



KCG
COLLEGE OF TECHNOLOGY
AUTONOMOUS



CODER'S CONNECT



DEPARTMENT
OF CSE



Volume : 07 Edition : 02 Month & Year: July 2023

TO MAKE EVERY MAN A SUCCESS AND
NO MAN A FAILURE



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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

Step into the Head of the Department's office at KCG College of Technology. Our department is deeply devoted to creating an engaging and supportive educational atmosphere. Here, our primary focus extends beyond academic advancement; we are equally committed to nurturing the overall development of our students. By combining rigorous academics, hands-on learning experiences, and character development, we strive to empower our students with both the practical skills and the mindset required for success in their chosen endeavors. Our dedication aligns perfectly with the college's vision of cultivating future leaders, and we eagerly anticipate collaborating to attain excellence in the realms of education and research

CODER'S CONNECT|TEAM



KALYANASUNDARAM K
SECOND YEAR



DIVAINA L A
SECOND YEAR



KALPANA DEVI L G
SECOND YEAR



ELSON SAMUEL S
SECOND YEAR



FACULTY-RESEARCH ACTIVITIES

FACULTY RESEARCH PUBLICATIONS :



VASANTHA KUMAR V

Developing a conceptual framework for short text categorization using hybrid CNN- LSTM based Caledonian crow optimization, Expert Systems with Applications, Volume 212, 2023, 118517, ISSN 0957-4174, <https://doi.org/10.1016/j.eswa.2022.118517>. Due to the continuous progression of social media networking sites, people share their thoughts, viewpoints, videos, speech and images through short texts. But the short texts are manually understandable but hard for the machine to collect data for clarification. The limited terms present in the short texts seem difficult while categorizing, analyzing as well as evaluating. Since social media and Bibliographic repositories like Digital Bibliography and Library Project (DBLP) contains a substantial amount of information, it is necessary to mine only useful information from the existing short texts.

K. S. SUGANYA

1st Edition was First Published on 2022 Imprint Chapman and Hall/CRC. The total no. of pages is 15 eBook ISBN 9781003217435 The most common problems of misidentification of patients in healthcare industry have resulted in incorrect drug prescription and testing, incorrect diagnosis of patient's ailments and treatment and incorrect discharge of infants to the families after post-natal care. Drug administration, phlebotomy, blood transfusions and surgical treatments are all common instances where patient misidentification can occur in health informatics. Regardless of the technology or approach utilized to precisely identify patients, thorough design of the care processes using Blockchain will ensure effective patient identification prior to any medical intervention and result in safer care with fewer errors. In healthcare, patient information is shared with healthcare experts using electronic health record (EHR), where patient's information is shared among the healthcare experts with the help of patient/healthcare expert's identity.





DR. ANAND

We commend Dr. Anand for his recent recognition as a Supervisor by Anna University, highlighting his commitment to mentoring students. His achievement of securing a 1 Lakh grant under the AICTE SPICES Scheme for the Programming Club showcases his dedication to enhancing computer science education. Dr. Anand's proactive efforts are instrumental in providing valuable resources and opportunities for our students. We celebrate his dedication and look forward to the positive impact of his contributions to our academic community.

DR. MINU SUSAN JACOB

We congratulate and appreciate Dr. Minu for successfully completing her PhD at Anna University. Her achievement reflects her dedication and commitment to academic excellence. Dr. Minu's pursuit of higher education sets a valuable example for our academic community and demonstrates her passion for knowledge. We are proud to have such accomplished faculty members like her who inspire both students and colleagues. Her success is a testament to the quality of our faculty, and we look forward to her continued contributions to research and education.





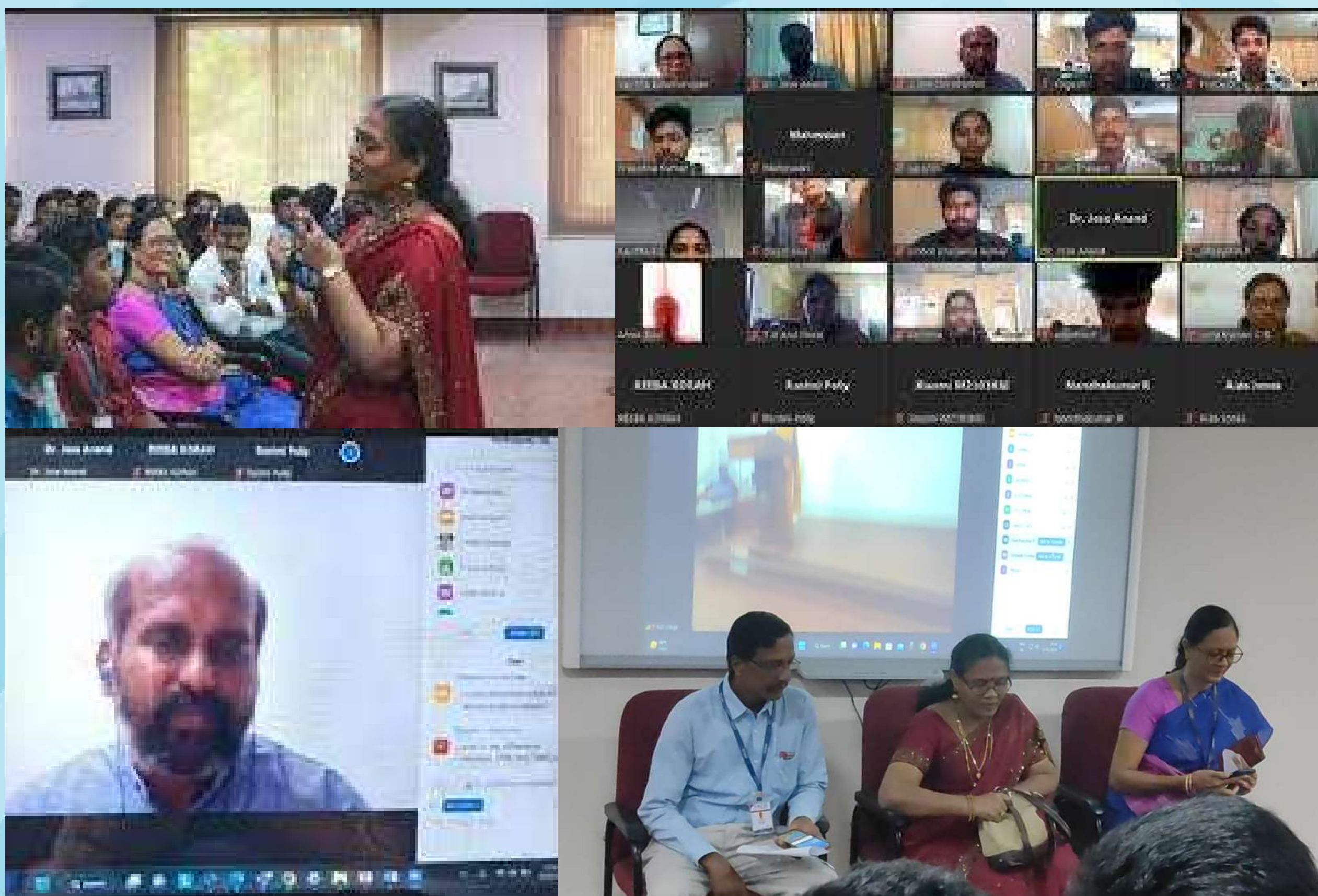
EVENTS



The inauguration of INNOCOM, an Innovative Community, took place on February 1, 2023. The event featured key resource persons who are experts in their respective fields: Mr. Jegatheesan Veeramalai, Senior Architect at Virtusa Corporation: He likely shared insights on architectural aspects of innovation within the community, drawing from his experience in Virtusa Corporation. Mr. Abhishek Muthukumar, Consultant Engineer at Cisco: He probably provided valuable input regarding engineering and technology aspects, offering insights from his role at Cisco. Mr. Agni, Innovation Management and University Connect Program at Nokia: His expertise in innovation management and university connections would have been instrumental in highlighting strategies for fostering innovation and collaboration within innocom .The presence of these accomplished individuals suggests a comprehensive approach to innovation within the community, drawing from diverse fields of expertise. This diverse knowledge base likely contributes to the success and effectiveness of innocom in fostering innovation. These experts likely shared practical knowledge, industry trends, and strategies that can be applied in the real world, which can greatly benefit students in their academic pursuits and future careers. Overall, the presence of these resource persons added significant educational value to the event and was undoubtedly useful for the students involved.



Ms. Gauri Gopinath's workshop on Design Thinking, held on February 4, 2023, greatly benefited students. It provided valuable insights and practical exercises to enhance problem-solving and innovation skills. Design thinking's applicability to real-world scenarios made it a relevant learning experience. Under Ms. Gauri Gopinath's guidance, students gained a deeper understanding of user-centric design and creative problem-solving. These skills will prove invaluable in both academic pursuits and future careers, equipping them to tackle challenges with innovative solutions. In summary, the workshop was highly useful, imparting knowledge and skills crucial for personal and professional development.



The Faculty Development Program (FDP) on cloud computing, conducted by resource persons from February 6 to February 10, 2023, greatly benefited teachers. This program provided advanced knowledge and practical insights into cloud computing, enhancing teaching capabilities and curriculum development. Teachers learned from field experts, staying current with technology trends to effectively educate students in this rapidly evolving field. The FDP also promoted networking and collaboration among educators, fostering a community of learning and knowledge sharing. Overall, this program enriched teachers' expertise, enabling them to better guide students and prepare the next generation of tech professionals for the digital age.



Ms. Manju K Manohar's "TECHNOPHELIA WORKSHOP ON TECHNICAL THINKING" on February 18, 2023, was highly beneficial for students. It offered valuable insights and tools to improve technical thinking, enhancing problem-solving skills. The workshop equipped students with creative approaches to tackle technical challenges, fostering critical thinking and innovation, vital for success in technology-related fields.



The "OPPORTUNITY ASSURED PROGRAM IN DATA SCIENCE" conducted by Mr. Ahmed Khalid, Senior Vice President and Head of Academic Alliances at Imarticus Learning, on February 18, 2023, was undoubtedly highly useful for the students. This program likely provided students with a comprehensive and structured pathway into the field of data science, offering not only theoretical knowledge but also practical training and industry insights. Mr. Ahmed Khalid's expertise and leadership in academic alliances would have ensured that the program was well-designed and up-to-date with industry standards. By participating in this program, students likely gained valuable skills and knowledge that are directly applicable to the data science field. Additionally, the assurance of opportunities would have given students the confidence to pursue careers in this high-demand and rewarding field.



Ms. Varsha, a Software Engineer at Virtusa, conducted a highly useful Flutter workshop for students on April 1, 2023. This hands-on session offered practical insights into mobile app development using Flutter, enhancing students' skills and competitiveness in this tech-driven world. Ms. Varsha's expertise ensured quality guidance, benefiting students academically and professionally, as mobile app development presents lucrative career prospects.



We commend Mr. Ashik, a talented 3D Artist at Crion Technologies, for his initiative in organizing a workshop in Blender. This event, held on April 1, 2023, provided valuable insights and practical knowledge in the field of 3D design. Mr. Ashik's dedication to sharing his expertise and enhancing the skills of our community is truly commendable. We look forward to more such enriching opportunities for skill development in the future.



Mr. Sathish, a Metaverse developer at Crion Technologies, conducted a workshop on the Metaverse on April 1, 2023. The workshop provided attendees with insights into this evolving digital universe and its potential impact on various industries. Participants had the opportunity to explore the future possibilities of the Metaverse, from entertainment to business. This workshop offered valuable insights into the emerging technology and its transformative potential.



INDUSTRIAL VISIT – NOKIA



Visiting Nokia as part of an FDP in Cloud Computing was an educational and eye-opening experience for both faculty members and students. The visit offered a comprehensive view of how cloud technology plays a pivotal role in a global telecommunications leader like Nokia. The day began with an engaging presentation that shed light on Nokia's history, values, and its prominent role in the telecommunications industry. This introduction set the tone for a day filled with insights into cutting-edge technology and its practical applications. One of the highlights of the visit was the exploration of Nokia's research and development facilities. We were given exclusive access to advanced labs where groundbreaking work on 5G technology was in progress. Engineers and researchers explained how cloud computing underpins the rapid deployment of 5G networks, enabling high-speed, low-latency connectivity. Witnessing simulations of 5G network deployment illustrated the pivotal role of cloud technology in modern telecommunications. We also had the privilege of touring Nokia's manufacturing unit, witnessing the intricate assembly process of telecommunication equipment. The emphasis on quality control measures and the integration of cloud-based data analytics and monitoring systems showcased the precision and innovation behind Nokia's operations. Nokia's commitment to sustainability was another key takeaway, highlighting how cloud technology can be leveraged to minimize environmental impact. Interactions with Nokia professionals and a robust Q&A session provided valuable insights and career inspiration for both students and faculty. Overall, the Nokia visit was a valuable opportunity to bridge the gap between theoretical knowledge and real-world applications in the realm of cloud computing and telecommunications.



ACHIEVEMENTS-STUDENTS



GEORGE BRITT A: (3RD YEAR)

We extend our heartfelt congratulations and sincere appreciation to our exceptional student for their remarkable achievements on the following dates:

- Winning the first prize on February 25, 2023, for Channel Surfing.
- Achieving the first prize on March 3, 2023, for Adzap.
- Excelling with the first prize on March 12, 2023, in Web Designing.
- Garnering the first prize on March 18, 2023, in Talent Show.
- Securing the first prize on March 25, 2023, for Talent Buzz.
- Impressing with the first prize on April 6, 2023, for Multiplicity.

This impressive string of victories demonstrates not only our student's remarkable talent but also their dedication, hard work, and versatility across various fields. Their achievements serve as a shining example for their peers and the entire academic community, inspiring us all to reach for excellence. We firmly believe that their continued success will not only motivate others but also contribute significantly to our institution's spirit of excellence. We eagerly anticipate their future accomplishments and applaud their journey towards even greater heights of achievement. Once again, congratulations on these outstanding victories!



MOHAN KUMAR (3RD YEAR)

We wholeheartedly appreciate and congratulate our dedicated student Mohan Kumar for securing the second prize on March 21, 2023, in the "Unleash X" competition. This accomplishment highlights their commendable skills, perseverance, and commitment to excellence.

NITISRI T S (3RD YEAR)

We take immense pride in congratulating Nitisri T S, a third-year student in the Computer Science and Engineering (CSE) program, for receiving the Special Innovation Award at VISAI 2023 on February 24th, 2023. Nitisri's exceptional achievement is a testament to their innovative spirit, dedication, and remarkable talents.



ADVAITH R (3RD YEAR)

Congratulations to Advaith R, a third-year CSE student, for securing the Second Prize at the SONY YURU HACKATHON on March 11th and 12th, 2023. Advaith's exceptional skills and dedication in this competitive event are truly commendable and inspire our academic community.

PRITHIYANGA (2ND YEAR)

We extend our heartfelt congratulations to Prithiyanga, a second-year student in the Computer Science and Engineering (CSE) program, for securing the Third Place at Code Xperts on March 8th, 2023. This accomplishment showcases Prithiyanga's dedication, coding prowess, and commitment to excellence in a competitive field.



MOHANAPRIYA.M (2ND YEAR)



We are thrilled to extend our warmest congratulations to Mohanapriya.M, a second-year student in the Computer Science and Engineering (CSE) program, for achieving the First Place in the Technical Quiz held on March 10th, 2023. This outstanding accomplishment underscores Mohanapriya's exceptional knowledge, quick thinking, and dedication to academic excellence.

AMIRAH AANJUM M N (2ND YEAR)

We are delighted to extend our warmest congratulations to Amirah Aanjum M N, a second-year student in the Computer Science and Engineering (CSE) program, for achieving the coveted First Prize in the SPELL BEE competition held on April 12th, 2023. Amirah's remarkable achievement underscores her exceptional linguistic skills, dedication, and commitment to academic excellence.



WOMEN CODEATHON 5.0

Congratulations to Shyamili R, Sangeetha D, and Nitisri T S, third-year CSE students, for winning the First Prize in the **Women Codeathon 5.0** on March 4th, 2023. Their exceptional coding skills, teamwork, and dedication to excellence are truly commendable and serve as an inspiration to their peers. We look forward to their continued success in their academic journey and beyond. Well done to these outstanding students for their well-deserved recognition and achievement!



**MADHAV KRISHANAN
(2ND YEAR)**



**HARSHAVARDHAN S
(2ND YEAR)**

We are pleased to congratulate Madhav Krishanan and Harshavardhan S, both second-year students in the Computer Science and Engineering (CSE) program, for their outstanding performance in the **FASHION QUIZ**, where they secured the Second Prize on February 24th, 2023. Their achievement highlights their versatility, knowledge, and commitment to excellence.



**M. AJAY
(2ND YEAR)**

**GOWRI LAKSHMI D
(2ND YEAR)**



We are pleased to congratulate Gowri Lakshmi D and M. Ajay, both second-year students in the Computer Science and Engineering (CSE) program, for their outstanding performance in the **SPIES IN DISGUISE**, where they secured the First Prize on April 12th, 2023. Their achievement highlights their versatility, knowledge, and commitment to excellence.



**RIYA ELIZABETH
RENI, (2ND YEAR)**



**SANDHIYA.K
(2ND YEAR)**



**NIRMALA DEVI.M
(2ND YEAR)**



**MOHANA PRIYA.M
(2ND YEAR)**

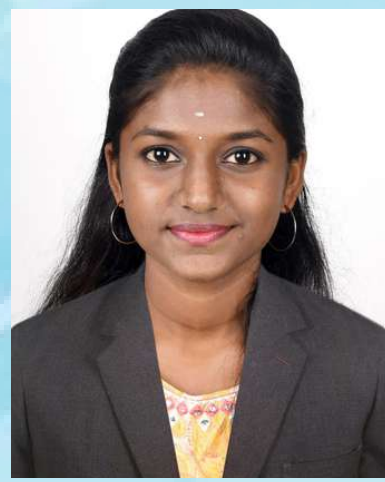
We are pleased to congratulate Riya Elizabeth Reni, Sandhiya.K, Nirmala Devi.M and Mohana Priya.M, both second-year students in the Computer Science and Engineering (CSE) program, for their outstanding performance in the **Art- metry Inherited Design & Innovation Challenge**, where they secured the First Prize on March 18th, 2023. Their achievement highlights their versatility, knowledge, and commitment to excellence.



**VAKKALAGADDA
DRISHTI RAO
(2ND YEAR)**



**MATHLIN
SARORAI A S
(2ND YEAR)**



**DEVADHARSHINI G
(2ND YEAR)**



**SAAI JAGAN S
(2ND YEAR)**



**MOHAMMAD AASHIQ
(2ND YEAR)**

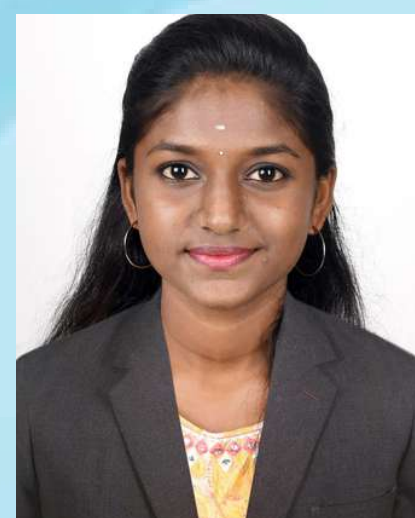
We are pleased to congratulate Vakkalagadda Drishti, Rao, MathlinSarorai A S, Saai Jagan S, Mohammad Aashiq and Devadharshini. G, both second-year students in the Computer Science and Engineering (CSE) program, for their outstanding performance in the **IMPACT'23 – Design Thinking Challenge**, where they secured the First Prize on April 15th, 2023. Their achievement highlights their versatility, knowledge, and commitment to excellence.



**KALYANASUNDARAM
(2ND YEAR)**



**AMITHESH
(2ND YEAR)**



**DEVADHARSHINI G
(2ND YEAR)**



**KIRUTHIK
(2ND YEAR)**

Congratulations to Kalyanasundaram, Devadharshini, Amithesh and Kiruthik, second-year CSE students, for winning the Second Prize in the **INDCOM - Project Demonstration & Competition** on April 12th, 2023. Their exceptional teamwork, and dedication to excellence are truly commendable and serve as an inspiration to their peers. Well done to these outstanding students for their well-deserved recognition and achievement!



**SHAFIUR RAHMAN N F
(3RD YEAR)**



**VIGNESH BALAJI R
(3RD YEAR)**



**SYED KHALID J
(3RD YEAR)**

Congratulations to Vignesh Balaji R, Syed Khalid J and Shafiur Rahman NF, third-year CSE students, for winning the Third Prize in the **CYBERCRATZ 1.0** on 24th and 25th March, 2023. Their exceptional teamwork, and dedication to excellence are truly commendable and serve as an inspiration to their peers. Well done to these outstanding students for their well-deserved recognition and achievement!



Ms. Prithiyanga, and **Ms. Samira**, Second Year CSE won FIRST PRIZE in SDG 7 summit and Energy Efficient Innovation Pitch Presentation conducted as part of IGEN Energathon 2023.

Ms. Sameera Second Year CSE received fund from MSME with Stimutech Wind Turbine for the Theme “Eco-Friendly & Sustainable Furniture”.



RESEARCH PUBLICATION

Sriram V, Second Year, CSE published a paper titled “Application of Queuing System Using Fuzzy Approximation Method in Departmental Store” in IEEE Xplore.



Ms. Mathlin Sarorai Second Year CSE won special Jury Award under the title Electricity Generation Using Footsteps – A Sustainable Solution in the Mistral Hackfest conducted by Mistral Solution

Ms. Devadharshini G, Second Year, CSE published a paper titled “Organic Farming in Drainage Systems with Advanced Automation through Robotics and IoT” in IEEE Xplore.





Mr. Kalyanasundaram K, a second-year student from the Computer Science and Engineering (CSE) Department at KCG College of Technology, had the unique privilege of participating in the Ek Bharat Shreshtha Bharat Yuva Sangam scheme, a government initiative focused on promoting cultural exchange between North Eastern states and Southern States of India. This program serves as a platform for youth to foster cultural understanding and strengthen the bonds that unite our diverse nation.



During his visit to Tripura, Mr. Kalyanasundaram had the honor of meeting the Honorable Chief Minister of Tripura, Dr. Manik Saha, and the Honorable Minister for Municipal Administration, Urban and Water Supply of Tamil Nadu, Shri. K N Nehru. These interactions not only provided him with insights into regional governance and administration but also offered a glimpse into the rich cultural tapestry of the states involved. Participating in such initiatives demonstrates Mr. Kalyanasundaram's commitment to cultural exchange and his dedication to the ideals of unity in diversity. By bridging the geographical and cultural gaps between states, he has contributed to the broader goal of national integration and harmony.

BOOK PUBLICATIONS

Mr. Kalyanasundaram K, Second Year CSE published 4 books from different domains on Amazon in the following domains .



Python Deep Learning: A Deep Dive

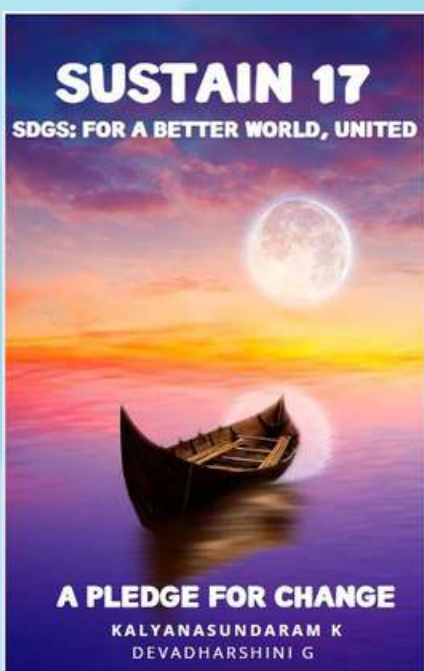
Python Deep Learning: A Deep Dive offers a captivating journey into the heart of artificial intelligence. In a world where machines are becoming increasingly intelligent, With clear explanations.



Blockchain Brilliance

- **Mr. Kalyanasundaram K and Mr. Akshath Jayakumar**, Second year CSE

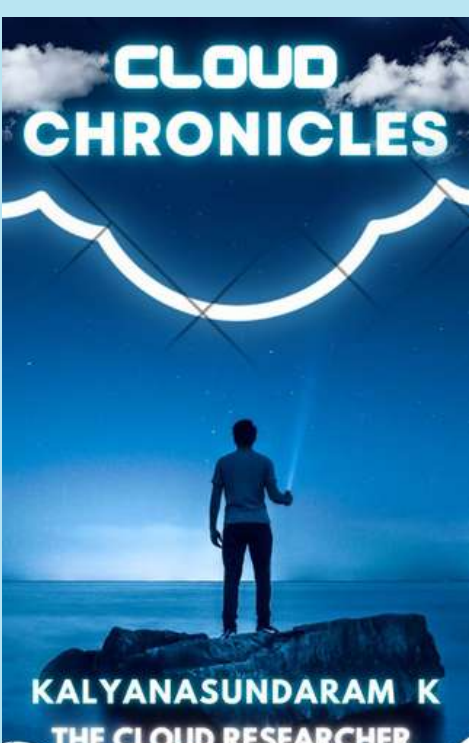
In the age of digital transformation, blockchain technology stands as a symbol of innovation and disruption. Through this book, readers will journey into the intricate web of blockchain, gaining insights into its applications in finance, supply chain, and beyond.



Sustain 17

- **Mr. Kalyanasundaram K and Ms. Devadharshini G**, Second year CSE

Sustainability is not a choice; it's a necessity. In this book, the author points the urgent need for sustainable practices in a world facing environmental challenges and it explains the 17 SDG's given by the United Nations.



Cloud Chronicles

It illuminates the transformative power of cloud computing and how it's reshaping the way businesses operate. Through captivating narratives and real-world examples, readers will gain a holistic understanding of the cloud's impact on our lives. This book is a window into the world of tomorrow, and every student should open it.

TECHNICAL ARTICLE



JAYAGANESH G
2ND YEAR

The Internet of Things (IoT) has become a buzzword in the technology world, representing a paradigm shift in how devices and systems connect and communicate with each other. With the rapid advancement of technology, the IoT has the potential to transform industries, improve efficiency, and enhance the quality of life for individuals worldwide. In this article, we will delve into the intricacies of the IoT, exploring its definition, evolution, and the significant implications it holds for various sectors.

Evolution

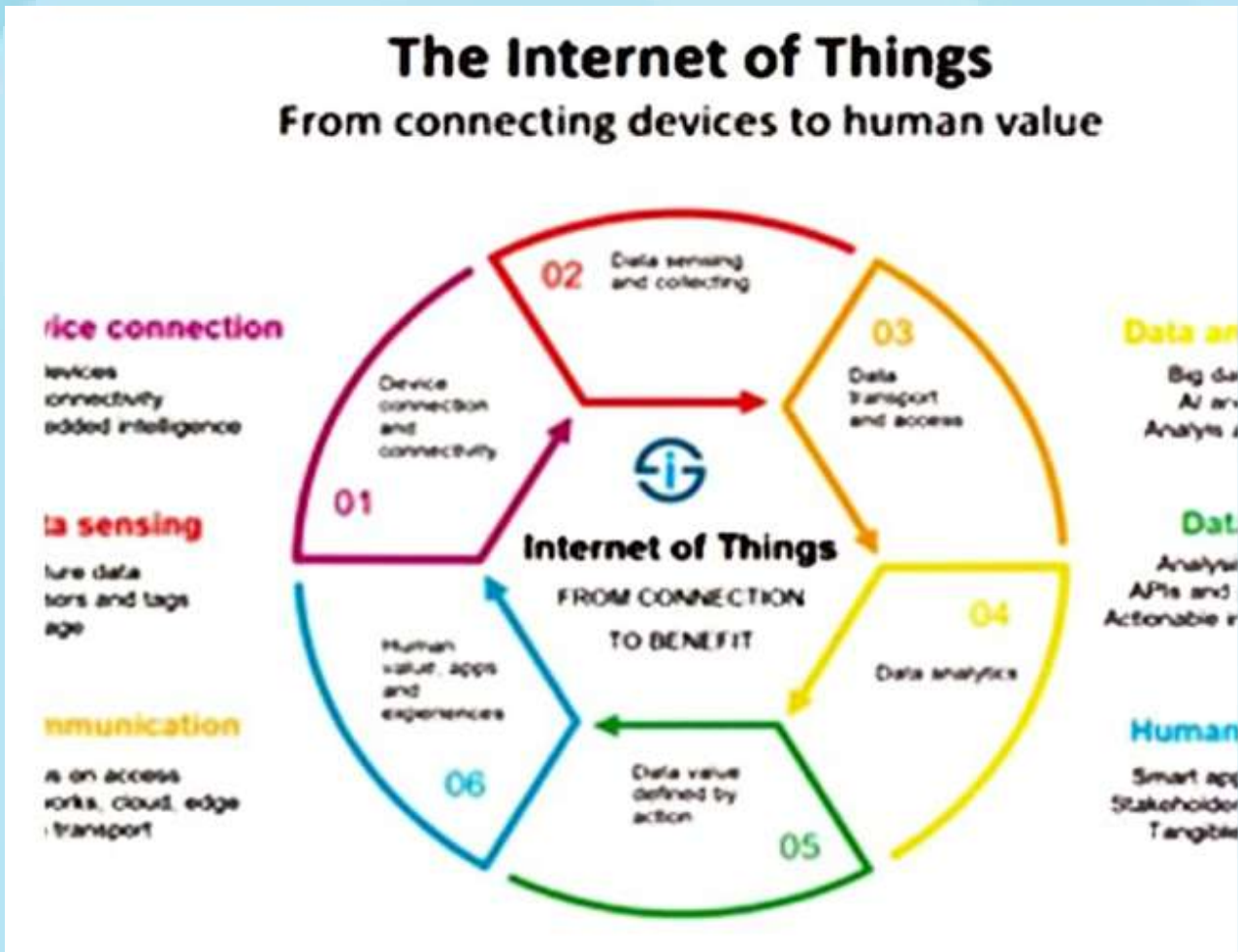
The concept of connected devices has been around for several decades. However, it is the convergence of multiple technologies that has accelerated the growth and adoption of the IoT. The evolution of the IoT can be traced back to the emergence of wireless connectivity, miniaturized sensors, and the increasing availability of affordable computing power. The first applications of IoT were seen in the industrial sector, where devices were connected to monitor and control manufacturing processes. This concept, known as the Industrial Internet of Things (IIoT), aimed to enhance the efficiency of operations, reduce costs, and improve safety in factories. As this technology became more prevalent and accessible, it started permeating into our everyday lives, giving rise to the concept of the Consumer Internet of Things (CIoT).

Implications

The IoT presents significant economic opportunities for businesses and entrepreneurs. As the number of connected devices increases, so does the demand for IoT-related products and services. This opens up new markets and revenue streams for both established companies and startups. Additionally, the data generated by the IoT can provide valuable insights into consumer behavior, enabling companies to develop personalized products and services tailored to their customers' needs.

Conclusion

The Internet of Things represents a new era of connectivity, innovation, and transformation across various sectors. From industrial applications to consumer devices, the IoT has the potential to revolutionize the way we live, work, and interact with technology. However, this transformation comes with its fair share of challenges, particularly concerning data security and privacy. As we navigate this digital landscape, it is paramount to balance the benefits of the IoT with the necessary safeguards to protect individuals, businesses, and society as a whole. The potential for advancement and improvement through the Internet of Things is immense, and by embracing this technology responsibly, we can pave the way for a smarter, more efficient, and interconnected future.



TECHNICAL ARTICLE



DIVAINA L A
2ND YEAR

AI: The Future of Healthcare

Introduction

Artificial intelligence (AI) and similar technologies are becoming more and more common in business and society, and they are starting to be used in healthcare too. Many facets of patient care could be changed by this technology, as well as internal administrative procedures at payer, provider, and pharmaceutical organizations. In the future, AI will be used more and more in the healthcare industry as a result of the complexity and growth of data in the sector. Payers, care providers, and life sciences organizations currently use a variety of AI technologies. The main application categories include recommendations for diagnosis and treatment, patient engagement and adherence, and administrative tasks.

Types of AI that is used in the healthcare sector

1. Machine Learning- Neural Networks and Deep Learning: The neural network is a more advanced type of machine learning. This technology, which has been around since the 1960s and has been widely employed in medical research for several decades, is used for categorization applications

2. Natural Language Processing: The generation, comprehension, and classification of clinical documentation and published research are the primary applications of NLP in the field of healthcare. NLP systems are able to conduct conversational AI, create reports (for example, on radiological examinations), analyze unstructured clinical notes on patients, and record patient interactions.

3. Physical Robots: Surgical robots give surgeons "superpowers," enhancing their vision, capacity to make precise, minimally invasive incisions, close wounds, and other surgical procedures. However, important choices are still made by human surgeons. Gynecologic surgery, prostate surgery, and head and neck surgery are among the common surgical procedures performed with robotic surgery.

4. Robotic Process Automation: They are employed in the healthcare industry for routine duties like billing, prior authorization, and patient record updates. They can be used to extract data from, say, faxed photograph and feed it into transactional systems when paired with other technologies like image recognition.

Current Trends in Healthcare

Current use of AI and Machine Learning shows a future of possibilities. Today, a number of significant businesses and start-ups, such as Enlitic, MedAware, and Google, have started large-scale projects aimed at advancing AI and ML and integrating it into the healthcare domain, for example Google's DeepMind Health project and IBM's Avicenna software. Additionally, the Cleveland Clinic and Atrius Health are working together with IBM's Watson Health to integrate cognitive computing into their healthcare system, which experts anticipate will lead to a decrease in physician burnout. Recently, k-nearest neighbours, naive and semi-naive Bayes, lookahead feature building, backpropagation neural networks, and other ML methods have been evaluated and developed.

Future of AI in healthcare

The biggest hurdle for AI in various healthcare sectors is not determining whether the technologies will be capable enough to be beneficial, but rather guaranteeing their acceptance in routine clinical practice. In order for AI systems to be widely adopted, they must be accepted by regulators, integrated with EHR systems, sufficiently standardised so that related products function similar to how it is taught to physicians.



Conclusion

The future of machine learning lies in complimenting human experience and knowledge with machine learning technologies in order to maximise the decision-making for patients with serious injuries.