



Bapuji Educational Association (R.)

Bapuji Institute of Engineering & Technology
Davangere - 577004



(AFFILIATED TO VTU BELAGAVI, APPROVED BY AICTE, NEW DELHI) ACCREDITED BY THE
NAAC WITH 'A' GRADE

Department of Computer Science & Engineering

UniCS



THE TECH MESSENGER

News Letter - Volume of the Year

JANUARY 2023 - JUNE 2023

“All Birds find shelter during a rain. But Eagle avoids rain by flying above the clouds”.

~Dr APJ ABDUL KALAM

Vision of the Institute

"To be a centre 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 broad 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 - Analyze and develop solutions for problems that are complex in nature by applying the knowledge acquired from the core subjects of this program.
- PSO2 - Ability to develop Secure, Scalable, Resilient and distributed applications for industry and societal requirements.
- PSO3 - Ability 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.

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 suggestion 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 happy to say that, Department of Computer Science & Engineering is releasing its Newsletter “Tech Messenger” for the year 2023. Department is instrumental in “Strong Alumni and Industry Connect” through which, achieving its goal of making students industry ready and employable by conducting Hackathons, Coding challenges, Real time project development contests awareness activities.

Faculty members of the department are highly encouraged to carry out their research work by providing conducive environment. Department forum “UniCS” is a platform to bring out the hidden talents of students. Department regularly organizes Technical Talks, alumni interactive sessions, workshops, Hackathons for students and FDPs for faculties in association with industries and Alumni. This newsletter showcases the glimpses of the activities held in the department. I congratulate editors of the Newsletter for their effort in bringing out this Newsletter in an attractive manner with all the events covering from January 2023 to June 2023. I wish them all the best.

Dr.Nirmala C.R.
Prof. & Head Dept. of CSE

NEWS LETTER COMMITTEE

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Assistant Professor

Prof. Gangamma Hediylad
Assistant Professor

Student Editor

Rohanaa N G

Renuka Prasad V G

FDP/WORKSHOP ATTENDED

- Dr. Gururaj T has attended 2 days' workshop on "Advance training on IPR" held on 23rd and 24th February 2023, at KSIT, Bengaluru.
- Dr. Chethana Prakash has attended six-day FDP on "Master Math by Python" at JIT, Davanagere from 06th to 11th Feb 2023.
- Dr. Chethana Prakash, Dr. ArunKumar G Hiremath, Shilpa K C, Prof Rachana S have attended two-day FDP on "Interface of IPR in academics and Entrepreneurship" held on 2 & 3 March 2023 at Bapuji Institute of Engineering & Technology (BIET), Davangere.
- Dr. Gururaj T has attended Certified program on "Masterclass on REACT JS", implementation of React JS and its application development process flow held from April 10 to Feb 12, 2023 in online mode, organized by Pantech e Learning, Chennai-600017.
- Prof. Gowramma B H has attended one-day FDP on "Getting Started with Internet of Things" organized by Bolt IoT on April 11th.
- Dr. Nirmala C R and Raghavendra N T have attended workshop on "Self-Reliant Job Creation" organised by VTU, Mysore on 11/04/2023.
- Prof. Jagadeesh A N has attended one-week FDP on "AI/ML Enabled IoT Networks from 24th to 30th April 2023 organized by Annant Gyan.
- Dr. Gururaj T, Prof. Chandrashekhar M V have attended five-day FDP on Leveraging Paradigms for Augmenting Quality in Teaching Learning and Assessment in Technical Education as per NEP 2020 during 8th -13th May 2023, organized by PRESIDENCY UNIVERSITY Association of Indian Universities & Presidency University - Bengaluru.
- Prof. Naresh Patel K M has attended workshop on "CodeNovice 1.0" on python programming for 4th Sem CSE students from 26/06/2023 to 28/06/2023.

TRAINING PROGRAM

- 7th semester Internship was conducted as a part of academic subject from 01/02/2023 to 04/02/2023.



Interaction with students during Internship

EVENTS ORGANIZED IN DEPARTMENT

- Dept. of CS&E conducted 3 days' workshop for 7th semester students on “**Artificial Intelligence and Machine Learning**” from 03/01/2023 to 05/01/2023 resource person was **Dr. Chetan K R (JNNCE), Dr. Manoj Kumar M V(NMIT) and Prof. Prashanth B S(NMIT).**



Students with Renowned Resource Persons



Glimpse of the Workshop

- Department of CSE conducted 2 days' workshop on “**Cyber security & Ethical Hacking**” under UniCS for 5th and 3rd semester students (2nd Batch) on 06th & 07th January, 2023. In association with “**Cybersapiens**” in association with IQAC cell. The whole event was completely sponsored by Namana Inc. USA founded by **Mr. Umesha Shetty, Alumni of CSE -1991**.



Inauguration of the Workshop

- Department of CSE conducted an Invited talk on “**Cyber security: foundation and Career Opportunities**” under UniCS for 5th and 3rd semester students on 07th January, 2023. In association with IQAC cell.



- Department of CSE in association with IQAC Cell, was organized one day Computer Network-Workshop TECH-O-NET on “**Computer Network Security Application**” for 5th Semester Students of CSE and ISE on 13 /01/2023.



Inauguration Of The Workshop

- In view of Social Connect and Responsibility, a special lecture and hands-on session on “**Blog Creation**” by **Dr. Santosh K C**, Assistant Professor, Department of CS&E, BIET, was convened for 3rd semester CSE students on 21/02/2023.



Glimpses Of The Event

- Department of CSE organized an “**Internal Hackathon**” to select the top teams to participate in **MANTHAN-2023** on 27/01/2023.



Students demonstrating their projects

- Dept. of CSE conducted 3 days Bootcamp for 3rd semester students on "**Data Structures & Object-Oriented Concepts**" from 09/03/2023 to 11/03/2023.



Glimpses Of BOOTCAMP

- Inauguration of “**Computing Facilities**” in CSE and allied branches” was held on 31/03/2023.



Inauguration of Computing Facilities

- Department of CSE in association with IQAC and IIC cell has organized workshop on “**Mobile Application Development**” for 6th semester CSE students on 15/05/2023



Prof. Santosh K C and Prof. Radhika Patil Delivered the talk on Mobile Application Development

- Felicitation to Ph.D scholars on 27/05/2023.



Dr. Mallikarjuna S B



Dr. Abdul Razak M S



Dr. Santosh K C

PROJECTS SANCTIONED BY KSCST/ Or any other notable student projects

- Student project titled “**Safety Gadget: An IT Based Security System**” guided by **Dr. Naveen Kumar K R and Prof. Arjun H** was approved and funded by KSCST, 46th Series of Student Project Programme.
- Student project titled “**IoT Based Animal Tracking System**” guided by **Prof. Vishwanath V K and Prof. Shryavani K** was approved and funded by KSCST, 46th Series of Student Project Programme.
- Student project titled “**Detection of Cyberbullying on Social Media Platforms**” guided by **Dr. Gururaj T and Prof. Vaishnavi Ajay Inamdar** was approved and funded by KSCST, 46th Series of Student Project Programme.
- Student project titled “**A Real Time Hand Gesture Recognition with human computer interaction System**” guided by **Dr. Santosh K C and Prof. Gangamma Hediylad** was selected for funding under Institute sponsored project
- Student project titled “**Traffic violation proctoring system: Helmet and triple riding detection**” guided by **Prof. Gangadharappa S and Prof. Jagadish A N** was selected for funding under Institute sponsored project.

STUDENTS ACTIVITIES / PROGRAM ORGANIZED

- In view of Social Connect and Responsibility, department of CSE conducted an activity "**Plantation and adoption of a tree**" for 3 semester students on 09/01/2023 in BIET campus.



Glimpses of Plantation And Adoption of Trees

- In view of Social Connect and Responsibility "**Water Conservation**" activity was conducted for 3 semester CSE students on 17/01/2023 at **Kunduwada Lake, Davangere.**



Glimpse of Water Conservation Activity

- In view of Social Connect and Responsibility "**Demonstration of organic farming and waste management**" activity was conducted for 3 semester CSE students on 23/01/2023 at **Taralabalu Krishi Vigyan Kendra, Davangere.**



Students Participation in the Event

- Post offer engagement Program with TCS for Placed CSE students-2023 was conducted on 03/02/2023.



Glimpses Of The Event

- 1st Semester CSE students gave the presentation on “ChatGPT” to create the awareness of current trending Techniques on 03/02/2023.



- CSE department under UniCS conducted Technical Quiz TCS-“TechBytes” for all students on 15th, February, 2023.



Students Participation In the Technical Quiz

- 8th Semester CSE students visited **IIITB-MPHASIS “RISE 2023”** Program at IIIT, Bangalore campus on 25/02/2023.



- In view of Social Connect and Responsibility Activity Event “**Heritage Walk**” to historical place Hampi for 3rd semester CSE students was organized on **28/02/2023**.



Glimpses of heritage visit

- In view of Social Connect and Responsibility, Activity “**Jamming session**” for 3rd semester CSE students was organized on 17/03/2023.



Glimpses of Jamming Session

- Department of CSE organized an expert talk on **“Readiness for Future Professional Life”** from Alumni of CSE batch 1994 Mr. Phani Parlapalli, Chief Operating Officer, Youngs Inc., USA



Glimpses Of The Event

- **“Talent Battle”** training Session for 6th semester students from 05th April to 21th April, 2023.



Glimpses Of The Event

- **Technical seminar** by 8th semester students as a part of academic subject on 10/04/2023 and 11/04/2023.



Glimpses of technical seminar

- **Farewell Program** to final year students on 27/05/2023.



Inauguration of Farewell



Glimpse of farewell

- 8th semester students won best project award under the guidance of **Dr. Pradeep N** in **Nirmana 3.0** (In-house Project Exhibition) held on 29/05/2023.



Winners of Nirmana 3.0 (Best Project Award)

PAPER PRESENTED /PUBLISHED BY FACULTY

- Dr. Gururaj T, published a paper “**Smart Design and Implementation of home Automation System using WIFI**”, **Proceedings of the International Conference on Augmented Intelligence and Sustainable Systems (ICAISS-2022)** IEEE Xplore compliant ·DVD Part Number: CFP22CB2-DVD ISBN: 978-1-6654-8961-4.
- **Dr. Chetana Prakash** published a paper “**IoT Security against Network Anomalies through Ensemble of Classifiers Approach**”, **International Journal of Recent and Innovation trends in Computing and Communication**, Accepted, Web of Science March 2023, ISSN: 2321-8169
- **Dr. Chetana Prakash** published a paper “**An Analysis of Modelling Techniques and Security Algorithm for Machine-To-Machine Communication in IoT Network**”, **International Journal of Engineering Research and Applications** ISSN: 2248-9622, Vol. 13, Issue 4, April 2023, pp. 01-07
- **Dr. Chetana Prakash** published a paper “**Secure Lightweight Cryptography Model for Internet of Things Enabled Networks**” **International Journal of Computer Networks and Applications**, Communicated to Web of Science ISSN: 2395-0455, April 2023.
- **Dr. Naveen Kumar K R, Dr. Sreenivasa B R, Dr. Arunkumar G H, Dr. Nirmala C R** published a paper “**A Novel Cluster Analysis-Based Crop Dataset Recommendation Method in Precision Farming**”, **Q2 Journal of Computer Systems, Science and Engineering**.

- Dr. Pradeep N published Book entitled "**Unleashing the Potentials of Blockchain Technology for Healthcare Industries**", Elsevier Publishers,2023, Paperback ISBN: 9780323994811, eBook ISBN: 9780323994828.
- **Prof. Naveen H M** published a paper "**An approach for classification of lung nodules**", Tumor Discovery, Volume 2 Issue 1, March 8, 2023
- **Prof Shilpa K C**, published a paper "**Degree-Based Entropy Descriptors of Graphenylene Using Topological Indices**", Q2 Journal of Computer Modelling in Engineering and Science, ISSN: 2248-9622, Vol. 13, Issue 4, April 2023, pp. 01-0
- **Dr Pradeep N** published a paper "**Noise Estimation and Type Identification in Natural Acene and Medical Images Using Deep Learning Approaches**" Hindawi, Volume 2023 | Article ID 3923667 <https://doi.org/10.1155/2023/3926>
- **Dr. Chetana Prakash** published a paper "**Optimized Controller Scheme for Autonomous Navigation in Infotainment on Internet of Vehicles**", International Journal of Computer Networks and Application, Volume 10, Issue 3, Q3, May-June 2023, DOI: 10.22247/ijcna/2023/221882.
- All the project batches of final year have published in reputed Journals.

PLACEMENT DETAILS

Sl. No	Name of the Employer	No. of Students Placed
01	TCS Digital	02
02	TCS NINJA	36
03	Redbus	02
04	First American India Pvt.Ltd	05
05	AmaDEus	02
06	Maple labs	02
07	Quinbay	01
08	Radisys	02
09	SLK Software	04
10	Cognizant. Bangalore	10
11	Tech Mahindra,Bangalore	02
12	KPMG	02

13	Robosoft Technologies	02
14	Odysseus Solutions	05
15	Dishnet	01
16	Tekworks	12
17	Minfy Technologies	01
18	Nirvoday Pvt Ltd	01
19	Mercedes Benz R&D,Bangalore	03
20	FACE Prep,Bangalore	04
21	Kasmo Technologies	05
22	Sonata Software,Bangalore	02
23	Face Prep,Bangalore	01
Total Placed		107

UNIVERSITY WORK CARRIED BT FACULTY

- Dr. Nirmala C R has appointed as examiner for Ph.D. viva voce and UG practical examination.
- Dr. Chetana Prakash has appointed as examiner for UG practical examination and M. Tech project work viva voce.
- Dr. S B Mallikarjuna is appointed as BOS member to VTU E-Sikshana.
- Dr. Pradeep N has appointed as examiner for Ph.D. viva voce and M. Tech project work viva voce.
- Dr. Chetana Prakash, the Chairman of BOE has attended the meeting on 11th January 2023 at VTU, “JNANA SANGAMA” Belagavi to discuss about Scrutinizing the External Exam Question Papers.
- Prof. Raghu B.R, Prof. Naresh Patel K M, Prof. Naveen H M, Prof. Naveen K R, Prof. Gangadharappa S appointed as valuator for UG answer scripts and examiner for UG practical examination.
- Prof. Waseem Khan, Prof. A N Jagadish, Prof. Preethi B, Prof. Gangamma Hediylad, Prof. Anu C S appointed as examiner for UG practical examination and UG answer scripts.

Ph.D. AWARDED

- Prof. S B Malikarjuna awarded Ph.D. for the thesis titled “**Automatic Disease Identification System of Arecanut Diseases using Image Processing techniques**” under the guidance of Dr. Poornima B on Feb 24, 2023.
- Prof. Abdul Razak M S awarded Ph.D. for the thesis titled “**Design and development of techniques for handling concept drift in data stream classification**” under the guidance of Dr. Nirmala C R on Feb 24, 2023.
- Prof. Santhosh K C awarded Ph.D. for the thesis titled “**Machine Learning approach for Estimation of Age and Identification of Sex based on Digital images of Teeth, Wrist and Femur Bone**” under the guidance of Dr. Pradeep N on Feb 24, 2023.

Article

Waseem Khan

Assistant Professor

Department of CS & E

Bapuji Institute of Engineering and Technology



TOPIC: SOCIAL ENGINEERING IN CYBER SECURITY

Cyber security is the practice of protecting critical systems and sensitive information from digital attacks. Cyber-attacks are the fastest growing crime globally. With around 2,220 cyber-attacks each day, that equates to over 800,000 attacks each year. Total cost of cybercrime globally has added up to over \$1 trillion in 2018. Approximately \$6 trillion is expected to be spent globally on cyber security by 2022. 95% of cyber security breaches are due to human error.

Motives of Attack :

- Theft of sensitive information
- Disruption of services
- Illegal access to or use of resources

Social Engineering is the art of manipulating people so that they give up confidential information or break standard security practices.

Facts about Social Engineering :

- Everyone is a potential target!
- It's often easier for cybercriminals to manipulate a human than a computer network or system.
- Attacks can be relatively low-tech, low-cost, and easy to execute.
- Technology is rapidly accelerating along with the sophistication of attacks

Social Engineering Attack Cycle

- Prepare the Attack
- Establish a Relationship
- Obtain Information
- Close the Interaction

Common Social Engineering Attacks :

- **Pretexting:** Pretexting is a social engineering technique in which a fictional situation is created for the purpose of obtaining personal and sensitive information from an unsuspecting individual.
- **Baiting:** Involves offering something physically or digitally enticing to a target in exchange for login information or private data.
- **Scareware:** Malicious computer programs designed to trick a user into buying and downloading unnecessary and potentially dangerous software, such as fake antivirus protection.
- **Ransomware:** Malicious software (malware) that prevents users from accessing their system or personal files and demands a ransom payment from the user in order to regain access.
- **Phishing:** A type of attack often used to steal user data, including login credentials, personally identifiable information or credit card numbers.

Security Tools :

- Wireshark
- N-Map
- Nessus
- Kali Linux
- Burp Suite

Article

Rohanaa N G

Student

Department of CS & E

2021-2025 Batch



TOPIC: CHATGPT

Introduction:

ChatGPT, developed by OpenAI, is an advanced language model designed to understand and generate human-like text. It utilizes cutting-edge artificial intelligence techniques to engage in conversations, answer questions, and generate coherent responses. In recent years, advancements in artificial intelligence (AI) have led to the development of sophisticated natural language processing (NLP) models capable of engaging in human-like conversations. One such model that has gained significant attention is ChatGPT, a variant of the GPT (Generative Pre-trained Transformer) series developed by OpenAI. In this article, we delve into the capabilities, workings, and diverse applications of ChatGPT in various domains.

Understanding ChatGPT:

ChatGPT is an AI model trained using large-scale datasets of human-written text, enabling it to generate coherent and contextually relevant responses to user input. Built upon the Transformer architecture, ChatGPT leverages self-attention mechanisms to understand and generate text based on the context provided in the conversation.

Capabilities of ChatGPT:

1. **Natural Conversation:** ChatGPT can engage in natural, free-flowing conversations on a wide range of topics, simulating human-like dialogue with users.
2. **Contextual Understanding:** The model exhibits an understanding of context, maintaining coherence and relevance throughout the conversation.
3. **Multi-Turn Dialogue:** ChatGPT can sustain multi-turn interactions, remembering previous context and responding appropriately to ongoing dialogue.
4. **Creative Responses:** Beyond factual information, ChatGPT can generate imaginative and creative responses, including storytelling, jokes, and poetry.
5. **Language Flexibility:** ChatGPT supports multiple languages and can seamlessly switch between them based on user preferences or input.

Applications of ChatGPT:

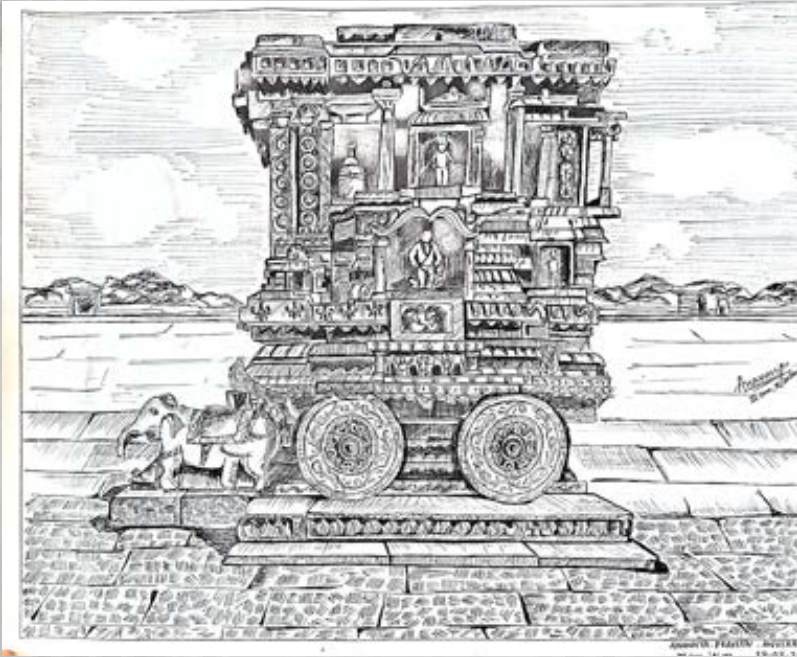
1. **Customer Support:** ChatGPT powers virtual assistants and chatbots deployed in customer support systems, providing instant responses to inquiries and resolving issues efficiently.
2. **Content Creation:** Writers and content creators use ChatGPT for generating ideas, brainstorming, and even drafting articles, stories, and marketing copy.
3. **Education:** ChatGPT facilitates interactive learning experiences through tutoring systems, language learning platforms, and educational chatbots.
4. **Entertainment:** ChatGPT contributes to interactive storytelling, gaming, and entertainment applications by creating engaging and immersive experiences for users.
5. **Research and Development:** Researchers leverage ChatGPT for conducting experiments in NLP, dialogue systems, and human-computer interaction, pushing the boundaries of AI technology.

Challenges and Considerations:

Despite its remarkable capabilities, ChatGPT also presents challenges and ethical considerations. Issues such as bias in training data, potential misuse for spreading misinformation, and the need for responsible AI governance require careful attention from developers, researchers, and policymakers:

ChatGPT represents a significant advancement in conversational AI, offering a glimpse into the future of human-computer interaction. As the technology continues to evolve, it holds immense potential to revolutionize various aspects of our lives, from communication and customer service to education and entertainment, while also prompting discussions on ethics, privacy, and the responsible deployment of AI systems

ART GALLERY



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