



Computer Engineering Department Newsletter-"Spectrum"

July 2023 to Dec 2023 (Ed.I)



Theme of Current Issue "Artificial Intelligence & Its Impacts".

Editorial Board

- ❖ **Editor in Chief**
- **Mr.M.S.Kalbande (VP)**
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- **Mrs.Sarita Thorat(Lecturer)**
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- **Deep Patel**
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All First Year Students

Message From Principal.....



Indian Economy is the fastest growing economy in Asia and one of the fastest growing in the world. To maintain this momentum, a large number of technical manpower is required wherein technical diploma education system is going to play a pivotal role of providing skilled manpower for organized, unorganized and service sectors of the Indian economy.

The main objective of the technical diploma education is to produce a pool of skill-based manpower to support shop floor and field operations of industries acting as an intermediate link between technicians and engineers. Actually, diploma education not only helps the students to become familiar with the use of various tools and pieces of equipment, and the development of practical skills pairing up with the theoretical knowledge about latest trends and technologies but also enable them to become acquainted with the world of Corporates, learn how to cooperate with other team members, and professionally solve problems resulting from working with the latest technologies.

I applaud the contributors for their stimulated thoughts and varied hues in articles contributed by them. The wide spectrum of articles published in different sections of this Newsletter provide a sense of pride that our students, professors possess creative potential and original thinking in ample measures.

Wishing all the best to the Newsletter Team!

Prof.Dr.S.M.Deokar,
(Principal)

	JAYAWANT SHIKSHAN PRASARAK MANDAL's	
	JAYAWANTRAO SAWANT POLYTECHNIC	
	(Approved by AICTE, New Delhi, Govt. of Maharashtra and affiliated to MSBTE Mumbai.)	
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Computer Engineering Department

VISION

To build creative programming mind in the students for adopting emerging technology in the field of computing, for the betterment of society.

MISSION

M1: To impart sound theoretical and practical knowledge in the disciplines of computing, through effective teaching learning process.

M2: To produce industry and society oriented skillful engineers through co-curricular and extra-curricular activities.

M3. To inculcate ethical values in the students.

Vice Principal's Message.....



Since November 2022, rapid advancements have happened in the field of Generative AI, with multiple releases of GPT models by OpenAI and a plethora of Large Language Models (LLMs) available in open source. Although, Generative AI has taken the world by storm, the technology itself has been around for a long time. Actually, Recurrent Neural Networks (RNNs) which have been around since 1980's were the very first Generative models. They were followed by various advancements like Long Short Term Memory Networks (LSTMs), Generative Adversarial Network (GANs), Variational AutoEncoders (VAEs), Transformer models and finally Generative Pretrained Transformer (GPT) series of models.

Generative AI generates novel content by learning the underlying patterns and structures of the data they have been exposed to. In case of GPT models, the model predicts one word at a time, which it thinks is most likely to appear next in the sequence. ChatGPT, developed by OpenAI, was trained on billions of sentences. It garnered significant attention and focus due to its remarkable language generation capabilities and its accessibility to the general public. It demonstrated the immense potential of generative AI in natural language processing and conversation with the ability to revolutionize various industries like Marketing & Advertising, Creative industries, Healthcare, Manufacturing, Gaming and e-Commerce to name a few.

Customer Support is one such domain wherein Generative AI is bringing about significant transformation. Generative AI powered Chatbots and Virtual Assistants can understand and respond to customer queries in a human-like conversational manner and resolve problems effectively. It can help generate many help and support FAQs for common customer support questions. A Generative AI powered agent-assistant can help support personnel resolve queries much faster by enabling them to access the right information and provide helpful generated suggestions. Such a bot allows for seamless multilingual communication where support queries can be answered with language translation happening in real time. Personalization's and recommendations can be built in to customer support very easily.

The other issue is steer ability and prompts brittleness. A key part of generating responses is to structure the "instructions" or the "prompt" for the model well. These prompts therefore need to be tuned well to get the desired outputs. The outputs of such models are prone to change with a small change of wordings in the prompt.

As the development of generative AI progresses rapidly, we can anticipate the emergence of even more advanced and powerful models in the future. Particularly, smaller task-efficient models that can be self-hosted and used on-premise will revolutionize various industry use cases, leading to broader adoption of language models.

Mr.M.S.Kalbande
(Vice-Principal)

Faculty Speak.....



Artificial intelligence (AI) is a wide-ranging tool that enables people to rethink how we integrate information, analyze data, and use the resulting insights to improve decision making—and already it is transforming every walk of life.

Artificial intelligence algorithms are designed to make decisions, often using real-time data. They are unlike passive machines that are capable only of mechanical or predetermined responses. Using sensors, digital data, or remote inputs, they combine information from a variety of different sources, analyze the material instantly, and act on the insights derived from those data. With massive improvements in storage systems, processing speeds, and analytic techniques, they are capable of tremendous sophistication in analysis and decision making.

The risks of A.I.

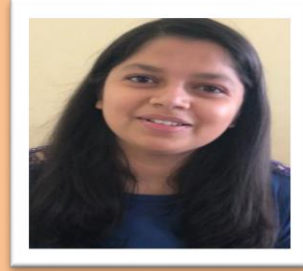
Many A.I. executives believe the technologies they are creating will improve our lives. But some have been warning for decades about a darker scenario, where our creations don't always do what we want them to do, or they follow our instructions in unpredictable ways, with potentially dire consequences.

A.I. experts talk about “alignment” — that is, making sure A.I. systems are in line with human values and goals.

What is intelligence?

All but the simplest human behaviour is ascribed to intelligence, while even the most complicated insect behaviour is usually not taken as an indication of intelligence. What is the difference? Consider the behaviour of the digger wasp, *Sphex ichneumoneus*.

Mr.B.L.Nirmal
(Lecturer)



In new wave of AI people of all over the world got infected. In this wave some will get ill by losing their job where some will come out of it by taking up knowledge of skilling, research and development and some will by challenging it comes out with a new technology. But what is AI? AI is just one phase in technology its ultimate aim is to mimic humans think on its own and make decision

AI has its aura in every field may be medical where predictive diagnosis, sensor watch to agriculture with yield prediction, flood forecasting which has made labor intensive work, less and focus on new solutions and innovations, this has also indirect impact on social relevance, sustainability where farmers suicides have decreased, people come to know about their health issues before getting worse and many more.

AI will add 15.7 trillion to global economy by 2030 A/c to world economic forum. Its impact in education has increased through start-ups, hackathons .In environmental sector it has contributed in mitigation of carbon emission and footprint.

But does AI has a negative impact and who should be made responsible the one making it or the one using it as it is rightly said that machines have chips ,humans making have heart but one add that you should fear is AI under the control of humans without hearts away for getting in the top, but we will surely get it.

Ms.M.S.Pardesi
(Lecturer)

Student Speak.....



"AI, the silent revolution shaping our future one algorithm at a time."

How does AI use predictive analytics to optimize production and efficiency in the manufacturing sector? How has AI revolutionized disease detection and treatment in the healthcare sector?

In what ways does AI contribute to climate change strategies and sustainable policies by analyzing vast datasets?

Advancements in research, quantum computing, and robotics hint at AI's incredible potential. Responsible development is imperative, integrating ethics to channel AI's capabilities for societal benefit. Navigating this journey necessitates a harmonious fusion of innovation and ethics, unlocking AI's boundless potential for a smarter, interconnected world. With careful implementation and oversight, AI stands poised to user in a future teeming with opportunities.

"AI: THE VISIONARY FORCE PROPELLING HUMANITY INTO FUTURE."

**Deep Suresh Patel
(SYCO)**



Artificial Intelligence (AI) is a cutting-edge technology of the modern era. Developed to mimic human behaviour and intelligence, AI possesses the capability to perform tasks that typically demand human cognitive abilities. From creating paintings to assisting with homework or debugging code errors, AI can seamlessly tackle an array of diverse tasks.

ChatGPT, developed by OpenAI, stands as a remarkable example of AI's vast capabilities. With its sophisticated language processing algorithms, ChatGPT possesses the power to address an extensive array of inquiries and challenges. From tackling language translation conundrums to unravelling complex mathematical problems that require meticulous calculations, crafting engaging storylines, or generating poetry. ChatGPT can do all of it.

In the future seeing ourselves surrounded by numerous AI-based services will be of no surprise.

**Tabish Raza
(TYCO)**



Pawar Abhijeet Rajkumar

Artificial intelligence seeks to replicate human intelligence in machines, primarily computers. The concept has historical origins, with the term invented in 1956 at Dartmouth College.

Why Artificial Intelligence? How AI in industry 4.0 impacted? What's Sustainability of AI? What's the future of AI? What's the social relevance of AI? Well, you got to keep reading more to find out! So, let's start! Here are answers to your questions!

Artificial Intelligence is at work to create computer systems that can act human intelligence, enabling them to learn, reason, and perform tasks.

**Abhijeet Pawar
(SYCO)**



"_Artificial intelligence is the future of the human mind_"

In today's time period AI plays a vital role for checking the eye conditions leading to loss of vision or Blindness Diabetes- related retinopathy, Glaucoma .Salute to the great person Alan Turing who published his work "Computer Machinery and Intelligence" which eventually became The Turing Test, The term "Artificial intelligence" was coined and came into popular use.

"The development of full artificial intelligence spell the end of the human race..."

**Asmita Mulik
(SYCO)**

Teacher's Day Celebration



Computer Engineering Department's first year students organized Teacher Day on 5th Sept 2023. Chief guest Principal Prof. Dr.S.M.Deokar and Vice principal Mr.M.S.Kalbade addressed students about role and importance of Teacher in the student's life and also guided students about role of students in society.

Celebration of Engineers Day



The Computer Department organized Engineer's day on 15th of Sept 2023. The Students had conducted the Events such as Coding competition and Poster making on this occasion. All students enthusiastically participated in these events.

Fresher's Party



The Computer Department organized Fresher's Party on 15th of Sept 2023. The chief guest of this function is actor Subhash Yadav. On this occasion talent show is organized for the first year students.

Social Activity



Department of Computer Engineering organized "Social Activity" at the Tukai Darshan. Students of second year and staff members distributed sweets and snacks to the children.

Social Activity



JSPM's Jaywantrao Sawant Polytechnic's Computer Engineering Department organized a Social Visit at Dalimb-Village, Dist-Pune. Second year faculty members, Mr.S.B.Mhaske ,Ms.N.A.Inamdar, Ms.N.S.Bahirame, Ms.P.S.waikar ,Ms.S.S.Wable ,Ms.M.S.Pardesi ,Ms.S.R.Ahuja and all second year students were present for this social activity.

Visit at Indradhanushya Environment Education & Citizenship Centre, Pune.



JSPM's Jaywantrao Sawant Polytechnic's Computer Engineering Department organized Visit at Indradhanushya Environment Education and Citizenship Centre on the occasion of International Day Of Clean Air for Blue Skies, 2023. Third year faculty members Mr.S.S.Shende,Ms.K.M.Shirole and all third year students were present for the for this visit.

Yoga & Meditation Seminar



Computer engineering department organized a Seminar for FY students on “Self-empowerment” (Yoga and Meditation). The main purpose of the seminar was to aware student’s related yoga and meditation and its importance Meditation empowers a student to focus and keep calm to get peace of mind.

Parents Meet



The computer engineering department had organized a Parent-teacher meeting. The main purpose of the meet was to create a common platform, where teacher and parents come together to enrich the student’s educational experiences and discuss a variety of issues, regarding all round development of students.

Expert Lecture



Computer Engineering Department organized for third year students the expert Lecture on ‘The Project work and writing-publishing journal paper’. Mr. A. N. Kaulage was the guest of this seminar. He is the Assistant Professor, Dept.of CSE Vishwkarma Institute of Technology (VIT).

Seminar on Operating System



The computer engineering department organized Seminar on “Operating System”, on Tuesday September 26, 2023 for third year. From this Expert Lecturer students grabbed the knowledge about “Operating System”, different types of operating system, component of operating system.

Seminar on Personality Development



The Computer Engineering department has organized a Guest lecture on “Personality Development”. Mr. Prashant Patil, was the speaker of the program. He has many years of experience in the teaching profession and now working as a freelance corporate trainer.

Expert Lecture



Computer engineering department has organized an Expert Lecture on “Data Structure” for second year. Mr.Madan Somvanshi was the chief guest of this function.

Industrial Visit



Computer Engineering Department organized Industrial Visit at The National PARAM Supercomputing Facility (NPSF), Center for Development of Advanced Computing C-DAC Innovation Park.

ACES Members Felicitation



Department of Computer Engineering Felicitates the “ACES” members with badges. ACES is the organization of the students where they conduct all kinds of different events throughout the year.

**HOD
(Mr.M.S.Kalbande)**