



Kongunadu

College of Engineering & Technology

[Autonomous]

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai, Accredited by NBA(CSE,ECE,EEE & MECH), NAAC, Recognized by UGC with 2(f) & 12(B) and certified by ISO 9001:2015 certified institution)



Newsletter

Volume01 | Issue02 | Jun 2023

HOD's Message:



I am happy to note that the Department of Artificial Intelligence and Data Science is releasing its Second Newsletter for Academic Year 2022-23 enumerating the various activities and achievements of our faculty and students.

The department endeavors to produce confident professionals tuned to real time working environment.

The department offers excellent academic environment with a team of highly qualified faculty members to inspire the students to develop their technical skills and inculcate the spirit of team work in them.

On this occasion, I congratulate all the team members of the editorial board for bringing up this issue in a better shape.

Editorial Board:

Chief Editors:

- Dr. K. Baskar (HOD/AD)
- Mrs. P.G. Gayathri (AP/AD)

Executive Editors:

- Mrs. N. Sarmiladevi AP/AD
- Mr. M. Sivakumar AP/AD

Student Editors:

- Dinagar K (2nd year)
- Logesh P (2nd year)
- Prashanth N (2nd year)
- Shanthiya R (2nd year)
- Vinothini C (2nd year)

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COLLEGE VISION & MISSION

VISION

To become an Internationally renowned Institution in technical education, research and development, by transforming the students into competent professionals with leadership skills and ethical values.



MISSION

- Providing the Best Resources and Infrastructure.
- Creating Learner centric Environment and continuous–Learning.
- Promoting Effective Links with Intellectuals and Industries.
- Enriching Employability and Entrepreneurial Skills.
- Adapting to Changes for Sustainable Development.



DEPARTMENT VISION & MISSION



VISION

To produce globally competent engineers in the field of Artificial Intelligence and Data Science with a focus on emerging computing needs of the industry and society.



MISSION

- Enrich the students' skills, knowledge with interdisciplinary skill sets by cognitive learning environment and industrial collaboration.
- Promote quality and value based education towards emerging computing needs of the industry and entrepreneurship skills among students.
- Provide for students with leadership qualities, ethical and human values to serve the nation and focus on students' overall development.



PROGRAM EDUCATIONAL OBJECTIVES(PEO's)

- **PEO I:** Graduates will be able to Artificial Intelligence professionals with expertise in the fields of Artificial Intelligence, Big Data Analytics and Data Science.
- **PEO II:** Graduates will be able to develop problem solving skills and ability to provide solution for real time problems.
- **PEO III:** Graduates shall have professional ethics, team spirit, life-long learning, communication skills and adopt corporate culture, core values and leadership skills.



PROGRAM SPECIFIC OUTCOMES(PSO's)

- **PSO1:** Professional skills: Students shall excel in software development including Artificial Intelligence technologies to solve complex computation task with softskills.
- **PSO2:** Competency: Students shall qualify at the State, National and International level competitive examination for employment, higher studies and research.



PROGRAM OUTCOMES(PO's)

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life Long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



Department Activities

Common Programme organized

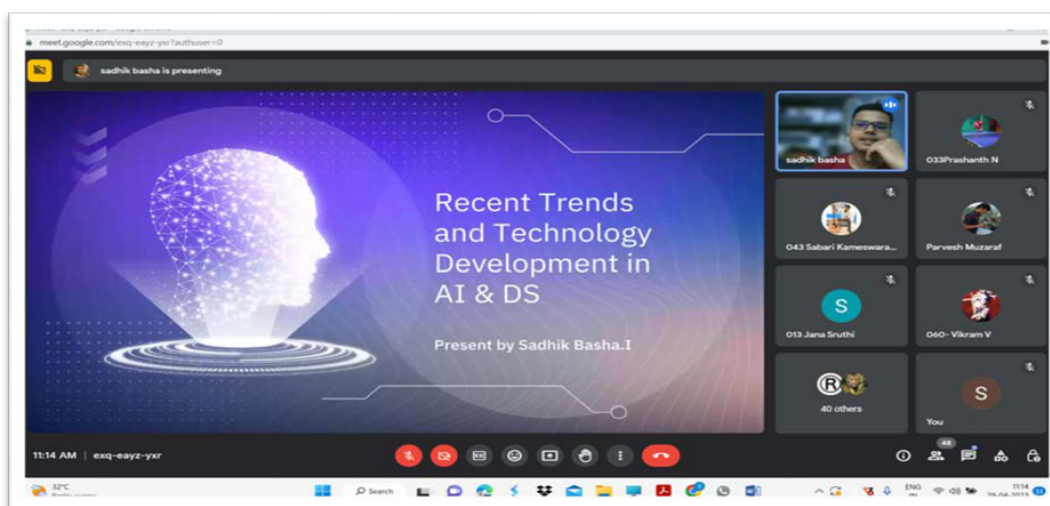
- ❁ Computer Training Programme was organized from 24th April 2023 to 28th April 2023 for +2 completed students.
- ❁ Advanced Faculty Skillset Program was organized on 26th June 2023 and 27th June 2023 for newly joined faculty members of KNCET.



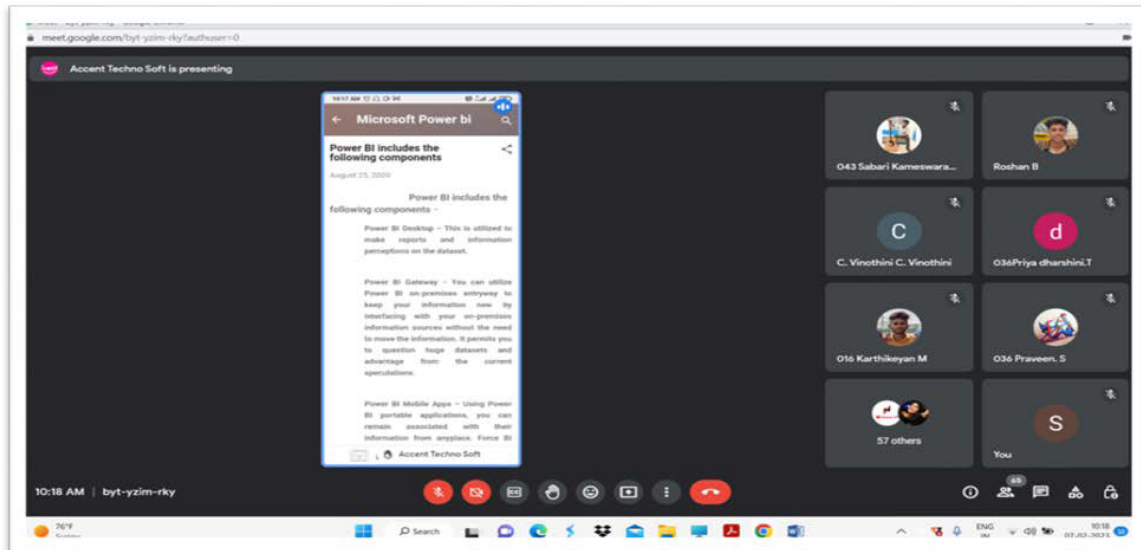
Programme Conducted by the Department

(Conference/Workshop/Seminar/FDP/Guest Lecture/Training/Webinar/Others)

- ❁ A Webinar titled
 - “Artificial Neural Networks” was organized on 08th May 2023. The chief guest was Mr.R.Prasanth, Senior Engineer, Vaken Technology Pvt. Ltd, Chennai.
 - “Recent Trends and Technology Developments in AI” was organized on 29th April 2023. The chief guest was Mr.Er.I.Sadhik Basha, Software Engineer, Aspire Systems Private Ltd, Chennai.
 - “Microsoft Power BI” was organized on 7th February 2023. The Chief Guest was Mr.K.Santhosh Kumar, Web Developer, Acent Tecno Soft (ATS), Coimbatore.



- ✿ A Seminar titled “Challenges in Adoption of AI” was organized on 3rd May 2023. The Chief guest was Mr.C.Balakrishnan, Design Engineering Manager, TryCAE Industrial Engineering Pvt, Ltd, Trichy.



- ✿ One Day Workshop titles
 - “Cyber Security” was organized on 14th March 2023. The chief guest was Dr. Vidhyasagar. BS, Assistant Professor, Amrita Vishwa Vidyapeetham, Chennai.
 - “MongoDB with Python” was organized on 31st January 2023. The chief guest was Mr.Nandhakumar T, Web Developer, ATS Accent Techno Soft, Coimbatore.
- ✿ Two Day Workshop titles “Data Analytics Tools” was organized on 13th March 2023 and 14th March 2023. The chief guest was Mr.S.S.Sivakumar, Guest Faculty, Birla Institute of Technology and Science, Chennai.





Value Added Course

- Machine Learning with AI Applications



Publication of Book/Manual

- [Dr.K.Baskar, Mr.M.Sivakumar, Mrs.N.Sarmiladevi & Mrs.P.G.Gayathri, “Text Analytics”, The Charulatha Publications, Chennai, May 2023, ISBN: 978-81-19056-47-7.]
- [Dr.K.Baskar, Mrs.P.G.Gayathri, Mr.M.Sivakumar & Mrs.N.Sarmiladevi, “Business Analytics”, The Charulatha Publications, Chennai, May 2023, ISBN: 978-81-19056-59-0.]
- [Dr.K.Baskar, Mrs.P.G.Gayathri, Mr.M.Sivakumar & Mrs.N.Sarmiladevi & R Programming”, The Charulatha Publications, Chennai, May 2023, ISBN: 978-81-19056-37-8.]
- [Dr.K.Baskar, Mrs.N.Sarmiladevi, Mr.M.Sivakumar, & Mrs.P.G.Gayathri, “Machine Learning Techniques”, The Charulatha Publications, Chennai, May 2023, ISBN: 978-81-19056-33-0.]



Publication in Journals by Staff

- SimranKhiani, , M. Mohamed Iqbal, AmolDhakne , B.V. Sai Thrinath , PG. Gayathri, R. Thiagarajan, “An effectual IOT coupled EEG analysing model for continuous patient monitoring”, Published by Elsevier Ltd., Measurement: Sensors 24(2022) 100597,<https://doi.org/10.1016/j.measen.2022.100597>.
- Baskar K, Muthuraj S, Sangeetha S, Vengatesan K, Aishwarya D, and Yuvaraj P S 2023 ‘Framework for Implementation of Smart Driver Assistance System using Augmented Reality’ Springer, BioMed Research International, DOI: https://doi.org/10.1007/978-981-99-1051-9_15.
- [Sangeetha S, Baskar K, Kalaivani P C D, and Kumaravel T 2023 ‘Deep Learning-Based Early Parkinson's Disease Detection from Brain MRI Image’ 7th International Conference on Intelligent Computing and Control Systems(ICICCS-2023), IEEE Xplore, ISBN: 979-8-3503-9725-3.



Publications in Conference by Staff

- Dr.K.Muthumanikam, S.Sangeetha, T.Kumaravel, Dr.P.Natesan, Dr.K.Baskar ‘App Access Control Scheme to Prevent Data Breach in Smartphone’ International Conference on ‘Communication, Security and Artificial Intelligence (ICCSAI-2022)’ held at Galgotias University, Delhi on 23rd & 24th December 2022.

- ✿ Dr.K.Baskar, S.Sangeetha, Dr.P.C.D.Kalaivani, T.Kumaravel ‘Deep Learning-Based Early Parkinson's Disease Detection from Brain MRI Image’ 7th International Conference on ‘Intelligent Computing and Control Systems (ICICCS 2023)’ held at Vaigai College of Engineering, Madurai from 17th May 2023 to 19th May 2023.
- ✿ N.Sarmiladevi,K.Baskar,R.Tamilarasu,L Nivetha ‘An Efficient Detection System for Cardio Vascular Disease Using Machine Learning Algorithms’ 2nd International Conference Technologies in Engineering(ICACITE) on 12th May 2022 at Galgotias Educational Institutions ,951-955,2022.
- ✿ Krishna Prakash Rajagopal, Sarmiladevi N, Balajee R, Indhuja A ‘Blockchain technology for protecting ingenuity of Image’ 3rd International conference on Advance Computing and Innovative Technologies in Engineering, 2023 on 13th may 2023 12th May 2023 at Galgotias Educational Institutions.



Paper Presented & Programme attended by the Staff

- ✿ **Dr.K.Baskar**, ASP, of Artificial Intelligence and Data Science department attended
 - FDP on ‘Trends and Innovations In Industry 4.0’ held at A.V.C. College Of Engineering, Mayiladuthurai, from 23rd January 2023 to 28th January 2023.
 - FDP on ‘Computer Networks and Internet Protocol’ held at NPTEL, SWAYAM, from January 2023 to April 2023.
- ✿ **N.Sarmiladevi** , AP of Artificial Intelligence and Data Science department attended FDP on ‘Trends and Innovations In Industry 4.0’ held at A.V.C. College Of Engineering, Mayiladuthurai, from 23rd January 2023 to 28th January 2023.
- ✿ **PG.Gayathri**, AP, of Artificial Intelligence and Data Science department attended FDP on ‘Trends and Innovations In Industry 4.0’ held at A.V.C. College Of Engineering, Mayiladuthurai, from 23rd January 2023 to 28th January 2023.
- ✿ **M Sivakumar**, AP, of Artificial Intelligence and Data Science department attended
 - FDP on “Trends and Innovations In Industry 4.0’ held at A.V.C. College Of Engineering, Mayiladuthurai, from 23rd January 2023 to 28th January 2023.
 - FDP on ‘Blockchain Technology and its applications – An Implementation Perspective’ held at Government College of Engineering, Erode from 6th February 2023 to 10th February 2023.
 - FDP on “Research Advancements in Intelligent Computing Technologies held on Sri Krishna College of Engineering and Technology from 19th December 2022 to 23rd December 2022.
- ✿ **Mr.R.Sathyaraj**, AP, of Artificial Intelligence and Data Science department attended FDP on ‘Data Science’ held at Dr.D Y Patil Institute of Engineering and Management Research, Akurdi, from 6th February 2023 to 10th February 2023.
- ✿ **Ms.Madhumitha**, AP, of Artificial Intelligence and Data Science department attended FDP on ‘Cloud Practitioner (AWS)’ held at SRM Institute of Science and Technology, Trichy, from 20th March 2023 to 25th March 2023.
- ✿ **Dr.K.Baskar**, ASP, of Artificial Intelligence and Data Science department attended Webinar on ‘Understanding Implementing and Practicing OBE for Academic Excellence’ held at Kramah Software Pvt. Ltd, Bangalore, on 23rd March 2023.
- ✿ **Mrs.PG.Gayathri**, ASP, of Artificial Intelligence and Data Science department attended Webinar on ‘Understanding Implementing and Practicing OBE for Academic Excellence’ held at Kramah Software Pvt. Ltd, Bangalore, on 23rd March 2023.

- ✿ **Mrs.N.Sarmiladevi**, ASP, of Artificial Intelligence and Data Science department attended Webinar on 'Understanding Implementing and Practicing OBE for Academic Excellence' held at Kramah Software Pvt. Ltd, Bangalore, on 23rd March 2023.]
- ✿ **Mrs.PG.Gayathri**, AP of Artificial Intelligence and Data Science department attended Workshop in
 - 'Preparation of NAAC Documentations and SSR for Degree Colleges (PNDSD C-2023)' held at IQAC, Sri Prabhu Arts, Science and M. Bohra Commerce Degree College, Shorapur, Karnataka on 23rd January 2023.
 - 'NPTEL E-Awareness' conducted by NPTEL on 1st February 2023.
 - 'NPTEL E-Awareness' conducted by NPTEL on 2nd February 2023.



Students Contribution

Prize won by Students in competitions:

- ✿ **N.Prasanth** won Zone 1st place in Sastra University Colosseum 13 - National Level Sports Fest - Table tennis held from 10/03/23 to 12/03/2023.
- ✿ **Muthuvel. K** won 1st place in Technical Quiz in 17th National Level Technical Symposium Organized by Sasurie College of Engineering on 5th Nov 2022.
- ✿ **Roshan.B**, won 2nd prize in Spell Bee in FESTRON X'23 A State level Technical Symposium Organized by K.Ramakrishnan College of Technology, Trichy on 7th March 2023.
- ✿ **Dinagar K**, won 1st prize in Code Debugging in FESTRON X'23 A State level Technical Symposium Organized by K.Ramakrishnan College of Technology, Trichy on 7th March 2023.
- ✿ **Dinagar K**, won 2nd prize in Decode in FESTRON X'23 A State level Technical Symposium Organized by K.Ramakrishnan College of Technology, Trichy on 7th March 2023.
- ✿ **Tharun J.P, Sabari Kameshwaran S**, won Third price in Paper Presentation in IMAGE2K'23 A National level Technical Symposium organized by Knowledge Institute of Technology, Chennai on 21st March 2023.
- ✿ **, Madhumitha T, Madhuvarshini J, Shanthiya** won Third price in Paper Presentation in IMAGE2K'23 A National level Technical Symposium organized by Knowledge Institute of Technology, Chennai on 21st March 2023.
- ✿ **Sabarish P, Vishwanathan M, Parvesh Muzaraf R** won 1st prize in Technical Connection in TECKON'2023 National level Technical Symposium organized by MAM College of Engineering and Technology on 31st March 2023.
- ✿ **Vikram V** won 2nd prize in Blind Code in National level Symposium VIRUKSHA'23 on 31st March 2023.

Industrial Visit

- ✿ Artificial Intelligence and Data Science Department 2nd year Students visit an Industry Xplore IT Corp, Coimbatore.
- ✿ **Mrs.PG.Gayathri**, AP, of Artificial Intelligence and Data Science department attended Industrial Training Program on 'Excel and Business Analytics" held at Terasoft Technologies, Trichy from 8th June 2023 to 10th June 2023.
- ✿ **Mr.M.Sivakumar**, AP, of Artificial Intelligence and Data Science department attended Industrial Training Program on "Deploying Machine Learning models with cloud" held at Nebula Institution of Technology, Trichy from 1st June 2023 to 3rd June 2023
- ✿ **Mrs.N.Sarmiladevi**, AP, of Artificial Intelligence and Data Science department attended Industrial Training Program on "Deploying Machine Learning models with cloud" held at Nebula Institution of Technology, Trichy from 1st June 2023 to 3rd June 2023

Paper Presentation by the Students:

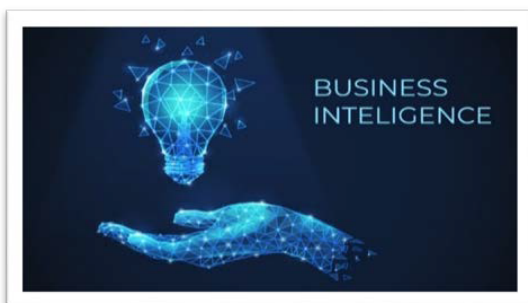
- ✿ 56 Students Department of Artificial Intelligence and Data Science, 2nd Year Participated in Paper Presentation in various colleges in academic year 2022 to 2023 Even semester.

Workshops and Technical Quiz attended by the Students:

- ✿ 67 Students of Second year AD attended webinar on “How to get a placement in Multinational companies” at 25.11.2022 in IIT Mumbai.
- ✿ 64 Students of Second year AD attended Internship in Various companies.
- ✿ 43 Students of Second year AD attended Workshops in Various Topics.
- ✿ 11 Students of Second year AD attended Seminars in Various Topics.
- ✿ 52 Students of Second year AD completed Python 3.4.3 test organized at Kongunadu College of Engineering and Technology provided by the Spoken Tutorial Project, IIT Bombay on November 22nd 2022.



Business Intelligence



Business intelligence (BI) refers to the procedural and technical infrastructure that collects, stores, and analyzes the data produced by a company's activities. BI is a broad term that encompasses data mining, process analysis, performance benchmarking, and descriptive analytics. BI parses all the data generated by a business and presents easy-to-digest reports, performance measures, and trends that inform management decisions.



Data Science



Data Science is a combination of mathematics, statistics, machine learning, and computer science. Data Science is collecting, analyzing and interpreting data to gather insights into the data that can help decision-makers make informed decisions. Data Science is used in almost every industry today that can predict customer behavior and trends and identify new opportunities.



Text Analytics:

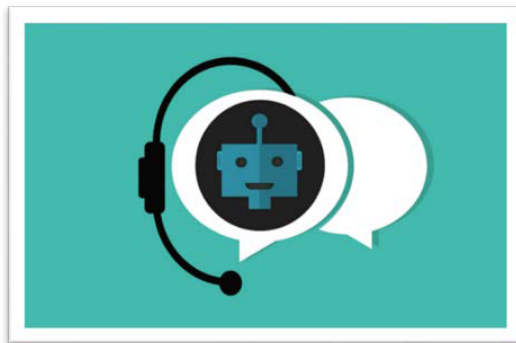


Text analysis (also known as Text Mining or Content Analysis) is a technique that computers use to extract worthwhile information from the human language in a smart and efficient manner. Researchers and developers can use this method to assemble diverse and unorganized data in a structured form. In this process, documents are disintegrated for hassle-free management of data pieces, simply put: unstructured text gets converted into structured data. The analysis of text, those in

either documents or graphics, qualitative details can be transformed into quantitative details.



Virtual Agent:

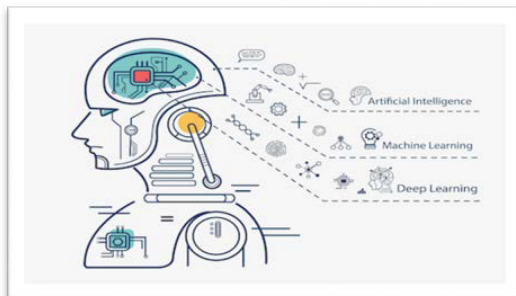


Virtual Agents are a manifestation of a technology which aims to create an effective but digital impersonation of humans. Quite popular in the customer care domain, Virtual Agents use the combination of Artificial Intelligence programming, Machine Learning, Natural Language Processing, etc. to understand the customer and his grievances. A clear understanding by the Virtual Agents is subject to the complexity and technologies used in the creation of the agent.

These systems are nowadays highly used through a variety of applications such as chatbots, affiliate systems, etc. These systems are capable of interacting with humans in a humane way.



Deep Learning



Deep Learning is a part of machine learning, which is a subset of Artificial Intelligence. It enables us to extract the information from the layers present in its architecture. It is used in Image Recognition, Fraud Detection, News Analysis, Stock Analysis, Self-driving cars, Healthcare like cancer image analysis, etc.

In an effort to create systems that learn similar to how humans learn, the underlying architecture for deep learning was inspired by the structure of a human brain. For this reason, quite a few

fundamental terminologies within deep learning can be mapped back to neurology.



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