

AI&DS

Monthly Awareness Bulletin



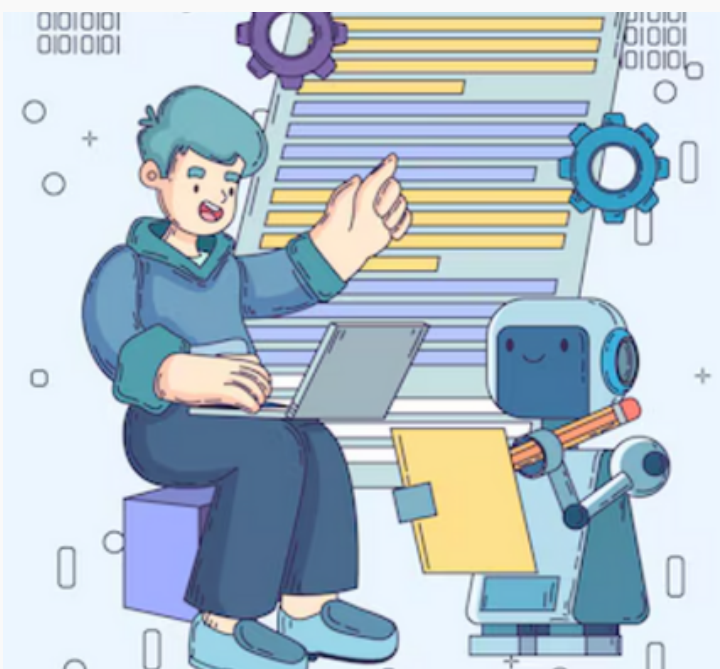
Dr. Shital Dongre,
Head (AI & DS)

Dear All

I Dr. Shital Dongre, Head (AI & DS) am happy to announce that, AI & DS Department has started an E-Bulletin in this auspicious September month. God Ganpati will surely bless us in publishing many trending, scholar articles via this E-bulletin. This monthly bulletin will serve as a platform to keep everyone informed about the latest news, achievements, upcoming events, and important announcements within our department. We hope this bulletin will keep you connected, informed, and inspired as we work together to achieve our goals.

Thank you for being part of our department's success!

TOON



Insights

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Independence Day

As we move beyond the celebration of Independence Day, let us carry forward the spirit of freedom and innovation into our daily endeavors. The sacrifices made by our forebearers laid the foundation for a nation built on resilience, courage, and hope. As we honor their legacy, let us renew our commitment to the ideals of democracy and justice, striving for excellence in all fields. With each step forward, we not only embrace growth and unity but also become custodians of the dreams that shaped our nation. Together, we build a brighter future, one where the flame of patriotism burns brightly in our hearts every day, guiding us toward a more prosperous, inclusive, and harmonious society. Let us be the torchbearers of progress, ensuring that the freedoms won are cherished and expanded for generations to come. In every action, let us reflect the values that bind us as one people, united in our diversity and strong in our shared purpose. With unwavering determination, we move forward, ever committed to the promise of a better tomorrow.

STUDENT PARTICIPATION



Dream Tejwani, TY

She successfully completed an internship at Amazon Development Centre India Pvt. Ltd. from June to July 2024, contributing to the REFRAIN Migration to RCPS project with the WW Returns & ReComm Tech & Inn (7799) team. Grateful to Amazon for the opportunity and my mentors for their guidance!

Codewavers, TY

The team Codewavers's members: Bhavesh Patil, Amey Pathe and Soham Borkar clinched secured the top spot at Innovo SSGMC 2024, impressing judges with their innovative solution's blend of creativity, technical excellence, and practicality.



Nidhish Wakodikar, TY

Nidhish Wakodikar from the team 'The Fine Tuners,' ranked Top 5 at the Bhartiya Antariksh Hackathon, hosted by ISRO and Hack2skill. They created a geospatially aware chatbot using AI, showcasing innovative space-tech solutions.

Arman Tamboli, TY

He completed the Bhramatal trek, reaching the Himalayan peak at 12,500 feet. The journey offered breathtaking views of Nandadevi and Parvati, leaving him with unforgettable memories and a sense of awe.



Parth Shethji, B.Tech

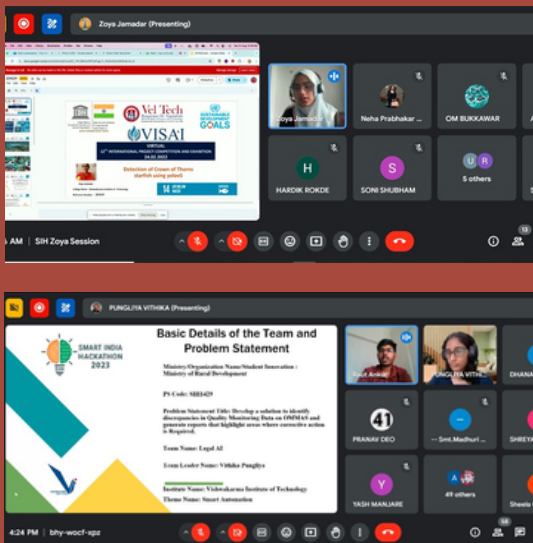
The team clinched the top spot at Innovo SSGMC 2024, impressing judges with their innovative solution's blend of creativity, technical excellence, and practicality.

AI ACES, TY

The team AI ACES's members: Sanket Kulkarni, Mayank Kulkarni, Shivani Kshirsagar & Durvesh Chaudhari participated in the Ingenious Hackathon organized by ISA and collaborated on a project sponsored by DSS World Pvt. Ltd., Pune, from March 24th to July 6th. They successfully developed a solution that utilizes data analytics and sensor technology to count passengers in public transit systems.



ACTIVITIES



1. SIH Strategies

The AIDS department organized an event for students preparing for the Smart India Hackathon, featuring insights from alumna Ms. Zoya Jamadar, a past winner. She shared tips on excelling in the competition, including process, topic selection, and evaluation criteria, followed by a Q&A session.

2. Generative AI

The AIDS department recently organized an insightful expert session on generative AI for second- and third-year students. The event featured two distinguished alumni from the 2024 batch, Vithika Pungliya and Ankur Raut, who delivered compelling presentations on the topic. Their in-depth knowledge and engaging delivery captured the students' attention, sparking a lively discussion filled with thoughtful questions. The enthusiasm and curiosity displayed by the students highlighted their keen interest in the evolving field of AI, making the session both informative and inspiring.



Faculty Publication

- "CarLINK: AI Driven Traffic Adviser for Automobiles, *"International Conference on Innovations and Challenges in Emerging Technologies (ICICET)"* Aug2024, Prof. Ganesh Ubale, Janhavi Gangurde, Piyush Ghante, Avdhoot Fulsundar, Satwik Divate, Vaishnavi Dalvi.

Topic of the Month Natural Language Processing(NLP)

Natural Language Processing (NLP) is a crucial subfield of artificial intelligence (AI) that focuses on the interaction between computers and humans through natural language. The primary goal of NLP is to enable machines to understand, interpret, and generate human language in a manner that is both meaningful and useful. This technology has found widespread applications, including machine translation, sentiment analysis, chatbots, speech recognition, and text summarization, making it an integral part of many modern digital services.

Recent advancements in NLP, driven by transformer models like BERT and GPT, have revolutionized language processing by improving accuracy in tasks such as translation and summarization. These models, through large-scale pre-training and fine-tuning, excel at multilingual tasks and have advanced conversational AI, enabling more natural interactions in chatbots.



Tools used in NPL:

- **OpenAI GPT:** A powerful language model for text generation, translation, and chatbots.
- **BERT:** A Google-developed model for understanding context in search queries and text classification.
- **spaCy:** An advanced Python library for fast and accurate text processing tasks like entity recognition.
- **NLTK:** A comprehensive NLP library for text processing and analysis, popular in education and research.
- **Hugging Face Transformers:** A collection of pre-trained models for tasks like sentiment analysis and summarization.
- **Stanford NLP:** A suite of tools for parsing, named entity recognition, and more, used in academia.
- **Google Cloud Natural Language API:** A cloud-based service for sentiment analysis and text classification.
- **Amazon Comprehend:** An AWS service for entity recognition, sentiment analysis, and language detection.

Use of NPL in different sectors:

- **Healthcare:** NLP enhances diagnostics, processes medical records, and supports personalized treatment by analyzing vast medical data.

- **Finance:** NLP powers sentiment analysis, fraud detection, and automates customer support, improving efficiency and security in financial operations.
- **Education:** NLP enables intelligent tutoring, automated grading, and personalized learning experiences, improving engagement and outcomes.
- **Retail and E-commerce:** NLP drives chatbots, personalizes recommendations, and analyzes customer feedback, enhancing customer experience and targeted marketing.
- **Legal:** NLP streamlines document analysis, contract review, and legal research, aiding in quick information retrieval and compliance.
- **Human Resources:** NLP assists in resume screening, sentiment analysis, and automating HR tasks, improving talent acquisition and employee management.

References : Open AI,
<https://datasciencedojo.com/blog/natural-language-processing-applications>



-Ishika Golechha (SY-A)



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