Department of Computer Science & Engineering

UniCS

THE TECH MESSENGER

News Letter - Volume of the Year

August 2020 - July 2021

"The secret of getting ahead is getting started." — *Mark Twain*

Vision of the Institute

"To be center of excellence recognized nationally and internationally, in distinctive areas of engineering education and research, based on a culture of innovation and invention."

Mission of the Institute

"BIET contributes to the growth and development of its students by imparting a board based engineering education and empowering them to be successful in their chosen field by inculcating in them positive approach, leadership qualities and ethical values."

Vision of the Department

"To be a center-of-excellence by imbibing state-of-the-art technology in the field of Computer Science and Engineering, thereby enabling students to excel professionally and be ethical."

Mission of the Department

- M1: Adapting best teaching and learning techniques that cultivates Questioning and Reasoning culture among the students.
- M2: Creating collaborative learning environment that ignites the critical thinking in students and leading to the innovation.
- M3: Establishing Industry Institute relationship to bridge the skill gap and make them industry ready and relevant.
- M4: Mentoring students to be socially responsible by inculcating ethical and moral values.

Program Educational Objectives (PEOs)

- PEO1 - To apply skills acquired in the discipline of Computer Science and Engineering for solving societal and industrial problems with apt technology intervention
- PEO2 - To continue their career in industry/academia or to pursue higher studies and research
- PEO3 - To become successful entrepreneurs, innovators to design and develop software products and services that meets the societal, technical and business challenges
- PEO4 - To work in the diversified environment by acquiring leadership qualities with effective communication skills accompanied by professional and ethical values

Program Specific Outcomes (PSOs)

- PSO1- Analyse and develop solutions for problems that are complex in nature by applying the knowledge acquired from the core subjects of this program.
- PSO2- To develop Secure, Scalable, Resilient and distributed applications for industry and societal requirements.
- PSO3- To learn and apply the concepts and construct of emerging technologies like Artificial Intelligence, Machine learning, Deep learning, Big Data Analytics, IoT, Cloud Computing, etc for any real time problems.

Newsletter Objectives

- Achievements of the Students and Faculty members from the CS & E department in Curricular, Co-curricular and Extra-curricular Activities.
- The Recent trends in the area of Computer Science & Engineering and related areas.

About the Department

Department of Computer Science and Engineering was established in 1984 as an academic center for undergraduate studies in engineering. Department offers Undergraduate, Post graduate and research programs in Computer Science and Engineering field and is affiliated to Visvesvaraya Technological University, Belagavi, Karnataka. Undergraduate program is accredited two times by NBA.

It is supported by well qualified faculty, non - teaching staff and best - in - class Infrastructure. The faculty members are actively involved in research and development. The staff members have also won the awards from reputed IT organizations like Infosys, IBM and Wipro and achieved academic excellence. 12 faculty members are pursuing research at reputed universities. Department has applied for one Indian patent in the field of Cluster head election Strategy. One of the faculty members has got best paper award in the URENG conference held at Dubai. Department has produced 5 doctorates in last 10 years.

The Department of Computer Science and Engineering of BIET has been at the forefront of churning out software engineers with a high caliber of technical expertise. It continues to foster and engender the innovation and breadth of vision necessary to excel in the blooming software industry.

From the Editorial...

Greetings to all!

The department is cheerful to present the latest edition of the Department of CSE Newsletter. It motivates, enlightens and enables the Student & Staff community to focus on their goals and achieve more. This newsletter explores the hidden talents, commitment, involvement and achievements of the Department Students and Staff Community in their Extra and Co-Curricular activities to the world.

The yearly newsletter of the Department of CSE covers the information about the Faculty Development Programme, faculty participation, student activities.

We look forward to your continued contribution and participation in this Newsletter. Your good ideas, comments or valuable suggestions about this Newsletter are welcome. This may lead to enhance the quality and professionalism of this newsletter in forth coming editions. Thank you for choosing and spending time with this newsletter.
We hope, this Newsletter encourage you to conquer more in your field.

sd/-
Editorial

Message from HOD's Desk

I feel indeed that Department of Computer Science & Engineering is releasing its Annual Newsletter Tech Messenger. Faculties of our department are highly encouraged to carry out their research work. Our forum Unics is a platform to bring out the hidden talents of students. Department has organized many Technical Talks, workshops, hackathons for students and FDPs for faculties. This newsletter will highlight all such activities. I congratulate editors of the Newsletter for their effort in bringing out this Newsletter colorfully with all the events covering from August 2020 to July 2021. I wish them all the success.

Dr. Nirmala C.R.
Prof. & Head,
Dept. of CS&E

NEWS LETTER COMMITTEE

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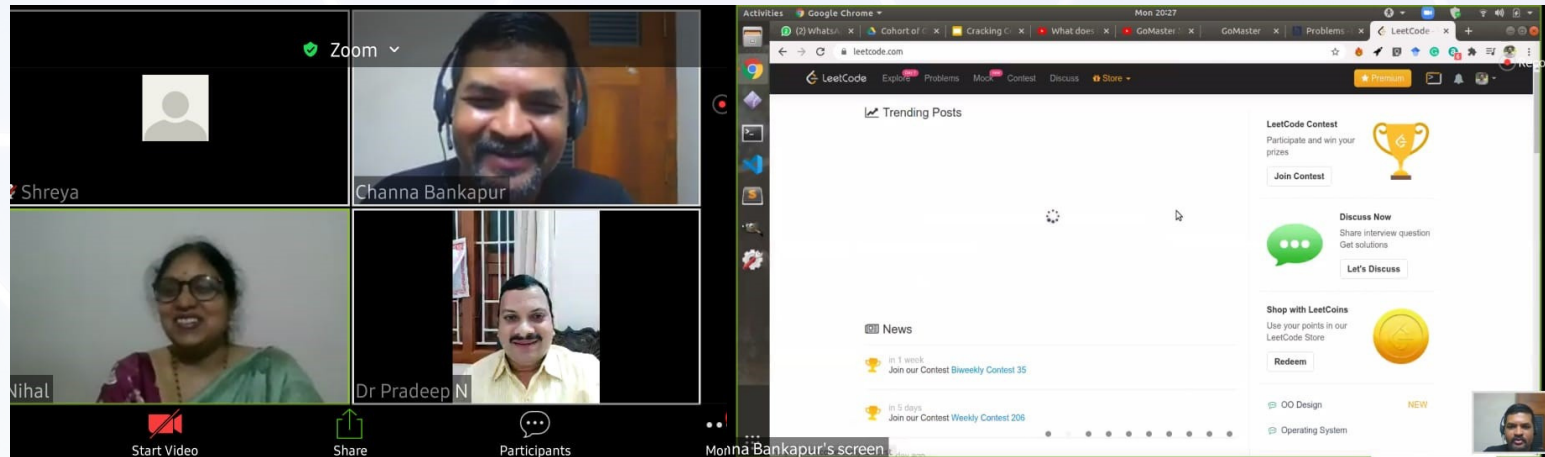Prof. Gangamma Hediyalad
Assistant Professor

Student Editors
Mr. Inzamam K A
Ms. Suraksha V Kandi

Department Activities

- Interactive Webinar on "Cracking Coding Interviews in Tech Companies like GOOGLE and MICROSOFT" Under the banner of ISTE Students Chapter on 07/09/2020.

The webinar was given by Mr. Channa Bankapur, Associate Professor, Trainer at GoMaster.in and Mr.Narasimha Datta N, Co-Founder at GoMaster Technologies.

- Power Seminar on "Machine Learning" In association with ICT Academy under the banner of ISTE Student Chapter on 25/09/2020.
- "C-Quest" Coding Contest opens for all the streams. The contest is conducted with written and coding round on the HackerRank Platform under the banner of dept. forum on 14/12/2020.
- "CSS Crop" a CSR Initiative in association with ICT Academy an offline Training program on Employability Skill Training in Trending Technology on My SQL Database& Soft skills., Hosted by Dept. of CSE, BIET from 16/12/2020 To 11/01/2021.
- "PCAP- Programming Essentials in Python" by Cisco Netacad in association with ICT Academy, Hosted by Dept. of CSE, BIET from 05/02/2021 to 05/03/2021.
- ICT Academy and CSS Corp- CSR Initiative conducted an offline Training program on "Employability Skill Training in Trending Technology on My SQL Database & Soft skills" from 08/03/2021 to 17/03/2021.

- "Blog - A – Thon" a way for create meaningful content to educate and inform others in association with ISTE Faculty Chapter on 25/03/2021.

Prof. Y Vrushabhendrappa, Director, Dr. Sadashivappa K, Incharge Principal, Dr. Nirmala C R, Head, Dept of CS&E, Dr. Kalleshappa, ISTE student chapter Co-ordinator inaugurated the event
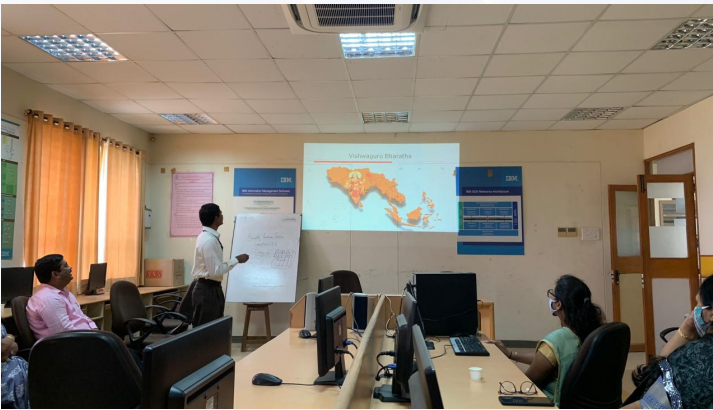

- "Faculty Lecture Series Conclave -V1.0" in association with ISTE Faculty Chapter Department faculties presented on various trending technologies from 07/04/2021 to 30/04/2021.
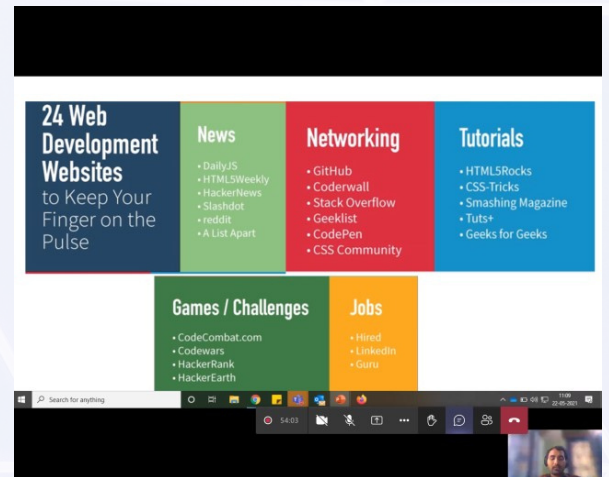
**Presentation on various technologies given by department faculties.**

- "VMWare Tanzu Build-a-Thon" initiated by VMware Pvt. Ltd., Bengaluru and hosted by SmartBridge in association with Dept. of CS&E, BIET on 11/04/2021.

- Department conducted the Power Seminar on "Industry 4.0" under the banner of dept. forum on 22/05/2021.

Online power seminar by Mr. Venkatesh Neelam, Deputy Manager-HR, Volvo.

- "Introduction to RPA" Initiated by UiPath Academic Alliance, Bengaluru. Hosted by Dept. of CSE, BIET, on 24/05/2021.

- "GitHub Campus Program", initiated by Kestone Global, Bengaluru and hosted by Dept. of CS&E, BIET, on 25/05/2021.
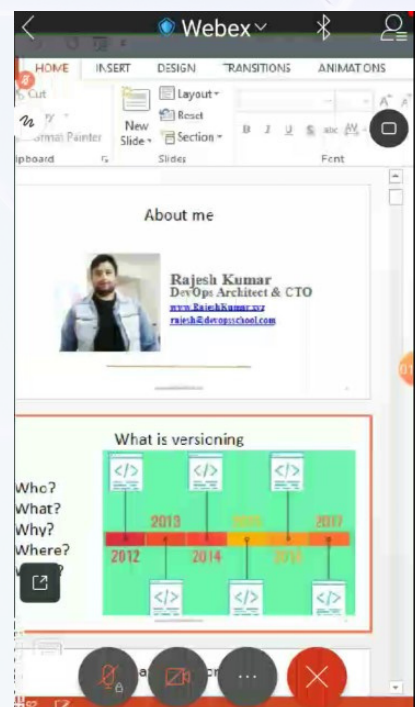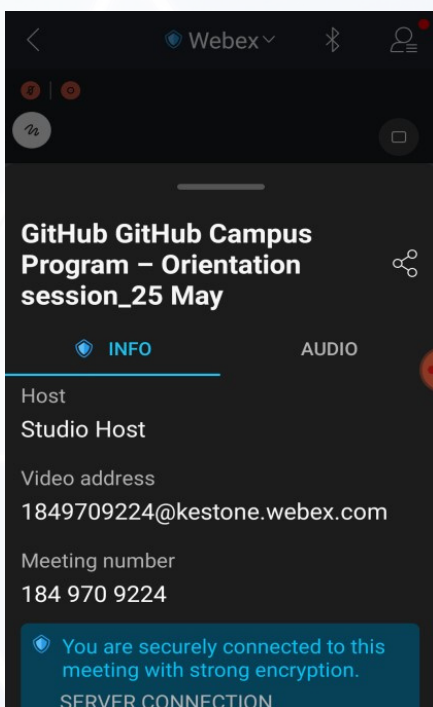

Meeting Information and Introduction & Versioning

The resource person Mr. Rajesh kumar explored Why GitHub is of use to you as a student, Why GitHub is of use to you as a faculty member and Git training using GitHub console.

- Online coding platform "IBM Call for Code" initiated by IBM Pvt. Ltd., Bengaluru and hosted by Dept. of CS&E, BIET, on 07/06/2021.

- Department conducted the event "Progyan 3.0 In-house Project Exhibition" on 09/07/2021 to 10/07/2021 under the banner of dept. forum.
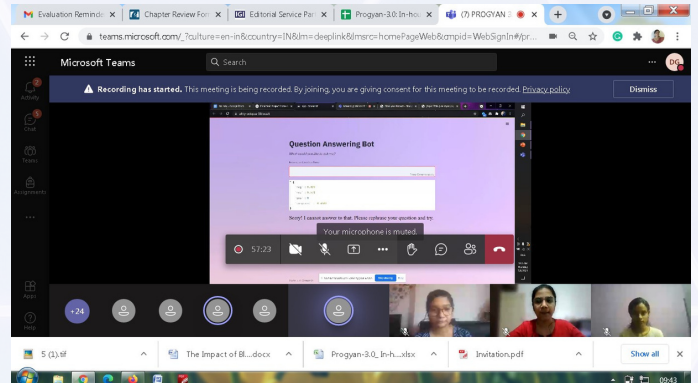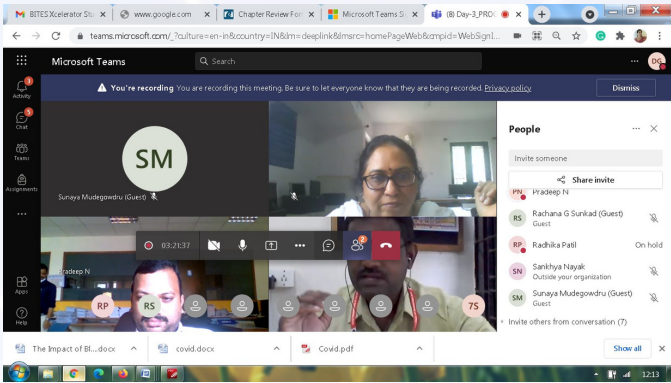
Dr. Sankhya Nayak N, Associate Professor, JNNCE shivamogga and Dr. Sreenivasa B R Associate Professor, BIET Davangere evaluated Progyan 3.0 In-house Project Exhibition

- Department conducted the event "Crack the code to Conquer the Interview" on 31/07/2021 to 01/08/2021 under the banner of dept. forum.

Dr.Nirmala C R, HOD briefing about the event.

- Department conducted the event "Soft Skills, skills for life" under IQAC cell and in association with ISTE Student Chapter from 30-08-2021 to 04-08-2021.

Alumni Mr. Prajwal Prasad, Resource Associate Euromonitor International delivering the importance of "Soft skills, skills for life".

Faculty Participation

Publications in National/International Conferences/Journals

- Dr. Arun Kumar G H, Nirmala C R published a paper "An Entropy Based Method for Outlier Detection and Removal in the Agriculture Data", International Journal of All Research Education and Scientific Methods (IJARESM), Volume 8, Issue 12, Page 1155- 1161 Dec-2020

- Naveen H.M published a paper "Segmentation of Lung Region: Hybrid Approach", International Conference on Information and Communication Technology for Intelligent Systems (ICTIS)

- Abdul Razak M. S, Dr. Nirmala C R published a paper "A computing model for trend analysis in stock data stream classification", Indonesian Journal of Electrical Engineering and Computer Science, Vol. 17, No. 2, September 2020, pp. 1602-1609

- Azizkhan F Pathan, Chetana Prakash published a paper "Unsupervised Aspect Extraction Algorithm for Opinion Mining using Topic Modeling"

- Anu C S, Preethi B, Dr. Nirmala C R published a paper "Comparative Analysis Of Machine Learning Algorithms With Different Classifiers", International Journal Of Current Engineering And Scientific Research (Ijcesr) , Volume-8, Issue-5, 2021

- Preethi B, Anu C S Dr. Nirmala C R published a paper "Consumer Purchase Prediction Using Random Forest Regression", International Journal Of Current Engineering And Scientific Research (Ijcesr), Volume-8, Issue-5, 2021

- Santosh K C and Pradeep N published a paper "Novel Approach to Determine Age and Gender from Wrist X-ray images", Turkish Journal of Computer and Mathematics Education, Vol. 12 No.3, 2021, pp 5215-5229, e-ISSN 1309-4653

- Waseem Khan, Rudresh N C published paper "New Machine learning method for image based diagnosis of COVID-19", International Journal of Current engineering and scientific research (IJCESR), Volume-8, Issue-6, 2021

- Pooja H, Gangamma H "A Novel Method for Mutual Authentication in Cloud Computing", IJCRT/Vol 9/ Issue 5-2021

Ph.D Awarded

- Prof. Naveen Kumar K R awarded Ph.D. for the thesis titled "Optimized Data Mining Techniques for Zone Delineation and Yield Prediction for Precision Agriculture" under the guidance of Dr. Nirmala C R on July 22, 2021. Prof. Sreenivasa B R awarded Ph.D. for the thesis titled "Personalized Recommendations for E-commerce applications using Machine Learning techniques" under the guidance of Dr. Nirmala C R on February 17,2021.

- Prof. Sreenivasa B R awarded Ph.D. for the thesis titled "Personalized Recommendations for E-Commerce Applications Using Machine Learning Techniques " under the guidance of Dr. Nirmala C R on April 03 ,2021.

Patents Details

- Dr.Nirmala C R, Dr. Sreenivasa B R, Dr. Chetana Prakash, Dr. Roopa G M, published national patent on "Artificial Intelligence Based Internet of Vehicles (IOV) System to Prevent Road Accidents"

- Dr. Chetana Prakash published national patent on "System and method for Analyzing Transaction data in Cryptocurrency Trading using Artificial Intelligence Model"

- Dr. Chetana Prakash published national patent on "Wireless Sensor Based Artificial Intelligence System and Device for Fetal Health Monitoring During Pregnancy"

- Dr. Roopa G.M published national patent on "Sensor Based Intelligent system to Detect black fungus infection among covid recoverd patient"

- Dr. Nirmala C R, Dr. Roopa G M, Dr. Chethana Prakash published national patent on "Intelligent Mobility Robotic Device for Locomotion of Physically Challenged People"

- Gangamma Hediyalad, Pooja H published national patent on "NLP and AI based automatic detection of infection rate of COVID-19"

- Anu C.S, Preethi B published national patent on "System for Efficient Transportation of medical oxygen to Covid patients at home quarantine"

- Radhika S Patil, Shwetha G, Vaishnavi Ajay Inamdhar,Shryavani K published national patent on "System and Design of Sensor Based Electronic Ventilator for COVID-19 Patients"

Edited Books

- N. Pradeep, Sandeep Kautish, C.R. Nirmala, Vishal Goyal and Sonia Abdellatif, edited book on "Modern Techniques for Agricultural Disease Management and Crop Yield Prediction", IGI Publishers.
- Pradeep N, Sandeep Kautish and Sheng Lung Peng, edited book on "Demystifying Big Data, Machine Learning and Deep Learning for Healthcare Analytics", Elsevier Publishers.

Student Corner

Shreya BB
Student
CS&E,
2018-2022 Batch

Title:"A Beautiful Thought!"

It felt like a calm spring after a strong storm. The urge of emptiness rushed the after feel of how our Deities Lord Ganapati and Gowrimata departed our houses after the rituals of the festival, followed by all our relatives, and suddenly how a huge void came uninvited, which, for a moment felt cannot be filled ever again. But, time is Time. It waits for nobody. It brings back things to place slowly. It destroys voids and hence, we are back to life, work life, and then arrives a slow rejuvenation of life, the whole chaos from the morning vendors shouting vegetable and flowers, birds chirping to the loud noises of the vehicles and the day has begun, Life is all the play of time, Time heals everything.

It's been an approximate two years, we are being stranded at home due to the pandemic, right back after 3rd Sem, and now we are 7th Sem, rowing back and forth for the preparation of projects and recruitment processes. Time thus, fly by. Just remember to enjoy the flight! Unaware of what the future holds for us, I strongly believe that it is quite important to give our best in every single step of our life and not simply focus on the competition in the room as it may contain us over our own abilities. The completion of every year brings a drastic change in every graduate's life, except for this year, it is going to be us. Looking back simply makes me realize how I have yet to wear so many shoe sizes. A huge gracious gratitude to all our well-wishers!

Faculty Corner

Prof. Mallikarjuna S. B.
Associate Professor
CS & E Dept. BIET, Davangere-04

Role of IT in Precision Forming – An Indian Perspective

In India agriculture is the primary source of livelihood for about 58% of India's population involved in different forms of agriculture and 70%of its rural households still depend primarily on agriculture for their livelihood with 82% of farmers being small and marginal. In India more than 50% of the work force is employed to agriculture sector and contributed nearly 20% to country's GDP in the FY-2020. India's arable land area of 159.7 million hectares (394.6 million acres) is the second largest in the world, after the United States. In most of the places in India still farmers follow old traditional methods in various processes farming. In Indian subcontinent 55% of the arable land depends on rain and due to lack of required amount rain fall and also lot of changes in the weather conditions farmers facing lot of problems. Due to changes in climatic conditions and lack sufficient water, fertilizers, pesticides and other necessary resources farmers are unable get predicted yield and quality crops. It is estimated that nearly 15-25% of potential crop production is lost due these menace in India.

Precision agriculture can play a vital role in all forms of agriculture. Precision agriculture refers to the precise application of agricultural inputs in order to improve productivity, quality, and profitability in agriculture. It is a modern agriculture practice involving the use of technology in agriculture like remote sensing, GPS and Geographical Information System (GIS) for improving productivity and profitability and also the modern technologies like Data Science, Image Processing, Machine learning, Deep learning are playing significant role to know soils parameters, types of diseases and severity of those diseases, optimum utilization of water, fertilizers, pesticides, tillage and other necessary resources.

More effective utilization of inputs will bring in more crop yield and quality without polluting the environment and will result in sustainable agriculture and sustainable development of the country. Hence precision agriculture is about doing the right thing, in the right place, in the right way, at the right time.As technocrats, it is our duty to develop economical and innovative ideas into the agriculture field and motivate the farmers use best practices in order to increase the quality and productivity.

Art Gallery