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Dept of Computer Science and Engineering

Message from the Head of the Department

I am happy to present this edition of our departmental newsletter. The content for this newsletter is the result of effort put by our students and faculty during the hybrid mode of academics due to continuation of pandemic time. Faculty and students have been successful in carrying out the academic works along with excelling in the other areas apart from academics. Even though it is a lot of effort in gathering data on what information is worth reporting every six months, the reactions from our colleagues, alumni and students have made it worthwhile.



Our faculty and students have tuned very well with hybrid mode of work and were able to mark with significant achievements and activities. The efforts have increased and the contents of the newsletter supports the same. Faculties and students have overcome the barrier of online mode and were able to carry out activities. This version of newsletter gives us an opportunity to take a stock on how we are progressing towards achieving excellence, in this online mode, in diverse

domains of Computer Science and Engineering. We have conducted events, talks and attended events in this online mode and are striving for continued progress and betterment of our research, consultancy, education and service to community which are very important to us. Our constant collaboration with various industry leaders has furthered our ability in research and development.

-Dr Ramakanth Kumar P

Vision

To achieve leadership in the field of Computer Science & Engineering by strengthening fundamentals and facilitating interdisciplinary sustainable research to meet the ever-growing needs of the society.

Mission

- To evolve continually as a centre of excellence in quality education in computers and allied fields.
- To develop state-of-the-art infrastructure and create environment capable for interdisciplinary research and skill enhancement.
- To collaborate with industries and institutions at national and international levels to enhance research in emerging areas.
- To develop professionals having social concern to become leaders in top-notch industries and/or become entrepreneurs with good ethics.

MoU signed by the Department

IBM Corp with RVCE

A memorandum of understanding between International Business Machines Corporation (IBM Corp) and RV College of Engineering to confirm the collaboration between the parties with respect to our intention to work together in the areas of skills, curriculum development and research. The objectives of RVCE interests with this potential relationship are focused in the areas of Artificial Intelligence, Blockchain, Quantum, Cloud, Cybersecurity, Data Science, Internet of Things and Design Thinking. IBM's business interests are focused at building meaningful lasting relationship with universities and in the areas of research innovation, global collaboration, skills and recruiting and IBM University awards.

Events conducted by the Department

4th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions (CSITSS 2021)



CSITSS was held from 16 Dec to 18 Dec. The conference emphasized contemporary research works that enable building sustainable solutions in the domains of Social Networks, Mobile, Analytics, Cloud computing, and Communications (SMACC). The conference has been held successfully for the past four years with participants from all over India and abroad. Quality research papers are accepted and published in IEEE digital library and selected papers in Scopus. The CSITSS-2021 ensures to provide a platform for researchers around the globe for knowledge exchange and networking. Our proud Sponsors for the conference were IEEE, IBM, Nokia, Orbit and Career labs in partnership with BYJU's The Learning App.

Invited talk on high-speed IP traffic analysis and significance of DPDK

An Invited Talk on High-speed IP Traffic analysis and the significance of DPDK by Rajesh R-Scientist –F, Raktim Bhattacharjee CAIR, DRDO was held on 10th July 2021 which was organized by Dr. Minal M, Dr. Deepamala N and Prof. Prapulla S B. With increasing usage of internet and in turn

improved networks with high-speed delivery comes the traffic issues as well. Network traffic analysis (NTA) is a method of monitoring network availability and activity to identify anomalies, including security and operational issues. The idea of IP traffic analysis with its important use cases like collecting a real-time and historical record of what's happening on your network, detecting malware, detecting the use of vulnerable protocols and ciphers, improving internal visibility, purpose and benefits were discussed.

Invited talk on Natural Language Processing with Deep Learning

An Invited talk on "Natural Language Processing with Deep Learning" by Shri. Abhishek, Software Architect at Pegasystems was organized on 8th July 2021 by Dr. Rajashree Shettar for PG students and faculty members. Natural Language Processing (NLP) allows machines to break down and interpret human language. It's at the core of tools we use every day – from translation software, chatbots, spam filters, and search engines, to grammar correction software, voice assistants etc. Emphasis was given on how NLP is used to understand the structure and meaning of human language by analyzing different aspects like syntax, semantics, pragmatics, and morphology. The working process of NLP, its importance in today's world, benefits associated and scope for future was elaborated by the mentor to the students.

Talk on Object Oriented Programming from an industry PoV

A talk on "Object Oriented Programming from an Industry PoV" by Mr. Akshar Prasad, ML Engineer at Atlassian was organized on 17th July 2021 by Dr Soumya A, Dr Poonam Ghuli and Prof. Priya D for IV semester UG students of CSE and ISE departments. Object-oriented programming is a fundamental programming paradigm used by nearly every developer at some point in their career. OOP is the most popular programming paradigm and is taught as the standard way to code for most of a programmer's educational career. But through this session the attendees could also understand the industrial point of view for applicability of OOP. Some introduction about OOP was given with a brief discussion about objects, classes, methods, building blocks and structure of program. Then went onto discuss about the benefits and the expectations and leveraging at the industry level.

Invited talk on Cybersecurity

An Invited Talk on Cybersecurity by WISE IBM India with a team of 6 speakers was organized on 26th October 2021 by Dr. Ramakanth Kumar P and coordinated by Dr. Sowmyarani C N. In today's world, many organizations collect, process, and store unprecedented amounts of data on computers and other devices. This session explained about cyber security referring to the body of technologies, processes, and practices designed to protect networks, devices, programs, and data from attack, damage, or unauthorized access and may also be referred to as information technology security. Emphasis was given on the importance of it, major benefits and challenges to make students aware about the need and scope of this technology in coming times.

Expert lecture on Object Oriented Programming using Java

An Expert Lecture on "OOP using Java" by Mr. Sanjay Deorari, Lead, ETA, Infosys Pvt Ltd was organized by Dr Soumya A, Dr Poonam Ghuli, Prof. Priya D on 13th August 2021 for IV semester UG students of CSE and ISE departments. The talk was about how object-oriented programming aims to implement real-world entities like inheritance, hiding, polymorphism etc. in programming. The mentor discussed about various OOPs concepts like classes, objects, method and method passing, abstraction, encapsulation, inheritance, polymorphism etc. in Java programming.

Certification course on An overview of video surveillance system

A 5 days Certification course on "An overview of video surveillance system" from 30th August to 3rd September 2021 by Experts from Academia and Industry like NFSU, COM-SUR, TechConPro, Videonetics, Mistral Solutions and Mialo Technologies. This was organized by Dr. Azra Nasreen, Prof. Neetu and Dr. Ramakanth Kumar P

Invited talk on Software testing: Industrial perspectives and practices

An Invited talk on "Software Testing: Industrial Perspectives and practices" by Mr. Aditya Hegde, employee at LinkedIn was given on 11th December 2021 which was organized by Dr. Vinay Hegde. The world of online environments grows and delivers new challenges for the software testing industry every day. The pressures to get products to market and scale their production often weigh heavily on development teams of all kinds. The talk was given in regards to how in addition to keeping up with changing industries and technologies, quality assurance (QA) analysts face an increasing myriad of issues on a daily basis. It gave an idea about how industries leverage continually evolving technology and demands and the importance of software testing. Many different tools used for software testing were mentioned in the session making students ready for industry.

Expert talk on Virtual Reality

An Expert talk on "Virtual Reality" by Mr. Rajesh Kumar Rawal of Infosys Pvt Ltd was given on 29th December 2021 which was organized by Dr Soumya A, Dr. Hemavathy R and Prof. Srividya M.S. Virtual Reality (VR) is the use of computer modelling and simulation that enables a person to interact with an artificial three-dimensional (3-D) visual or other sensory environment. VR applications immerse the user in a computer-generated environment that simulates reality through the use of interactive devices, which send and receive information. The talk focussed on idea of virtual reality and augmented reality, difference between them, significance and applications of virtual reality in various areas such as video games, 3D cinema, medical processes, social virtual worlds etc. A basic overview of VR and the challenges ahead were also discussed in the session which was attended by undergraduate students in the college.

Talk on Algorithm Analysis Framework and Introduction to machine learning algorithm

A talk on "Algorithm analysis framework and Introduction to Machine learning Algorithm" by Mr. Gangadhar.C Immadi was conducted on 28th August. The talk was intended to give insights into the general framework designed for analyzing the efficiency of algorithms which is the way of finding resources required by the algorithm and hence help in deciding about the best algorithm among the candidate algorithms. This becomes extremely important in artificial intelligence to solve problem effectively with the best available algorithm. Different components of this framework, it's significance etc. were taken up for discussion.

Women empowerment session in exploring Cloud and AI opportunities

A Women Empowerment Session in Exploring Cloud and AI opportunities by Ms. Chaitra Vedullapalli was conducted on 25th September 2021 and jointly organized by Department of CSE, ISE, ECE and MCA. This talk emphasized on various opportunities that are being built in cloud and artificial intelligence domain for women and encourages them to step forward into this field to explore more and fill the gap that has been aroused due to lack of participation of women in areas of upcoming technologies.

Expert lecture on Reimagining IT education for Atmanirbhar Bharat

Expert Lecture on "Reimagining IT education for Atmanirbhar Bharat" by Dr. Shreekanth M Prabhu was jointly organized by Department of ISE, MCA and CSE on 17th September to lay some perspectives on how IT education can be implemented to support in building Atmanirbhar Bharat with today's engineers taking active lead in exploration, innovation, implementation and growth.

Faculty Achievements

Dr. Ramakanth Kumar P, HoD



- Participated in Nokia University Conclave 2021 online event on 18th and 19th Nov.
- Organized a 3-day workshop for all the 2nd year students on 3D Modelling using Augmented reality and Virtual Reality on 18th, 19th and 23rd September.
- Organized many expert lectures from the department - Invited Talk on Ajax by Ms. Smitha, Consultant at IBM Bengaluru 29th July; Invited Talk on Angular JS and Node JS by Mr. Gireesh Punathil, Web Service Architect at IBM, Bengaluru on 30th July.
- Session Chair for Two Days Springer International Conference on Evolutionary Computing and Mobile Sustainable Network (ICECMSN) 2021 held on 28th and 29th September.
- Scrutinized NBA related documents of BIET

Davanagere on 27th September.

- Nominated as BoS Member by VTU for Dr. Ambedkar Institute of Technology, Bengaluru and Sharad Institute of Technology College of Engineering, Yadrav, Kolhapur, Maharashtra.
- Academic Council Member for BNM Institute of Technology

Dr. G S Nagaraja



- Invited as subject expert for appointment of Assistant professor at BMSIT in the department of Computer Science and Information Science Engineering.
- Member of Awards Committee of IEEE India Council to review

applications/nominations received for IC Awards – 2021

- Advisory committee member of International Conference on Forensic, Analytics, Big Data & Security (FABS - 2021) organized by IEEE student branch, BMSIT&M in association with IEEE Bangalore section during 21-22 December.
- External NBA assessor in Department of Information Science and Engineering, Faculty of Engineering and Technology, Jain (deemed-to-be) University.

Dr. Vishalakshi Prabhu H



- Reviewer for Track-22 of 7th IEEE CONNECT, July 2021 (Premier conference).
- Completed NPTEL course "Evolution of Air Interface towards 5G" during August with Silver Tag (75%)

Dr. Shobha G



Member of IET (The Institute of Engineering and Technology) Scholarships Awards 2021 Advisory Committee. The aim of IET India was to incentivise young people entering the engineering and technology profession.

Dr. Shanta Rangaswamy



Completed AICTE ATAL FDP on Artificial Intelligence and Machine Learning: Research and applications perspective from 25th to 29th Oct

Dr. Rajashree Shettar



- Chaired a session for the 5th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions [CSITSS 2021] held on 17th and 18th December 2021 organized by RV College of Engineering, Department of Computer Science and Engineering, Bengaluru.
- Chaired a session at the International Conference on "Innovations in Disruptive Technologies" organized by held at Sri Kanyaka Parameswari Arts and Science College for Women, Chennai on 29 July 2021.

Prof. Jyoti Shetty



- Certified as Top Performing Mentor Jul-Dec 2021 for mentoring NPTEL course on "The Joy of computing using Python" by NPTEL.
- Reviewer of 2021 IEEE DISCOVER, an international conference organized by IEEE Mangalore Subsection and hosted at NMAM Institute of Technology.

Talks delivered by faculty

- **Dr. G S Nagaraja**, was the Resource person and delivered talk on "Wireless IoT network protocols" at 6 days AICTE-ISTE funded Induction/Refresher program (3rd phase) on "Future wireless communication: Standards and Technologies" organized by Electronics and Communication department, K S Institute of Technology, Bengaluru.
- **Dr. Vishalakshi Prabhu**, delivered a IUCEE talk on "5G Network Slicing" on 14th September.

Research and Consultancy Projects

Research projects:

Data Anonymization Techniques for Mitigation of Privacy Attacks in Data Publishing is a project that was sanctioned in November for the duration 2021-2022 by funding agency named Karnataka Fund for Infrastructure Strengthening in Science and Technology (KFIST). The associated faculty being Dr. Sowmyarani C N.

Consultancy projects:

Igenune Software is a project that was sanctioned in September by funding agency named SJM Infotech Pvt. Ltd and associated faculty being Dr. Ashok Kumar, Dr. Ramakanth Kumar P, Dr. Sharvani G S and Prof. Girish Rao Salanke N S

ARTPARK:

The proposal submitted has been selected for funding under the Student Innovation Grant Program of ARTPARK. This program turned out to be highly competitive where they had received about 131 proposals in the UG category, out of which they were able to fund only 29, based on Relevance of the proposal to the area of Robotics & Autonomous system, technical depth, Significance of the deliverables, Novelty and innovation, Impact potential and proposer's prior experience in this area.

Research and Publications

- Dr. Rajashree Shettar, co-authored book chapter titled "Spam Detection Over Call Transcript Using Deep Learning" in Proceedings of the Future Technologies Conference (FTC) Nov 2021, Vol 2, pp 138-150.

Journal Publications -

- Dr. Kusuma Kumari BM, Dr. Ramakanth Kumar P, "Sentimental Analysis aspects with its applications and Challenges," *Journal of Emerging Technologies and Innovative Research*, Vol 8, Issue 10, Oct 2021, (ISSN-2349-5162)
- Dr. Kusuma Kumari B M, Dr. Ramakanth Kumar P, "Handwritten Offline Signature Verification and Forgery Detection," *Journal of Emerging Technologies and Innovative Research*, Vol 8, Issue 10, Oct 2021, (ISSN-2349-5162), 491-497
- Prof. Suma B, "Privacy preserving association rule hiding using border-based approach," *Indonesian Journal of Electrical Engineering and Computer Science*, Aug 2021
- Dr. Shobha G, Prof. Jyoti Shetty, "Design and Implementation of HSQL: A SQL-like language for Data Analysis in Distributed Systems," *International Journal of Advanced Computer Science and Applications (IJACSA)*, Vol 12, Nov 2021
- Dr. Nagaraja G. S, "System for Fusion of Face and Speech Modalities Using DTCWT+QFT and MFCC+RASTA techniques," *Indian Journal of Science and Technology*, Vol 14, Dec 2021
- Dr. Praveena T, "The Impact of Industry 4.0 on Supply Chain Management," *International Journal of Supply Chain Management (IJSCM)*, Vol 10, Aug 2021
- Prof. M S Srividya, "Deep learning techniques for physical abuse detection," *IAES International Journal of Artificial Intelligence (IJ-AI)*, Vol 10, Dec 2021
- Prof. Prapulla S B, Dr. Shobha G, T C Thanuja, "Energy-efficient data-aggregation for optimizing quality-of-service using mobile agents in wireless sensor network," *International Journal of Electrical and*

Computer Engineering, Vol 12, Aug 2021

- Vaibhav V Athani, Prof. Sandhya S, "Survey on Load Balancing Techniques in Cloud," *International Research Journal of Engineering and Technology (IRJET)*, Vol 8, Jul 2021
- Dr. Poonam Ghuli, Akshita L, Harshul Singhal, Ishita Dwivedi, "Diabetic retinopathy classification using deep convolutional neural network," *Indonesia Journal of Electrical Engineering and Computer Science*.

Conference papers –

- Dr. Shobha G, Prof. Jyoti Shetty, Varsha R Jenni, Akhil Dua, Roger Dev, "Hybrid Density-based Adaptive Clustering using Gaussian Kernel and Grid Search," *6th IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT-2021)*, 27th - 28th Aug, 2021
- Akshay Mammen Koshy, Gaurav Yellur, Hima J Kammachi, Isha V P, Dr. Ramakanth Kumar P, Dr. Minal Moharir, Dr. Deepamala N, "An Insight into Encrypted DNS Protocol: DNS over TLS," *4th International Conference on Recent Developments in Control, Automation & Power Engineering (RDCAPE-21)*, 978-6654-1429-6.
- Raghav Rawat, Pratheesh, Krishna Shedbalkar, Dr. Minal Moharir, Dr. Ramakanth Kumar P, Tanmayanada MGP, "Analysis and Detection of Malicious Activity on DoH Traffic," *2021 2nd Global Conference for Advancement in Technology (GCAT)*, Oct 1-3, 2021, ISSN: 978-1-6654-2.
- Meghana V, Prof. Anisha B S, Dr. Ramakanth Kumar P, "IOT based Smart Traffic Signal Violation Monitoring System using Edge Computing," *2021 2nd Global Conference for Advancement in Technology (GCAT)*, 978-1-6654-1836-2/21/\$31.00 ©2021 IEEE
- Sushma S Ankad, Shivaprasad Rai B, Dr. Azra Nasreen, Dr. Surbhi Mathur, Dr. Ramakanth Kumar P, Dr. Sreelakshmi K, "Object Size Measurement from CCTV footage using deep learning," *5th IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS)*
- Mahesh Subray Hegde, Sukrutha C Basappa, Dr. Nagaraja G.S, "Smart dry and wet waste management using IoT," *5th IEEE International Conference on Computational Systems and Information Technology for Sustainable Solution (CSITSS)*
- Prof. Girish Rao Salanke N S, Rameshwar Garg, Chandana Kiran Ambedkar, Kaustuv Saha, "PROFCAD: An Algorithm to Detect Anomalies in Cloud Applications for KPI Monitoring Systems," *5th IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS)*

- Abhiram Natarajan, Anirudh Kannan, Varun Belagali, Vaibhavi N Pai, Rajashree Shettar, Poonam Ghuli, "Spam Detection Over Call Transcript Using Deep Learning", *Proceedings of the Future Technologies Conference (FTC)*, Oct 28-29, 2021
 - Dr. Sandhya. S, Karthik S, Supreetha H V, "Detection of Anomalies in Time Series Data," *5th IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS)*
 - N Kavyashree and Dr. Sowmyarani C N, "TCP Attack Detection Using Dynamic Threshold", *5th IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS)*
 - N Dey, S Samhitha, M Hariprasad, A Anand, Prof. Veena Gadad, "Analysis of Machine Learning Algorithms by Developing a Phishing Email and Website Detection Model," *5th IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS)*
 - Bhuvana Shivashankar, A M Anjana Sundari, Hithaishi Surendra, S S Atul Sai, Dr. Minal Moharir, "Deep Learning based Campus Assistive Chatbot," *5th IEEE International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS)*
- Dr. Rajashree Shettar** has been awarded,
- Certificate of Appreciation and rewards, from Samsung Company for mentoring students in SAMSUNG PRISM worklet – AI, ML | Utterance Recommendation System in Bixby' from June 2021 to Jan 2022.
 - Certificate of Appreciation, from Machine Intelligence Research Lab for serving as Program Committee member for the 12th Innovations in Bio-Inspired Computing and Applications (IBICA '21) Conference 16th and 17th December, 2021
- Prof. Praveena T**, has been awarded the Certificate of Excellence and rewards from Samsung Company for mentoring students in SAMSUNG PRISM worklet – Upcoming new AI Model enablement for onDevice DNN execution', from June 2021 to Jan 2022.
- Prof. Jyoti Shetty** has,
- Received the "2021 HPCC Systems Mentor Badge" for serving as mentor to interns in the 2021 HPCC Systems internship program, providing guidance and direction to their designated intern towards the successful completion of their open-source projects. She supported the work 2021 HPCC Systems Interns, Atreya Bain, Mayank Agarwal and Achinthya Sreedhar put into their project posters which were submitted into their 2021 Poster Contest where Atreya Bain also won the award in the 2021 Best Poster - Community Choice Category.
 - Awarded 'Certificate of Excellence' and rewards for Samsung Prism project titled "UX Framework| Google Play Instant Apps and Bundle Dynamic Delivery".
- Prof. Prapulla S B**, has been awarded the Certificate of Excellence and rewards from M/s Samsung Company for mentoring students in SAMSUNG PRISM worklet – IoTP20RV - 'IoT | Energy Saving using People Activity & Count obtained using Computer Vision' from June 2021 to Jan 2022.

Awards received by faculty

Dr. K Badari Nath has been awarded,

- Best/Deserving Case Study Report, at Mini Symposium on P2BL, organized by IUCEE (Indo US Collaboration for Eng. Education), held on 9th and 10th November, 2021.
- Best paper Award, for the paper "SmartZ COVID-19 Smart Door", at IEEE International Conference on Computational Systems and Information Technology for Sustainable Solutions [CSITSS 2021] held on 16th and 18th December 2021 organized by RV College of Engineering, Bangalore and Florida International University, Miami, USA

Dr. Soumya A has been awarded,

- Certificate of Excellence for guiding the students towards Samsung Prism Worklet titled "Code-Mixed Language Model and Multi-Intent System" during June 2021-Jan 2022.
- 'SPoC of the Month Dec 2021' as appreciation for using Infosys Springboard and Campus Connect partner during by Infosys Ltd., Bengaluru.
- **Dr. Shanta Rangaswamy** has been awarded Certificate of Excellence and received rewards for Samsung Prism project titled "UX Framework| Google Play Instant Apps and Bundle Dynamic Delivery" during June 2021 to Jan 2022.

Student Activities

Our department's pride lies in its multi-talented students. They are a part of various activities apart from academics such as cultural and technical clubs. Popular clubs include CARV (for Theatre arts), Alaap (for musicians), Footprints (for dance lovers), etc. These clubs are active all-round the year and are quite popular amongst other Engineering colleges. The department encourages and provides total support to the students for their all-round development. A lot of students are active members³ of these clubs and have as well won name and fame while competing against various colleges across the nation.

Students interested in various interdisciplinary areas are encouraged to join some of the innovative technical clubs. From college level to international level, the students of our department have brought laurels to the institution. The college and the department, supports them with technical as well as financial aids. Dedicated mentors for each of the clubs help in catering to the needs of the team. These clubs develop everything from racing cars to mini satellites. Our students have been an integral part of these clubs since their conception.

Student Achievements

Besides academics, our department is widely known for its multi-talented students. We see a large number of students from the department represent college at collegiate, national and international Levels in different domains. The department gives its complete support and encouragement to all its students to participate in these activities. The students of our department have continued to make best use of opportunities even amidst the pandemic.

Here are a few achievements by the students.

- **Nakul R S**

Nakul, VII semester student is an excellent and highly committed Basketball player.



Nakul and his team secured first place at the VTU South zone basketball tournament held on 16th and 17th December.



They also secured second place at the VTU Inter zone basketball tournaments held on 19th and 20th December at GM Institute of Technology, Davangere, Karnataka.

- **Pooja Rajesh**



CARV English hosts the English Theatre Fest called Coliseum every year. This is an inter-college fest that sees participants from all engineering colleges across the country including NITs and IITs which was conducted in November. Pooja Rajesh, a V semester student, wrote and directed a comedy play titled, "Violet's Orange". The play

was about a father narrating a story to his 7 years old daughter to teach her valuable life lessons and won first place in the event.

- **Akshita Gupta**



Akshita Gupta, V semester student, played the lead character in the play titled "The Room". The Room, was a play put up for the theatre fest Coliseum organized by CARV English in November. The play highlighted the thoughts of a woman suffering from schizophrenia and dementia and the people she interacts with on a daily basis.

- **Vihaan Nama**



Vihaan Nama, V semester student published a paper on "Sleep Analysis – An Innovative Concept of Using Technology to Analyse Dreams and Determine Behaviour" in AICTE sponsored national conference, Critical Thinking for GenZ Multidisciplinary Approach organized by Department of Master of Computer Applications RV College of Engineering on 28th and 29th October.

- **Aditya Singh and Jagadeesh Patil**



Aditya Singh and Jagadeesh Patil, V semester students won first prize in the Innovation Contest at Nokia University Conclave 2021 in November. The objective was to create an out of the box innovative idea using current technologies like IOT and machine learning for solving challenges faced in healthcare, education or agriculture. Their idea was "Smart Assistance for visually impaired" which is based on computer vision and IOT to help blind people navigate through their surroundings. It

consists of a camera and an array of sensors including GPS which lie on an RPi bed and has voice automation enabled. It has the following capabilities: Recognizes objects and traffic signals, text to speech, obstacle detection using LIDAR and voice automation. At the completion, the demonstrated the prototypes of the following three modules in SAVP: computer vision, voice automation and obstacle detection. The aim of this project is to help a blind person become more independent while commuting by recognizing building names, signs on road such as bus stop and zebra crossing.

- **Aditya Y Jeppu**



Aditya Y Jeppu, V semester student participated in Google Summer of Code with a project titled “Video Sequence Editor Improvements – Individual Strip previews and modification indicators”. The main goal is to add a preview of the clip in the corresponding strip of the sequencer to replace the current flat colour rectangles and, if time permits, to provide visible icons on the strip representing any strip modifications made by the user.

Student Placement offers

Our department has continuously proved to be one of the best in terms of in-campus student placements every year. The details regarding the same are given below.

Over 50 students have been offered package higher than 20 lakhs by various companies.

Salesforce, has extended FTE offer to Rounak Jain and Anurag Singh Bhadauria, VII semester students with a CTC of 35.37 lakhs.

Pulak Pathak, Manoj Kartik R and Harish A Jartarghar, VII semester students have been recruited by Tekion with an offered CTC of 35 lakhs.

Articles by faculty and students

Article 1:

Digital Economy: Need for Data privacy

By **Dr. Sowmyarani C N**, Associate Professor and **Prof. Veena Gadad**, Assistant Professor, Department of Computer Science and Engineering, RV College of Engineering, Bengaluru

The importance of data privacy and protection has been recognized as and when the social and economic activities

have increased. The 21st century has witnessed explosive rise in number of ways in which we use information that is referred as “information age”. The Privacy Data Protection (PDP) law aims to safeguard the sensitive personal data of individuals by creating the framework for data collection, use and sharing of such data to the third parties. Sensitive Personal Data refers to person’s race, ethnic origin, health status, education, genetic life, marital status, age, biometric data, religious, philosophical or political affiliations etc. that the individual does not want to reveal to others. Out of 195 countries in the world 128 countries have put in place legislation to secure the protection of data and privacy. In India, Personal Data Protection Act, 2019 was introduced in Parliament but its approval is still pending. The provisions of this Act are applied to processing of personal data where such data has been collected, disclosed, shared or otherwise processed within the territory of India. At the frontline there is necessity of Data protection and privacy in the domain of Machine Learning, Artificial intelligence and Robotics, Cloud computing, Internet of Things, Fog Computing, Big Data Analytics, Bioinformatics and Cyber Security. To conclude, with nearly 450 million Internet users and a growth rate of 7 -8%, India is well on the path to become a digital economy which creates large market for global players, hence there is a great need to research, design and implement data privacy protection techniques and tools.

The Editor’s note

We thank our department for giving us the opportunity to proudly present the 8th issue of our newsletter Enqueue().

In here, we present to you a glimpse of the various activities and events which were organized and held at our department in the months of July to December, 2021.

We also present to you our faculty’s outstanding achievements, research and consultancy projects and their publications in various reputed journals and conferences. Finally, we showcase various achievements and awards won by our highly talented students. We thank all our teachers and students who have kindly obliged to contribute articles and other content.



Prof. Pavithra H
Asst. Professor @
CSE department



Shivani C H
Student @
CSE department

Write to us:

We sincerely hope that you found our department’s newsletter informative and enjoyable. Do provide us with your valuable feedback by writing to us at enqueue@rvce.edu.in.