



# Dayananda Sagar University

Bengaluru

## SOE-BULLETIN

The Official Newsletter of **School of Engineering**



# SCHOOL OF ENGINEERING

## Vision

To Transform life through Excellence and Innovation on in Engineering Education and Research with an emphasis on Sustainable, Inclusive Technology and Global needs.

## Mission

To Develop School of Engineering at Dayananda Sagar University, as Center of Excellence by imparting Quality Education and Research to generate highly Competent, Skilled and Humane manpower to face emerging Technological, Scientific and Social challenges with Ethics, Integrity, Credibility and Social concern.



**TECH TALKS**

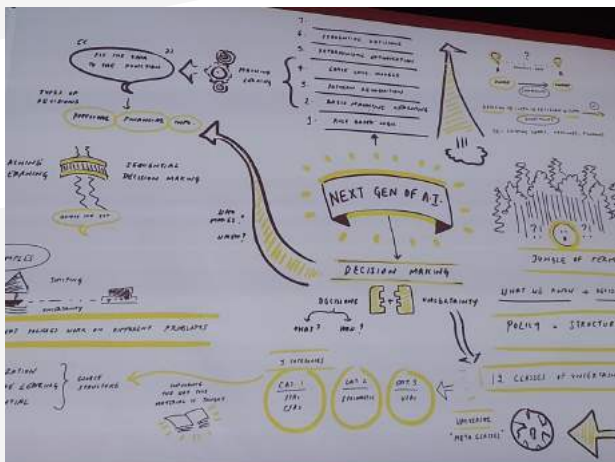
## Seminar on Problem Based Learning

Department of Computer Science and Engineering (Cyber Security) organized three hours seminar on "Problem Based Learning" for first year CSE(CS) on 1st June 2023 from 1.45pm to 4.45pm. Dr. Kiran B. Malagi, Chairman, CSE(CS) delivered the seminar. Seminar was followed by orientation about Cyber Security branch by department faculties. Students interacted with all the faculties to know more about their branch.



## An Exclusive Conference on Building Future-Ready Retail with AI at scale at Target Multiplai

The "Building Future-Ready Retail with AI at Scale" conference, held at Target Multiplai in 2023, brought together leading experts, industry professionals, and AI enthusiasts to explore the latest advancements and applications of artificial intelligence (AI) in the retail sector. The conference aimed to provide insights into leveraging AI technologies to create more personalized, efficient, and engaging retail experiences.



# Webinar on "Revolutionising the Proptech market: Unleashing the Power of Data Science"

The Department of CSE (Data Science) has successfully organized a webinar on "Revolutionizing the Proptech Market: Unleashing the Power of Data Science". The resource person was Mr. Ganesh M Bhat, Data Scientist from Centrica, London, UK. The targeted audiences were 2nd, 4th and 6th semester students of Data Science.

The students were given knowledge on the present technologies that a Data Scientist practices on a regular basis. The speaker used the property market as an example and explained how Machine Learning, Deep Learning and Computer Vision is applied on Proptech Market.

**Resource Person: Ganesh M Bhat, Data Scientist @ Centrica, London**

The slide titled "Proptech Nomenclature" defines the field and its domains. It states that Proptech involves digital tools used by experts to optimize aspects of the real estate industry, such as buying, selling, mortgages, and property surveys. It identifies two main domains: Residential and Commercial. The slide features two circular diagrams: "Residential Proptech Landscape" and "Commercial Proptech Landscape".

- It involves the digital tools used by experts to optimize several aspects of the real estate industry like buying, selling, mortgages, property surveys etc.
- There are two definitive domains of this market namely Residential and Commercial

The slide illustrates a machine learning pipeline for price prediction. The process starts with "Data", followed by "Cleaning", "Feature Engineering to date", "Price Prediction", and "Model Update".

- Data:** distances from points of interest, sq. meters, square etc.
- Cleaning:** Remove the outliers and fill the missing values of the respective features.
- Feature Engineering to date:** For the same conditions average the date and extract longitude feature such as avg. year into average.
- Price Prediction:** Apply the best model for price and pass their results into the ML model to get the predictions made by the model.
- Model Update:** Use the predicted price as a proxy for revenue stage.

Key findings and model performance:

- Finalizing the model was initially done with identifying the model with the best R2 score and with the MAE, MSE and RMSE. Random forest offered an R2 score on average 86% in Ontario and 83.8% in Spain.
- Initial RF model was improved on using hyperparameter tuning (with GridSearch) and then subsequent acquiring of feature importance from the model itself and backtracking to pass on the most relevant features themselves.
- Inference was performed on any bank mortgage portfolio and average error in this stage was only 10-15%.
- The ML model significantly improved on the comparable model by predicting accurate price predictions and not overvaluing properties based off a certain type or location.



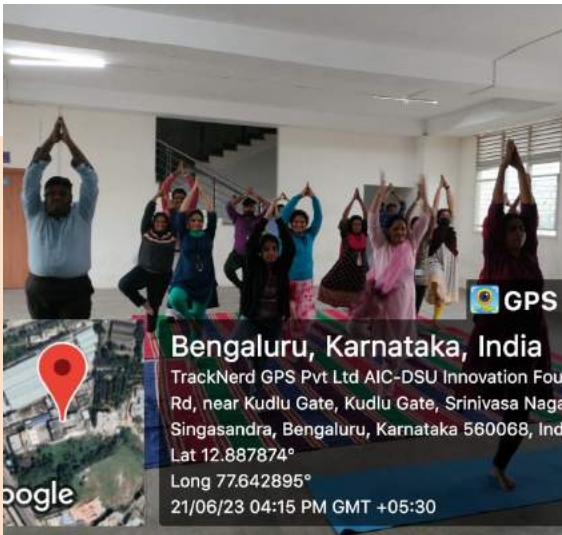
# EVENTS

## International Yoga Day

Department of Computer Science and Engineering (Cyber Security) in association with Computer Science and Engineering celebrated International Yoga Day on 21st June 2023 at B block 4th floor from 8.45am to 9.45am. All faculties of the departments actively participated in the event. Dr. Savita Hiremath of department of CSE and Prof.Naveen Kulkarni of Department of CSE(CS) demonstrated and trained different asanas of Hatha Yoga like Surya Namaskara, Yoga Namaskara, Veerabhadrasana, Sarvangaasana, etc., along with Pranayama (Breathing Techniques), Meditation. CSE Department Chairman Dr. Girisha talked on contribution of Indian ancient knowledge like yoga to humanity. CSE(CS) chairman Dr. Kiran Malagi talked on Effect alternative and complementary medicines like yoga and music on physical and mental health.



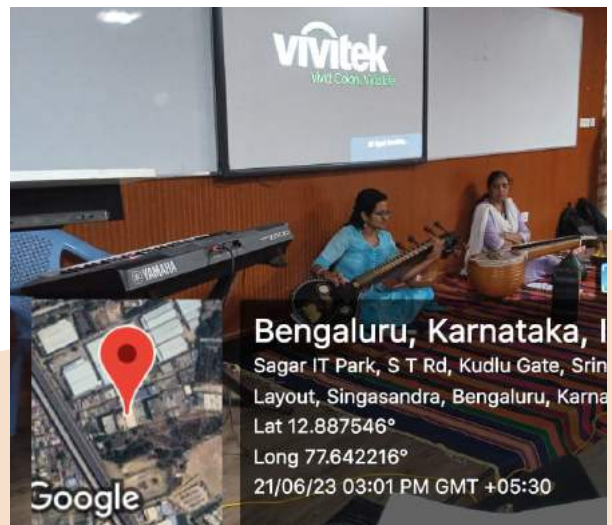
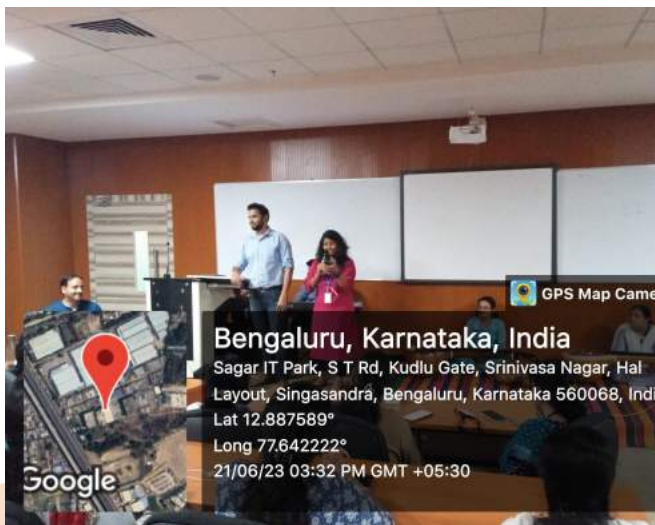
The Department of Computer Science and Engineering celebrated International Yoga Day on 21st June 2023. Dr. Savitha Hiremath gave a yoga demonstration for the faculty members, to observe International Yoga Day and raise awareness of healthy lifestyles.



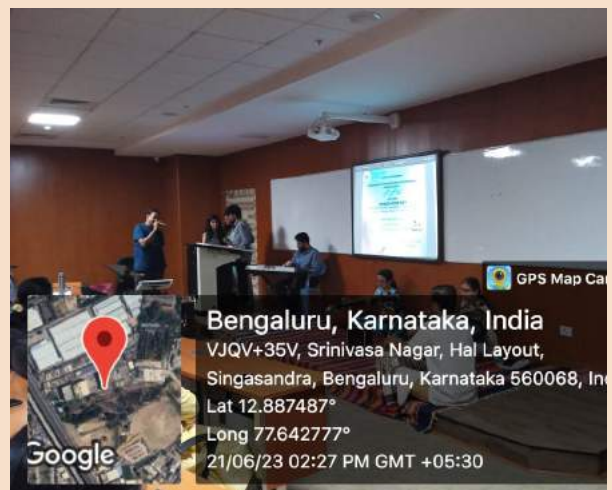
Department of Electronics & Communication Engineering dept. organized International Yoga Day and more than 70% of faculties and students participated with great enthusiasm. The event began with a brief introduction on Yoga Day followed by warm up exercises. The students and faculty practiced & performed sitting and standing asanas like Suryanamaskara - sequence of 12 powerful yoga poses, Virabhadrasana, Vajrasana and lastly the meditation. The importance of these asanas was explained simultaneously. The celebration concluded with the speech of Dr. Theodore Chandra, Chairperson dept. of ECE. He encouraged students and Faculty to practice regular yoga to remain fit and improve concentration.

# World Music Day

Department of Computer Science and Engineering (Cyber Security) celebrated World Music Day on 21st June 2023 from 2pm to 4.30pm at Gallery Hall, A Block. Dr. Kiran Malagi, Chairman, CSE(CS) addressed the Gathering and talked on Effect of Music on Human Body and Mind. It was followed by individual and team music performances. Dr. Kiran Malagi (Singing and Rhythm Pad), Dr. Rajesh T.M (Keyboard), Prof. Naveen Kulkarni (Tabla), Prof. Padmageetha (Veene), M.Tech. CSE student Mrs. Monica (Veene), CSE B.Tech. Students Mr. Chandan (Singing), Ms.Bhuvana (Singing), Ms.Amruta (Singing) performed as classical music band and their performance was appreciated by all the audience. After this team performance many faculties of SoE presented their singing performance which was like recreational activity for all the faculties.



Many faculties of SoE attended and encouraged music performers. Prof.Kanmani B.S. and Prof. Veena M. Cultural Coordinators of SoE coordinated the event.



## Photography and Art Exhibition on World Environment Day

The Department of Computer Science and Engineering had organized a Photography and Art Exhibition on the occasion of World Environment Day on 10th June 2023. It was coordinated by faculty coordinators Prof. Pooja Shree H R, Prof. Sharvari J N, Prof. Veena M, Prof. T K Pradeep Kumar and student coordinator J N Sumanth.



**Dayananda Sagar University**  
Department of Computer Science & Engineering

**organizes**  
**Photography & Art Exhibition**  
**on the occasion of**  
**"WORLD ENVIRONMENT DAY"**

**10 June, 2023**  
10 AM Onwards  
A-block Canopy Hall

Art and Photography enthusiasts can submit your work (Hard copy) on or before 6th June 2023, 4:45 PM to Prof. Pooja Shree H R (T335 B-block)

**Faculty Coordinators**  
Prof. Pooja Shree H R (Asst. Professor, CSE)  
Prof. Sharvari J N (Asst. Professor, CSE)  
Prof. Veena M (Asst. Professor, CSE)  
Prof. T K Pradeep Kumar (Asst. Professor, CSE)

**Student Coordinator**  
J N Sumanth (B.Tech. sem. 4, CSE)

**Conveners**  
Dr. Udaya Kumar Reddy K R  
Dean, SOE, DSU  
Dr. Girisha G S  
Professor & Chairperson CSE, SOE, DSU

For Any Queries email: [poojashreehr-cse@dsu.edu.in](mailto:poojashreehr-cse@dsu.edu.in) [Register now](#)

**Join us and be part of a fun filled day!**

## CSR activity: Awareness and Training Program on "Introduction to Celebrating Life Addiction Free & Competition"

The Department of Computer Science and Engineering in association with NSS Unit of DSU, CLAF, an initiative of Movement for Alternatives for Youth Awareness (MAYA) and Karnataka NO for Tobacco (KNOT) organized an event - Awareness and Training Program on "Introduction to Celebrating Life Addiction Free & Competition". 44 Students had participated which was held on 16th June 2023. The event was coordinated by Prof. T K Pradeep Kumar, Dr. Bhagyajyothi, Prof. Maragatham. S. Student Volunteers - Mr Naveen Kumar and Ms Preethi.



## Ecosystem restoration

A group of enthusiastic students from 4th semester ECE, SoE started a campaign to plant trees at city campus, DSU on 5th June 2023. On 7th June, the department of ECE, SoE joined hands and celebrated environmental day on 7th May, 2023. Students had prepared soulful posters and showcased their concern through restoration slogans. Students of ECE planted trees at Dayananda Sagar University, Harohalli.

**Prof.Nandini Rao from ECE coordinated the celebration.**



## WORLD ENVIRONMENT DAY-GUEST TALK

The Department of Mechanical Engineering organized a guest talk on "Significance of Wildlife Conservation and Plastic Pollution"- by AMOGHAVARSHA J S- Renowned Wildlife Photographer, Filmmaker, Recipient of National award, and actor on June 5th, 2023 from 3 pm-4 pm in Canopy, Block-A, campus-3 on the occasion of World Environment Day- (Theme: Beat Plastic Pollution)



## Highlights of Farewell “Samavarthana”

Department of Computer Applications at SOE level in DSU, organized “Samavarthana”, a farewell event for final year outgoing students of BCA VI SEM and MCA IV SEM on 13/05/2023 in a view to wish them with the theme “Every Ending has a new beginning”. The event had begun with a floral welcome to our Pro-VC Dr. Amit Bhatt, Dean Dr. Udaya Kumar Reddy, Placement officer Mr. Guru Venkateshwar and Chairperson Dr. Vasanthi Kumari P along with all other department chairpersons of SOE. All the students were felicitated by the DEAN of SOE, Dr. Udaya Kumar Reddy while addressing the students, he explained how the students should prepare themselves for their future endeavors and wished them with his motivational speech. Later the final year students were asked to give their opinions about the university. They cherished their student life journey with DSU by projecting a video. The event was then followed by cultural programs which was catalogued by the juniors.

**“Samavarthana” was coordinated by SOE Cultural Coordinator Shama and Prof. Sumana SG.**



## “Cancer Awareness Outreach Program” under NSS Activity

Dept. of Computer Applications has successfully completed the NSS activity "Cancer Awareness Outreach Program" on 20th May, 2023 in association with SOE, wherein SOE NSS student Volunteers Participated in the Program by Enapoya University at Gandhi Bhavan Conducted by State NSS Cell.





# PROJECT EXPO

## PROJECT EXPO

On May 5th 2023 Department of MCA organized Mini Project Expo, which focused on Applications of data structure. The expo included students from is year MCA. The expo started with a few thoughtful words by our honourable chairperson of MCA department Dr. Vasanthi Kumari mam. The words impacted on us to do more innovative things in upcoming days. After the expo started by formal welcoming of all the dignitaries presented in the expo.

Students showcased their project team wise for the competition. The Judges of the event was Dr. Baby Maruthi mam and Dr. Pavitra mam. Meanwhile there was 21 projects for the expo.



All the faculty from MCA department and various other department faculties from CSE and Cyber security addressed the event. Faculties from CS department Dr. Ashwin sir was present and also Dr. Durbadal chattaraj sir from CYBER security department was also present for the event and addressed event with their meaningful speech for the students



# WORKSHOPS

# Workshop on Introduction to Linux and Network Management

Department of Computer Science and Engineering (Cyber Security) organized two days' workshop on "Introduction to Linux and Network Management" for fourth semester students. In-house Resource Persons Dr. Durbadal Chattaraj, Dept. of CSE(CS) and Prof. Raghavendra K, Dept. of CSE covered and demonstrated Linux Installation, Linux Basic Commands, Networking commands and Process & Environment variable management. Prof. Naveen Kulkarni and Prof. Manjula of department of CSE(CS) coordinated the workshop. Fifty-five students of fourth semester Computer Science and Engineering (Cyber Security) participated in workshop.



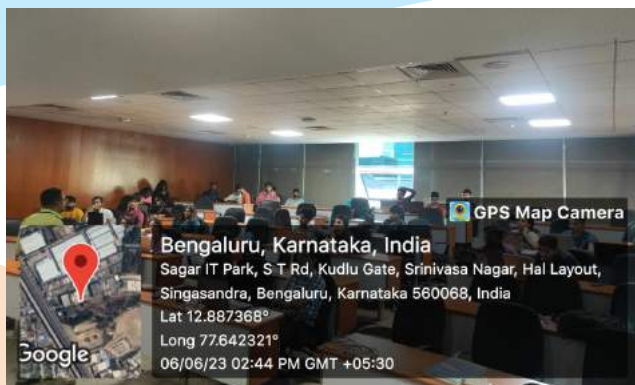
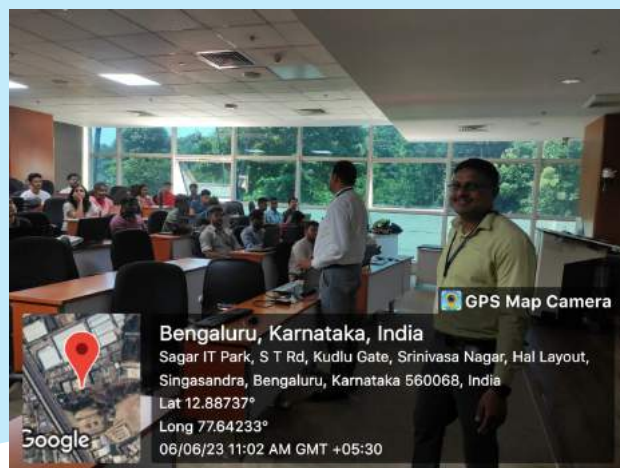


# INDUSTRIAL VISIT

## Industrial Visit

Department of Computer Science and Engineering (Cyber Security) organized one day industry visit to U R Rao Satellite Centre (ISRO) for fourth semester students on 7th June 2023. Dr. Durbadal Chattaraj and Prof. Manjula M. coordinated the event. Dr. Shrinivas, Scientist, URSC showcased and explained students on different units of URSC. There were three phases of Demonstration:

- Video Demonstration on how satellite is built and its working
- Visit to Clean Rooms to observe how scientist work to build and test satellite components.
- Satellite Miniature and Hardware Museum.



## Industrial Visit - ISRO-UR Rao Satellite Centre

One-day Industrial Visit to ISRO UR Rao Satellite Centre, Bengaluru, was organized by the Department of CSE (Data Science), on 6th June 2023 organized by Dr. Shaila S G, Professor and Chairperson, Dept. of CSE (Data Science) and Prof. Monish L, Assistant Professor, Dept. of CSE (DS). The visit was undertaken by 55 students of 4th semester, accompanied by 4 faculty members.

U R Rao Satellite Centre (URSC), Bengaluru, formerly known as ISRO Satellite Centre (ISAC) is the lead centre for building satellites and developing associated satellite technologies. These spacecrafts are used for providing applications to various users in the area of Communication, Navigation, Meteorology, Remote Sensing, Space Science and interplanetary explorations. The Centre is also pursuing advanced technologies for future missions. URSC is housed with the state-of-the-art facilities for building satellites on end-to-end basis. ISRO Satellite Integration and Test Establishment (ISITE) is equipped with state-of-the-art clean room facilities for spacecraft integration and test facilities including a 6.5 Metre thermos vacuum chamber, 29 Ton vibration facility, Compact Antenna Test Facility and acoustic test facility under one roof.

Assembly, Integration and Testing of all Communication and Navigation Spacecraft is carried out at ISITE. A dedicated facility for the product ionisation of standardised subsystems is established at ISITE.

URSC has a unit called Laboratory for Electro Optics System (LEOS), which is situated in Peenya, Bengaluru and is mainly responsible for research, development and product ionisation of Sensors for ISRO programmes.



## Industrial Visit: NOKIA EXPERIENTIAL LEARNING

Department of Computer Science and Engineering, Nokia registered students (under the Special Topic) and 2nd year students have visited Nokia L5 premises for Experiential learning. Students have visited their Data centre and their 5G facilities. They are also educated about upcoming 5G compatible Network Design and Architecture Protocols. The visit was coordinated by Prof.Savita Vijay, Dr Basavaraj N Hiremath and Dr. Pramod Naik on 15th June 2023.



## Industrial visit to Satish Dhawan Space Center (SDSC), Sriharikota

The Department of Aerospace Engineering organized industrial visit for 6th Semester Students of Aerospace Engineering to SDSC on 16 June 2023. Objective of the visit was to provide a Technical Exposure to the students on Space Technology and advancements in related technologies. The visit not only provided a good insight into the quality of research happening in the area of space technology but also gave great exposure to the students about the future career prospects and areas of research in applied sciences. The visits included Library, 1st and 2n launch pads, Space Museum and Mission Control Centre. The technical information provided by SDSC was extremely informative and the details are separately documented. Faculty member Prof. Sripad Kulkarni accompanied the students, ably assisted by Sri Murthy, Library Department, SDSC.





# FACULTY ACHIEVEMENTS



**Dr. Shahina Parveen**  
Professor & Chairperson,  
CST, DSU.

**Dr. Shahina Parveen - Professor & Chairperson, CST, DSU.**

- Reviewed papers in 9th International Conference on Electronics, Computing and Communication Technologies, IEEE CONNECT, June, 2023.
- Published a paper titled "**Cardiovascular Disease Prediction in Retinal Funds Images using ERNN Technique**", in **Frontiers of ICT in Healthcare, Scopus.**
- Published a paper titled "Accurate Location-Based Routing for Emergency Response: A Case Study of an App for First Responders using What3Words" 8th International Conference on Communication and Electronics Systems organized by PPG Institute of Technology, 1-3 June, 2023. (ISBN:979-8-3503-9663-8)



**Prof. Baskar Venugopalan**  
Professor of Practice  
Department of CST, DSU.

**Prof. Baskar Venugopalan** published a paper titled "Accurate Location-Based Routing for Emergency Response: A Case Study of an App for First Responders using What3Words" 8th International Conference on Communication and Electronics Systems organized by PPG Institute of Technology, 1-3 June, 2023. (ISBN:979-8-3503-9663-8)



**Dr. Shaila S G**  
Professor & Chairperson  
Department of DS, DSU.

**Dr. Shaila S G** has Reviewer for ScienceDirect journal Engineering Applications of Artificial Intelligence in the month of June 2023



**Dr. Kakoli Bora**  
Associate Professor  
Department of DS, DSU.

**Dr. Kakoli Bora** has Reviewer for IEEE international conference on Networks, Multimedia and Information Technology organised by NITTE Meenakshi Institute of Technology on 7th June 2023.



**Prof. Shivamma D**  
Assistant Professor  
Department of DS, DSU.

**Prof. Shivamma D** has Reviewer for IEEE International conference on Applied Intelligence and Sustainable Computing (ICAISC-2023) organised by SDM Engineering College, Dharwad on 16th and 17th June 2023.



**Dr. George Fernandez**  
Assistant Professor  
Department of CSE, DSU.

**Dr. George Fernandez**, Associate Professor and Prof. Mala B. A., Assistant Professor published a book titled "Getting Started with the Internet of Things" for Notion Press Publisher on 1st June 2023.



**Dr. Rajesh T.M**  
Associate Professor  
Department of CSE, DSU.

**Dr. Rajesh T M**, Associate Professor, Department of Computer Science and Engineering has participated in IP Awareness/Training program under NATIONAL INTELLECTUAL PROPERTY AWARENESS MISSION on June 09, 2023.



**Prof. Mala B A**  
Assistant Professor  
Department of CSE, DSU.

**Prof. Mala B A**, Assistant Professor, published a paper in International Journal of Engineering Research and Applications titled "Assisting Blind using light weight IoT tool: A Review" on 28th June 2023.



**Dr. Meenakshi Malhotra**  
Associate Professor  
Department of CSE, DSU.

**Dr. Meenakshi Malhotra**, Associate Professor, published a paper in International Journal High Technology Letters titled "Categorization of Mental Health Disorders Using Multivariate Feature Selection and Optimized Bayesian Classification of EEG Signals" on 10th June 2023. She along with students Abhijith J K, Belsare Yash Rahul, Chethan Rao S, Harshal Goyal, also published an IEEE Conference paper titled "A community-based cloud music streaming platform with recommendation and comments filtering" in May 2023.



**Dr. Rammohan**  
Professor  
Department of Mechanics, DSU

**Dr. Rammohan**, Professor Dept. of Mechanical Engineering has attended five-day FDP on “Fundamentals of Low Frequency NVH and Automotive Applications” from 19th – 23rd June, 2023. organized by Dassault Systems Foundation. He has also attended on short- term course Training Program on “Structural Fire Engineering” from May 22 – 26, 2023 at IISc, Bengaluru.



**Prof. P C Deshmukh**  
Adjunct Professor  
Department of Physics, DSU

**Prof. P C Deshmukh** is interviewed by the Indian Association of Physics Teachers (IAPT) in IAPT special event (on 30th June, 2023) “Meet the Author” for the Book “Foundations of Classical Mechanics” (Cambridge University Press, 2019)



**Prof. Vijaya Kumar**  
Professor & Chairman  
Department of Physics, DSU

**Prof. Vijaya Kumar:**

- Published a research article in Elsevier’s “Journal of Non-Crystalline Solids”, with title Structural and electrical properties of TSP: CH<sub>3</sub>COONa amorphous Biopolymer electrolytes for electrochemical cell applications. The journal has Impact factor of 4.458.
- Presented an oral talk at an International Conference, “International Conference on Energy Conversion and Storage (IC-ECS – 2023)” organized by Amrita Vishwa Vidyapeetham on 21 Jun 2023.



**Dr. Anuradha Bhattacharya**  
Assistant Professor  
Department of Mathematics, DSU

**Dr. Anuradha Bhattacharjee**, Assistant Professor had successfully guided the research scholar **Mr. SHANKAR NARAYAN** bearing USN: ENG17PPBS14 with the thesis title “Mathematical Modelling of Cardiovascular System “on 02 June 2023 under the external examiner **Dr. Kandasamy, Professor, Department of Mathematics, NITK.**





**Prof. Ankita Chandola**  
**Assistant Professor**  
**Department of Mathematics, DSU**

**Prof. Ankita Chandola**, Assistant Professor had successfully done her Ph.D Viva-Voce from Amity University, NOIDA, UP, INDIA on 12 JUN 2023 with the thesis title “Analysis And Computation of Special Functions of One and Several Variables Pertaining to Physical Applications” under the supervision of Dr. Rupakshi Mishra Pandey, Associate Professor, Amity University, Noida, UP, India and Co-Supervision of Dr. Ritu Agarwal, Assistant Professor, MNIT-Jaipur, Rajasthan , India, with the external examiner Dr. A. Swaminathan, Professor, Department of Mathematics, IIT-Roorkee.





# STUDENT ACHIEVEMENTS

**Kaushal Yadav and Lakshman Parihar.M** under the guidance of Prof.Chhhaya Dhule published a paper titled “VANI-AI Powerd Voice Assistant Radio Applications “in International Conference on Emerging Trends in Technology, Science, Management and Upcoming Research on Computer Science held on 21-22 April 2023.

**Kamarsu Venkata Sriya, Amrin Bushra Taj, Akshay M R, L Anagha** students of CSE under the guidance of Mr. Narasimhan Vijay Anand, TriSpace technologies filed an Indian Patent titled “A system and method for optimizing Bill of material cost and power performance of Graphics Processing Unit GPU core” No.202341044078 on 30th June,2023.

**Mr. Rohit S** of the 2019-2023 batch (USN No. ENG19AS0023) performed extremely well in GATE Exam and joined IITM, Chennai for Masters’ degree in Aerospace Engineering.

## EDITORIAL BOARD

### MANAGING EDITOR



Dr. Uday Kumar Reddy K R  
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### EDITOR - IN - CHIEF



Dr. M. Shahina Parveen  
Professor & Chairperson, CST, DSU.

### Faculty Co-Ordinator

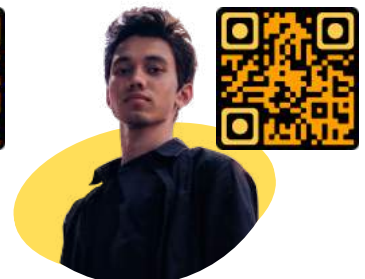


Prof. M. Chithambarathanu  
Assistant Professor  
Department of CST, DSU.

### Student Co-Ordinators



Anuj Dwivedi  
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(AI&ML), DSU.



Harsh Manalel  
Department of CSE  
(AI&ML), DSU.



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University** Bengaluru

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