Volume34, Issue1 ,10 January 2022 , e6539 https://doi.org/10.1002/cpe.6539
- Mrs.Minu Susan Jacob,"Stock Price Prediction Based on LSTM Deep Learning Model," 2021 International Conference on System, Computation, Automation and Networking (ICSCAN), Puducherry, India, 2021, pp. 1-4, doi: 10.1109/ICSCAN53069.2021.9526491.
- Mrs.Minu Susan Jacob,"Realtime Face Mask Detection using Machine Learning," 2021 International Conference on System, Computation, Automation and Networking (ICSCAN), Puducherry, India, 2021, pp. 1-4, doi: 10.1109/ICSCAN53069.2021.9526418.
- Mrs.Minu Susan Jacob,Twitter-Based Disaster Management System Using Data Mining ,January 2021,DOI:10.1007/978-981-16-0965-7_16,In book: Computer Networks, Big Data and IoT (pp.193-203)

MR.R.ANAND

- Mr.R.Anand,"Breast Cancer Prediction in Machine Learning Techniques using Blockchain," 2021 6th International Conference on Signal Processing, Computing and Control (ISPCC), Solan, India, 2021, pp. 293-298, doi: 10.1109/ISPCC53510.2021.9609488.
- Dr.R.Anand,Analysis Of Heart Risk Detection In Machine Learning Using Blockchain," 2021 6th International Conference on Signal Processing, Computing and Control (ISPCC), Solan, India, 2021, pp. 685-689, doi: 10.1109/ISPCC53510.2021.9609353.

"

MR.V.VASANTHA KUMAR

- Mr.V.Vasantha Kumar,"Naive Bayes Algorithm for Sentiment Analysis on Twitter," 2021 International Conference on System, Computation, Automation and Networking (ICSCAN), Puducherry, India, 2021, pp. 1-4, doi: 10.1109/ICSCAN53069.2021.9526473.
- V. Vasantha Kumar, "Identification of Plant Diseases Using Image Processing and Image Recognition," 2021 International Conference on System, Computation, Automation and Networking (ICSCAN), Puducherry, India, 2021, pp. 1-4, doi: 10.1109/ICSCAN53069.2021.9526493.

Dr. R Dhanalakshmi:

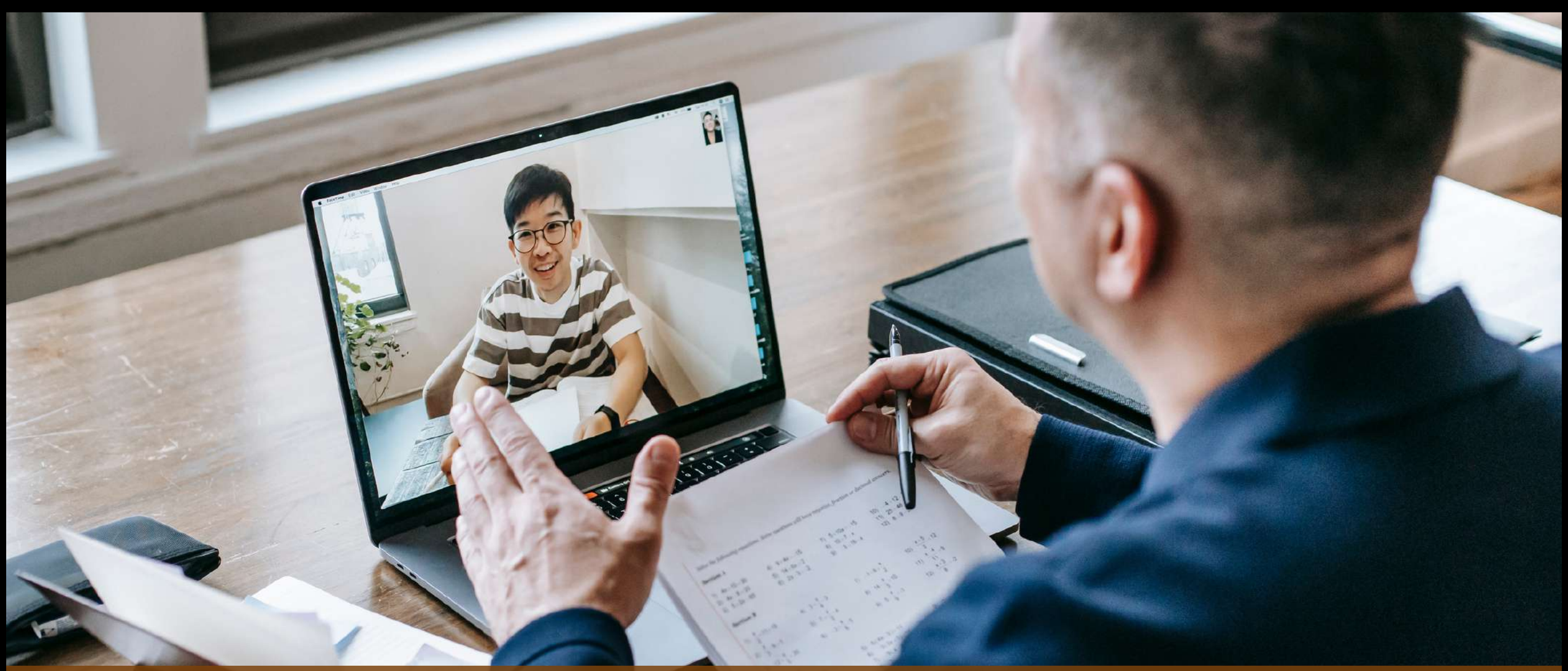
1. Paper Title: Profile Based Digitization of Medical Records in Cloud
   - Publication Status: Australian Patent Granted
2. Paper Title: A System And Method for Agile Meeting Dashboard
   - Publication Status: Australian Patent Granted (Application No. 2021102955)
3. Paper Title: A System and Method for Development of Interactive Three-Dimensional Model
   - Publication Status: Australian Patent Application (June 2021, Application No. 20211103243)
4. Paper Title: A Single Sign-on Authentication System
   - Publication Status: German Patent Granted (April 22)
5. Paper Title: A System to Manage Medical Data
   - Publication Status: German Patent Granted (April 22)

Dr. S Sankar:

1. Paper Title: A System and Method for Agile Meeting Dashboard
   - Publication Status: Australian Patent (October 2021, Application No. 2021102955)
2. Paper Title: Aqua life: A Compact device extracting drinkable water from sea water
   - Publication Status: Australian Patent (April 2021, Application No. 2021100286)
3. Paper Title: 3D printing of cost-effective human skull models and skull implants
   - Publication Status: Australian Patent (May 2021, Application No. 2021101703)

Dr. Praveen Joe:

1. Paper Title: Profile Based Digitization of Medical Records in Cloud
   - Publication Status: Australian Patent Granted (March 2021)



FACULTY AS RESOURCE PERSONS

Role: Resource person

- The international seminar held at APU University in Malaysia on June 3, 2021, brought together experts and scholars from around the world to exchange knowledge and insights on a wide range of topics.
- The national ATAL Faculty Development Program (FDP) held at LICET in Chennai on May 27, 2021, provided a valuable platform for educators to enhance their skills and knowledge in various fields of academia.
- The national ATAL Faculty Development Program (FDP) held at IRTT in Erode on November 23, 2021, facilitated professional growth and knowledge sharing among educators and researchers from across the country.
- The national seminar hosted at the All Institute of Speech and Hearing in Mysuru on February 28, 2022, served as a valuable platform for professionals and experts in the field to discuss and exchange insights on speech and hearing-related topics.

Role: Session chair

- The National Conference on Research Trends in Computer Science and Information Technology (NCRTCI) 2022, held at Bharath Institute of Higher Education and Research on April 27, 2022, provided a significant platform for researchers and academics to explore the latest trends and innovations in the fields of computer science and information technology.

Role: Resource person

- The national conference on Cloud Computing Security, hosted at Bharath Institute of Higher Education and Research on February 28, 2022, brought together experts and professionals to discuss and address critical issues surrounding the security of cloud computing technologies.

WORKSHOPS & LECTURES

1. **Interview Techniques**

A three-day workshop on "Interview Techniques" was conducted with Dr. Praveen Joe I R as the resource person. This engaging workshop attracted 105 participants and took place over three days in July 2021. Additionally, the CSE department organized a "Department Orientation" workshop in which Dr. R Dhanalakshmi played a key role. This workshop, held in August 2021, saw participation from 85 individuals.

2.**Department Orientation:**

The CSE department organized a "Department Orientation" workshop with Dr. R Dhanalakshmi taking a leading role. Held in August 2021, this workshop had 85 participants. It served as a valuable platform to familiarize participants with the department's offerings, faculty, and academic expectations. Such orientation sessions play a crucial role in acclimating students to their academic journey.

Guest Lectures :

1.The CSE department has also been proactive in arranging guest lectures to enrich students' understanding of critical topics in the field. In one instance, Mr. Jones Peterson delivered a lecture on **"Software Testing"** on March 31, 2021. Software testing is a fundamental aspect of software development, and this lecture provided insights into testing methodologies and best practices.

2. Another guest lecture in the CSE department focused on **"Digital Healthcare in Industry Revolution 4.0."** Dr. Booma Poolan Marikannan served as the resource person for this lecture, which was held on April 4, 2021. In the era of Industry 4.0, digital healthcare is a burgeoning field, and this lecture shed light on its transformative potential.

3. Furthermore, Mr. Arokia Renjit shared his expertise in **"Networking"** during a guest lecture on March 5, 2021. Networking is a core element of computer science and plays a pivotal role in modern technology infrastructure. This lecture offered valuable insights into networking principles and practices.

STUDENT'S ACHIEVEMENTS

1. Gracia Betty from 3rd Year won the "Best Video on ‘Madras Day'" on August 23, 2021.
2. Advaith and Mazin from 2nd Year secured the "First prize in Debate (Zeppelin 21)" on October 2, 2021.
3. Kamal Anand from 3rd Year achieved the "Third prize in photography (Zeppelin 21)" on October 2, 2021.
4. Parathasarathy from 2nd Year received the "Third prize in meme creation (Zeppelin 21)" on October 2, 2021.
5. Devdharshini from 1st Year clinched the "First prize in Current Affairs (Zeppelin 21)" on October 2, 2021.
6. Rubasri from 2nd Year achieved the "First prize in dance (Zeppelin 21)" on October 2, 2021.
7. Balaji M from 3rd Year secured the "Third prize in dance (Zeppelin 21)" on October 2, 2021.
8. Sneha R and Amreshwar from 3rd Year were awarded an "Encouragement Prize" with a cash amount of INR 4000 in the "Open Innovation Challenge and Startup Pitching Event 2020" conducted by Vel Tech Rangarajan Dr. Sagunthala R and D Institute of Science and Technology on October 25, 2021.
9. 24 students from 2nd Year obtained UiPath Training Certification in December 2021.
10. Karan Sanjeev Nair from 3rd Year was selected for the AICTE CoronaSafe Engineering Fellowship program among 50K+ candidates across India.
11. Menaka from 3rd Year received a "Special Recognition Award in Virtual Art Exhibit" held at the 2021 Seoul International Meditation Festival and won a cash prize of $100.
12. Swetha Sri and Sneha Raj from 3rd Year were finalists in the Technology Infusion Grand Challenge Asia conducted by La Trobe University.

TECHNICAL ARTICLE

–SURUTHI V 3RD YEAR CSE

AR/VR-AUGMENTED REALITY AND VIRTUAL REALITY

What is AR and VR with examples?

Augmented reality (AR) adds digital elements to a live view often by using the camera on smartphone. Examples of Augmented reality experiences include Snapchat lenses and the game Pokemon Go.

Virtual reality (VR) implies a complete immersion experience that shuts out the physical world. Examples of Virtual reality are virtual entertainment with 3D effect and

we need a VR headset, within an interactive, computer-generated environment to experience the virtual reality.

How does VR and VR work?

Virtual reality (VR) and augmented reality (AR) have exciting potential in the future of gaming, marketing, e-commerce, education, and many other fields.

AR uses a real-world setting while VR is completely virtual. AR users can control their presence in the real world; VR users are controlled by the system.VR requires a headset device, but AR can be accessedwith a smartphone. AR enhances both the virtual and real world while VR only enhancesa fictional reality.

Technical Article

-Amirah Aanjum M N, 1st Year

There are millions of games created on Roblox each year. Here, a shot of theprison-escape game Mad City.

WEB OF Roblox, a platform where WORLDindependent developers creategames popular with children, has been described as a metaverse. metaverse has become the newestmacro-goal for many of the world's tech giants

The metaverse is a network of shared, immersive virtual worlds where people can connect with friends, create and play games, work and shop.

How do you get into the Metaverse?

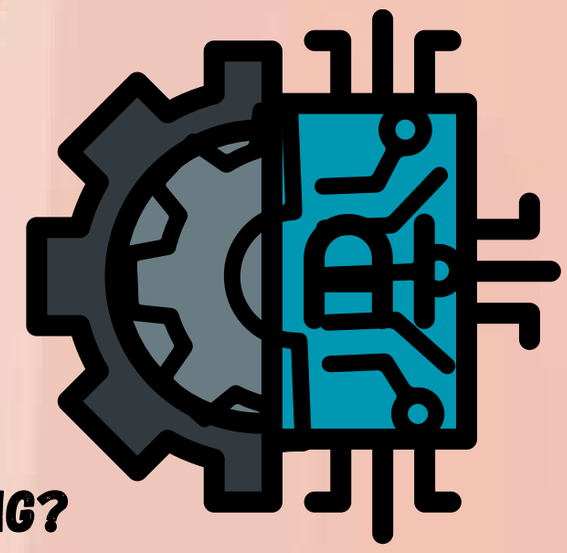
Since the metaverse isn’t a physical place, you can’t get into it. However, you can access it through metaverse platforms using technology designed for the platform’s unique experience. A laptop computer or mobile device is all you need to access an AR or VR experience in some cases.

When dealing with larger platforms like The Sandbox and Roblox, you will need more equipment like a regular headset or VR headset.

As the world’s largest corporations and most ambitious start-ups pursue the metaverse, it’s essential that we—users, developers, consumers, and voters— understand we still have agency over our future and the ability to reset the status quo, but only if we act now. Yes, the metaverse can seem daunting, if not outright scary, but this moment of change is our chance to bring people together, to transform industries that have resisted disruption, and to build a more equal global economy.

TECHNICAL ARTICLE

-KALPANA DEVI L G, 1ST YEAR



WHAT IS MACHINE LEARNING?

A subset of the field of artificial intelligence (AI), machine learning is a discipline focused on using mathematical techniques and large-scale data processing to build programs that can find relationships between input and output data. As an umbrella term, AI covers a broad domain in computer science focused on enabling machines to “think” and act without human intervention. It covers everything from “general intelligence” or the ability for a machine to think and act in the same way a human would, to specialized, task- oriented intelligence, which is where ML falls on the spectrum.

THE MACHINE LEARNING DEVELOPMENT LOOP

Enter machine learning. Under the guidance of capable data scientists and ML engineers, the process starts with data. Namely, the mountains of data created by our embedded systems. The first step in the ML development process is to collect data and label it before it is fed into a model. Labeling is a critical classification step and is how we associate a set of inputs to the expected output.

MACHINE LEARNING MODEL DEVELOPMENT, TRAINING, TESTING, REFINING

After data collection, the next steps are model development, training, testing, and refinement. This phase is where a data scientist or engineer creates a program that ingests the mass of collected input data and transforms it into the expected outputs using one or more approaches. Explaining those approaches could fill volumes, but suffice it to say that most models perform a set of transformations (for example, vector and matrix multiplication) on their inputs. Additionally, they will adjust the weights of each and every input against each other in order to find a set of weights and functions that reliably correlate to the expected outputs.

SO WHERE DOES TINYML FIT?

If it’s not clear already, machine learning is a data-intensive process. When you are attempting to derive a model through correlation, you need a lot of data to feed that model. Hundreds of images or thousands of sensor readings. In fact, the process of model training is so intensive, and so specialized, that it’s a resource hog for almost any central processing unit (CPU), no matter how high-powered. Instead, the vector and matrix-math operations so common in ML are not dissimilar from graphics processing applications, which is why GPUs have become such a popular choice for model development.