



## THE DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING E-NEWSLETTER 2021-22

The Department of Computer Science & Engineering is pleased to present its annual e-newsletter for the year 2021-22. This e-newsletter details the activities and achievements of our esteemed department.

### **OUR VISION:**

“Seeks to become a universally well-known academic centre for teaching, learning, research and innovation in the field of Computer Science & Engineering.”

### **OUR MISSION:**

**M1:** Impart quality education with an emphasis on basic principles of Computer Science and Engineering.

**M2:** Inculcate advancements in curriculum and pedagogy to enhance the teaching and learning process.

**M3:** Foster research and collaboration with premier institutions and industries.

**M4:** Promote innovation and entrepreneurship for the betterment of society.

### **PROGRAM EDUCATIONAL OBJECTIVES (PEO):**

**PEO 1** - Excel in a professional career across industries and institutions that emphasises Innovation and problem solving.

**PEO 2** - Collaborate successfully with peers, colleagues and organisations.

**PEO 3** - Work as ethical and responsible members of the computing profession and society.

## National/State Level Events Conducted By Department Clubs

### **GIT SESSION**

The students were introduced to version control system and its advantages.

#### **Outcome:**

- The students were well versed with the version control system.
- The students used the same for keeping track of their projects.
- The students referred to all the repositories shared by LCC.



Git sessions held for students

### **PYTHON SESSIONS**

The basics of python language, helpful in implementing various machine learning algorithms, was taught.

#### **Outcome:**

- Students understood the relevant subtleties of the Python language.
- Students were introduced to various collections in python like lists, tuples, sets and dictionaries.
- Students learnt about exception handling in python and were able to create their own classes.
- Students learnt about different operations that could be performed with the help of NumPy, pandas, seaborn and other python libraries.

### **FOSS CAMP**

Each one of the participants' zeal to face complex and interesting problems was enhanced. The ability to bend their minds as required was imparted.

#### **Outcome:**

- The participants experienced the real placements scenario they would face in future.
- Participants' logical, technical, verbal, communication and many other skills were tested.



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### CODE WARS

A team event, participants were imparted with good problem solving skills and coding skills.

#### **Outcome:**

- Improvement in the skills of the participants.
- Participants learnt to code under time constraints.

### DECRYPTO

The participants were enthusiastic in learning and playing verbal games.

#### **Outcome:**

- This event prompted the participants to think out of the box.
- Participants explored and learnt new things.

### LCC HACKATHON - HACKELITE'19

**Stage 1 held on 9<sup>th</sup> November:** The basic objective was to confirm that the teams had finalized their problem statement for the Hackathon. Here, the design and thinking skills of the participants were tested. The mentors wanted the participants to have an idea about what they were going to do before they started implementing.

**Stage 2 at 9:00 pm** was to ensure that the participants' idea could be put into a working prototype model in the 36 hours of Hackathon.

**Stage 3 commenced at 11 am on 10<sup>th</sup> November:** The teams which were falling behind were recognized and provided with extra attention and support by the mentors, as final hours are crucial to have a finished product. The motive was to make sure that these teams are not discouraged from participating in future hackathons.

In the final stage, which was at 4:00 p.m., emphasis was given on the product presentation skills of the participants.



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### **MACHINE LEARNING**

Various concepts of machine learning were introduced to students and this helped them build various projects based on those concepts.

Topics covered in the workshop:

- Introduction to machine learning.
- Data pre-processing.
- Linear regression and multiple linear regression.
- Logistic regression.
- K-mean clustering.

### **Google Developer Student Clubs - JSSSTU:**

The Google Developer Student Clubs chapter of our university conducted various events throughout the year.

1. 30 Days of Google Cloud
2. Git Set Code
3. Explore ML
4. GDSC Elevate Episode 1: Resume 101
5. 7 Days of DSA
6. Tic-Tech-Toe: Introduction to technical domains
7. Break-Chain: Block-chain workshop
8. GDSC Elevate Episode 2: Competitive Programming vs. Projects
9. GDSC Samvad Episode 3: Personal Branding and Internships
10. Compose Camp: Android Study Jams





Tic-tech-toe event speaker



Explore ML hands-on session

### **Faculty Awards/achievements/PhDs awarded**

- **Dr Anil Kumar K M** was appointed as BOS member in Computer Science and Engineering (Cyber Security), University of Mysore for 2021-2024.
- **Dr Vani Ashok** was awarded a PhD under the guidance of Dr D S Vinod.

### **Publications in Journals/Conferences**

- Vedavathi, N. and Anil Kumar K M, “An efficient e-learning recommendation system for user preferences using hybrid optimization algorithm.” *Soft Computing*: 1-12, 2021.
- Prasanna B T, et al,” Online Voting System Based on Blockchain”, *International Journal of Computer Sciences and Engineering*, Volume 9, Issue 2, February 2021.
- Prasanna B T, et.al,” Automatic Greenhouse System Using IoT along with plant disease detection”,*International Journal of Advanced Research in Computer and Communication Engineering*, Vol 10, Issue 6, June 2021.

- Prasanna B T , et.al,” Blockchain based Land Registry and Land Transformation system using Ethereum”, Journal of Emerging Technologies and Innovative Research, Volume 8, Issue 7, July 2021.
- Prasanna B T, et al., “Secure Product Recommendation and Shopping System Using Data Mining and Blockchain”, Pramana research Journal, Vol11, Issue 6, June 2021.
- Roopesh R and Manimala.S, “Test Coverage Enhancement using Hybrid Modular Approach”, International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, Vol.8, Issue 7, page no.c68-c73, July-2021.
- Preethi V and Manimala.S, “5G Registers UDM Product Performance Automation”, International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, Vol.8, Issue 7, page no.d364-d367, July-2021.
- Manimala.S, Suraj. R, Syed Hazim, Chitranjan Kumar, Ravi CV, “A survey of different methods used in Detecting deepfakes”, Pramana Research Journal, ISSN NO: 2249-2976, pp 25-35, Volume 11, Issue 6, 2021.
- Guru R, Tejashwini P, Dhanush A, Sneha M, Chandana N Murthy, “Campus Navigation System Based on Mobile Augmented Reality”, Paramana Research Journal, Volume 11, Issue 6, 2021.
- Donapati V S R, Dr. Manimala, Chitturi P Kalyan, Kusuma M, M Thameem, “A Comparative Study Of Speech Emotion Recognition Using Various Machine Learning Algorithms”, Pramana Research Journal, ISSN NO: 2249-2976, pp 36-42, Volume 11, Issue 6, 2021.
- Trisiladevi C. Nagavi and Chethana H. T., “A New Framework for Matching Forensic Composite Sketches with Digital Images”, International Journal of Digital Crime and Forensics (IJDCF), Volume 13, Issue 5, pp. 1-19, 2021.

- Trisiladevi C. Nagavi, Manjari Ranjan, Anirudh D. Pai, Puneet Ahuja, Kavitha M. S., “Customer Relationship Management Using Machine Learning”, International Research Journal of Engineering and Technology (IRJET), Pages 943-949, Volume 08, Issue 07, July 2021.
- P. Mahesha, Anusha M S, Rishika, Shreeansh Gupta and Thurzday Moirangthem, “E-Store: In line with Online Electronics Retail”, International Research Journal of Engineering and Technology (IRJET), Pages 195-201, Volume 08, Issue 07, July 2021.
- Vani Ashok, & Vinod, D. S., “A Novel Fusion of Deep Learning and Android Application for Real-Time Mango Fruits Disease Detection.” In Intelligent System Design (pp. 781-791). Springer, Singapore, 2021.
- Ramya, J., Vijaylakshmi, H. C., & Saifuddin, H. M., Segmentation of skin lesion images using discrete wavelet transform. Biomedical Signal Processing and Control, 69, 102839, 2021.
- Sangam Prasad, Shankar Desai, Sandeep Kumar, Adarsha M V & Guru R , “Traffic Signal Detection Using CNN”, International Journal of Advanced Research in Computer and Communication Engineering, Vol 10, Issue 6, June 2021.
- Vedavathi N, Anil Kumar K.M., “E-Learning Course Recommendation Using Hybrid Fusion with Matrix Factorization.” International Journal of Advanced Science and Technology, 29(12), 507 – 511, 2021.

**Book Chapters**

<b>_Sl. No.</b>	<b>Faculty name</b>	<b>Title of the chapter</b>	<b>Publisher/Book</b>	<b>Year</b>
1	Vani Ashok & S Srinath	Cephalometric Skeletal Structure Classification Using Convolutional Neural Networks and Heatmap Regression	Springer Nature	2022
2	Trisiladevi C. Nagavi	“A Review of Face Analysis Techniques for Conventional and Forensic Applications”, In Cyber Security and Digital Forensics: Challenges and Future Trends	John Wiley & Sons, Inc. Publications	2022
3	Trisiladevi C. Nagavi	Matching Forensic Composite Sketches with Digital Face Photos: A Bidirectional Local Binary Pattern based Approach	Springer Nature	2021
4	P. Mahesha	Comprehension of melody representation and speed-up approaches for query by humming system	Elsevier	2022





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**Invited Talks**

<b>Name of the Faculty, Designation</b>	<b>Name of the Event</b>
Dr.Srinath.S, Associate Professor	Invited Talk on "Machine Learning and Deep Learning " on 17.02.2022 at Govt. Polytechnic, Chamarajanagar
	Invited Talk in the AICTE-ISTE Sponsored FDP on the topic "Digital Pedagogy on 24.02.2022 at JSS Polytechnic for the Differently Abled-FDP Details: Training of Trainers of Polytechnics in Innovative Technologies for Teaching differently abled sponsored by AICTE-ISTE from 21-02-2022 to 26-02-2022, online, organized by JSS Polytechnic for the differently abled, Mysuru.
	Invited Talk on "Machine Learning" on 08.03.2022 at Govt. CPC Polytechnic, Mysuru- 6
Dr.Anil Kumar K.M , Associate Professor	Delivered a talk on "Cyber Security" at the Induction Programme at JSS STU held on 30th December 2021
Dr. Manimala. S	Delivered a talk on Artificial intelligence in MHRD workshop conducted by Pune, Maharastra.

**Patents**

Sl. No.	Year	Title of the patent Published	Application /Patent No.	Name of Inventors	Filed / Published
1	2022	Smart energy consumption monitoring meter	362254-001	Prof. Anil Kumar K M	Published
2	2021	A Novel Soft X-Ray Image Benchmark Dataset for Automatic, Non-destructive Internal Quality Detection of Mango Fruits	202141035062	Vani Ashok	Published

**MoU Signed**

- Holosuit Pvt. Ltd., Singapore.
- Bosch Global Software Technologies (BGSW), to start an industry elective course on Cyber Security and Industry 4.0.

### **Industrial Visit**

Industrial Visit to U R Rao Satellite Centre, ISRO, Bengaluru was conducted on 02/08/2022 and 03/08/2022. The event was organized by the Department of Computer Science and Engineering, SJCE, JSS STU, Mysuru and sponsored by AICTE - Scheme for Promoting Interests, Creativity, and Ethics among Students (AICTE-SPICES) for 4th Semester B.E. Students. A total of 129 students from 3 sections of 4th semester visited the ISRO campus. 10 staff members accompanied the students on both the days.



ISRO Industrial Visit

### **Editorial Members:**

Dr Srinath S | Dr Anilkumar K M | Prof. Parashiva Murthy B M  
Anagha Honnali | Darsha Sorokhaibam | Ninaad A Kaller  
Shreeya Pai | Thanya Gangesh | Darshan B S | Abhilash Hathwar