

Winter
2024

Department of Information Technology



**JAYAWANTRAO SAWANT
POLYTECHNIC, HADAPSAR, PUNE-28**

Department of Information Technology

Newsletter

“BITS AND BITES”

Departments Vision Missions:

Vision

To groom technically competent IT engineers to satisfy the needs of industry and society.

Mission

1. To impart effective teaching and learning, to nurture students fundamentals and technical knowledge.

2. To enhance practical learning to meet the industrial needs.

3. To promote ethical and moral values through co-curricular and extra-curricular activities.

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- Chief Editor:
Mrs. S. B. Baraskar
- Editor:
Ms. J. R. Dhavale
- Student Editor:
Mr. Swayam Roman

FOUNDER SECRETARY'S MESSAGE

Dear students,

JSPM's Jayawantrao Sawant Polytechnic was established in 2006 with the objective of creating center of excellence for education in the field of Engineering. The main objective behind starting the institute was to make technical education available to all who are desirous of achieving it. I also visualized that a social transformation can be brought through the medium of dynamic education, Jayawantrao Sawant Polytechnic is, thus, an institution of technical education with social commitment. With India and Indians, emerging as leaders across various professional sectors, it becomes an even greater challenge for the education sector to nurture and groom such abundant talent, which is all set to take industry's quest for excellence to dazzling new heights. We have created a learning culture, a friendly environment that facilitates complete development of our students. Our three pronged focus on knowledge, skill and attitude is aimed at meeting the needs of our customers, i.e., the industry. To achieve this we have handpicked the best faculty from diverse fields and expertise. We have invested in state of the art facilities, infrastructure and skilled human resources to supplement the culture and environment of the institute's good governance. Moreover, it is our pledge to change in tandem with the changing requirements of the industry and develop and nurture talent that will make the nation proud.

Prof. Dr. T. J. Sawant, Founder Secretary, JSPM



Prof. Dr. T. J. Sawant
Founder Secretary

PRINCIPAL's MESSAGE :

The evolution of the institute over the past Eighteen years has witnessed strong blend of state-of-the-art infrastructure and intricately intertwined human resource committed to provide professional education with thrust on creativity and innovation. The motivating environment in JSP for knowledge assimilation, generation and dissemination with a sense of social responsibility, human values and concern for social commitment has carved a niche for itself among the best technical institutes. The special emphasis is on Outcome Based Education (OBE) and Experiential Learning. This newsletter is one of the ways to achieve OBE. All the best all students.

Prof. Dr. S. M. Deokar, Principal JSP



HEAD OF THE DEPARTMENT'S MESSAGE:

Department offers Diploma in Information Technology with 120 intake capacity. The department has well equipped Laboratories. The department consists of highly qualified, well experienced and dedicated faculties. Department regularly arranges Expert Lectures and Industrial visits along with workshop and seminars for the development of the students in various field. The department encourages and supports students in extra and co- curricular activities like sports and cultural programmers. We are also focused for the campus placements for our students.



EDITOR'S MESSAGE



I am happy to present this edition of our Diploma Engineering Newsletter. The theme of this issue is **The Future of AI in Everyday Life**. This issue highlights the hard work, creativity, and achievements of our students and faculty. Each article and update reflects our commitment to learning, innovation, and practical skills.

Engineering is not only about machines and technology — it is about solving real-life problems. I hope this newsletter inspires you to explore new ideas, take up challenges, and continue improving your technical abilities.

I thank all contributors for their valuable efforts and support. Your participation makes this newsletter meaningful and enjoyable.

Wish you all great learning and success ahead!

Technical Events and Activities

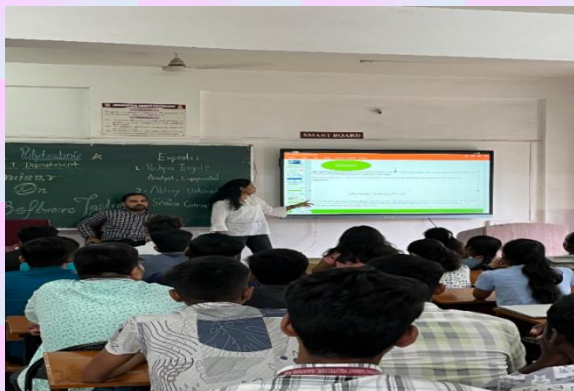
➤ **Expert lecture on Computer Network:**

Seminar On “Computer Network” held by IT Department for TYIF on 04/10/2024. Mr. Abhay Urkude conducted an engaging session on Computer Networks, focusing on network types, protocols, and data transmission concepts. He explained the OSI model, IP addressing, and real-world networking applications. The session was informative and enhanced participants' understanding of core networking principles, essential for IT careers.



➤ **Expert Lecture on Software Testing:**

Seminar On “**Software Testing**” held by IT Department for SYIF & TYIF on 28/09/2024. Ms. Pushpa Ingole conducted an informative session on Software Testing, covering key concepts such as manual and automated testing, SDLC, and bug tracking. She emphasized the importance of quality assurance in software development. The session was valuable for participants seeking foundational knowledge and practical insights in testing.



➤ **Seminar on Opportunities for study & Work in Overseas**

Seminar On “Opportunities for study & Work in Overseas” held by IT Department for TYIF on 18/10/2024. Mr. Kalpesh and Ms. Swati conducted an insightful session on Opportunities for Study & Work Overseas. They discussed admission processes, scholarships, visa guidelines, and career prospects abroad. The session provided valuable guidance to students aspiring for international education and work, making it highly informative and encouraging.



➤ **Food Distribution At orphanage:**

Orphanage Visit was organized by IT Department on 12/08/2024 for all the students of SYIF of Jayawantrao Sawant Polytechnic. Students have collected money by themselves and bought a stationary, snacks and groceries for the donation to Anathalaya. Total 60 students have been actively participated in the donations and interacted with the children of Dharmaveer shambhu school, and the peoples in orphanage. Head of the Anathalaya Maruti Aaba Tupe and the principle of school have appreciated the donation given by the SYIF students.



➤ **Tree Plantation Program:**

On 18th September 2024, SYIF students of Jayawantrao Sawant Polytechnic participated in an Industrial Visit to gain practical knowledge. Following this, a Tree Plantation Program was conducted to promote environmental awareness. The initiative encouraged student engagement in sustainability and real-world learning, making it a valuable educational experience.



➤ **Seminar on Importance of Aptitude and Communication:**

Seminar on “Importance of Aptitude and Communication” On 2nd August 2024, the IT Department organized a seminar on “Importance of Aptitude and Communication” for the First Year (FYIF) and Second Year (SYIF) Information Technology students. The objective of the seminar was to highlight the critical role of aptitude and communication skills in academic success and career development. The session was conducted by Mrs. Bhagyashree Waghmode, a seasoned IT professional and career strategist. Drawing from her vast experience in the industry, she provided students with valuable insights on how strong aptitude and effective communication can significantly enhance their problem-solving abilities, confidence, and performance in both academic and professional settings.



➤ **Seminar On Soft skills:**

Seminar On “**soft Skills**” held by IT Department for FYIF & SYIF on 30/08/2024. A workshop on “**soft Skills**” was conducted by Mrs. Madhuri kale, an experienced software developer and educator. The session focused on the fundamentals and practical applications of both programming languages. Ms. Rachmale explained core concepts, syntax differences, and real-world use cases, highlighting the importance of mastering both languages in today’s IT industry.



➤ **Seminar On Art of living and Meditation:**

Seminar On “**Art of living and Meditation**” held by IT Department for TYIF on 15/01/2025. Mr .Shrihari Gaikwad conducted an insightful session on “**Art of living Seminars on Meditation**”, covering resume building, cover letter writing, and interview techniques. She emphasized tailoring applications to specific roles and provided practical tips for job seekers. The session was highly informative and beneficial for all participants preparing.



➤ **Industrial visit to Acme Info vision Systems Pvt.Ltd.**

Jayawatrao Sawant Polytechnic's Department of INFORMATION TECHNOLOGY has successfully organised the Industrial Visit at Acme Info vision Systems Pvt.Ltd. for TYIF students under the guidance of HOD Mrs. S. B. Baraskar and Faculty Mr. V. H Pachangane. The company is working in software development and IT service sectors and network Security domains.



Visit to Kaas Pathar

Jayawatrao Sawant Polytechnic's Department of INFORMATION TECHNOLOGY has successfully organised the Visit at Kaas Pathar on 20/9/2024 for TYIF students under the guidance of HOD Mrs. S. B. Baraskar and Faculty Mr. V. H Pachangane. The students observed and enjoyed the beauty of nature and appreciate the the UNESCO World Heritage Site



New Collaborations and MOUs

➤ Industrial visit to Tron Softech, Pvt.Ltd, Wagholi Pune(MOU)

Jayawatrao Sawant Polytechnic's Department of INFORMATION TECHNOLOGY has successfully organised the Industrial Visit at TronSoftech Pvt. Ltd. Wagholi on 23/8/2024 for SYIF students under the guidance of HOD Mrs. S. B. Baraskar and Faculty Mr. V. H Pachangane. The company is working in software development and IT service sectors and network Security domains. Mr. Sushant Gore the owner of the company shared his valuable information with the students and also Guided them about the various job roles of being an IT engineer. Students actively participated in the question answer session.



Achievements

MSBTE Exam Winter-2024

DEPARTMENT TOPPERS

Rank	Name of Student	Class	% Result
1	Rani Haridas Mathe	TYIF	92.82
2	Divekar Pratik Rajaram		92.00
3	Lavhate Kartiki Moreshwar		90.35
1	Bardpure Rituja	SYIF1	92.24
2	Bhagwat Pranali		89.65
3	Ingale Pradip		88.24
1	Waghmare Diksha Sakharam	SYIF2	88.00
2	Jha Prince Kumar Samar		87.53
3	Jadhav Srushti Sanjay		86.24
1	Kholkar Darshan Laxman	FYIF1	87.06
2	Vaishnavi Gadhave		86.35
3	Nakate Pranav Ramesh		85.41
1	Omar Zafar Shaikh	FYIF2	90.71
2	Bhise Diksha Subhash		87.88
3	Kshetri Akshata Mallikarjun		87.41

STAFF with 100% RESULT

Sr. No.	Name of Staff Member	Class	Subject Taught
1.	Ms. J.R. Dhavale	FYIF1	Communication Skills (English)
2.	Ms. J.R. Dhavale	FYIF2	Communication Skills (English)
3.	Mrs. S.V. Sardar & Mrs. Y.S. Kawade	FYIF1	Basic Science
4.	Mrs. S.V. Sardar & Mrs. Y.S. Kawade	FYIF2	Basic Science
5.	Mrs. Y.N. Jadhav	FYIF1	Basic Mathematics
6.	Mr. O.K. Wadne	TYIF	Advance Computer Network

Students' Articles

The future of AI in everyday life

By Ms. Mansi Patil

Artificial Intelligence (AI) is poised to significantly reshape everyday life, offering increased convenience, efficiency, and personalization across various sectors. From smart homes and healthcare to transportation and education, AI will become increasingly integrated into daily routines, impacting how we live, work, and interact with the world.

Here's a glimpse into the future of AI in everyday life:

Smart Homes and Automation:

AI-powered devices like smart thermostats, security systems, and virtual assistants will make homes more efficient and comfortable. Imagine a home that anticipates your needs, adjusts lighting and temperature based on your preferences, and even manages household chores with robotic assistance.

Personalized Experiences:

AI will personalize our interactions with technology, offering tailored recommendations, customized learning experiences, and virtual assistants that adapt to our individual needs.

Revolutionizing Healthcare:

AI is already transforming healthcare with faster diagnosis, personalized treatment plans, and more efficient management of medical resources. AI can analyze medical images with greater accuracy, predict disease outbreaks, and even assist in surgical procedures.

Transforming Transportation:

Self-driving cars, optimized traffic management, and intelligent navigation systems are on the horizon, promising safer and more efficient transportation. AI will play a crucial role in managing traffic flow, reducing congestion, and minimizing accidents.

Enhancing Education:

AI-powered adaptive learning platforms can personalize the learning experience, tailoring content to individual student needs and providing targeted support. Virtual tutors and personalized feedback mechanisms can enhance student engagement and academic performance.

Redefining Workplaces:

AI is already automating repetitive tasks and enhancing productivity in various industries. As AI-driven automation becomes more prevalent, it will create new job roles and require workers to adapt to new skill sets.

Ethical Considerations:

While AI offers tremendous potential, it's crucial to address ethical considerations such as data privacy, algorithmic bias, and the potential for job displacement. Ensuring responsible development and deployment of AI is essential to maximize its benefits and minimize potential risks.

In conclusion, AI is not just a futuristic concept; it's already transforming our lives in many ways and will continue to do so in the years to come. By embracing the potential of AI responsibly, we can create a future where technology enhances our daily lives and empowers us to achieve more.

The future of AI in everyday life

By Mr. Prince Jha

Innovations in the field of artificial intelligence continue to shape the future of humanity across nearly every industry. AI is already the main driver of emerging technologies like big data, robotics and IoT, and generative AI has further expanded the possibilities and popularity of AI. According to a 2023 IBM survey, 42 percent of enterprise-scale businesses integrated AI into their operations, and 40 percent are considering AI for their organizations. In addition, 38 percent of organizations have implemented generative AI into their workflows while 42 percent are considering doing so.

With so many changes coming at such a rapid pace, here's what shifts in AI could mean for various industries and society at large.

How AI Will Impact the Future

Improved Business Automation

About 55 percent of organizations have adopted AI to varying degrees, suggesting increased automation for many businesses in the near future. With the rise of chatbots and digital assistants, companies can rely on AI to handle simple conversations with customers and answer basic queries from employees.

AI's ability to analyze massive amounts of data and convert its findings into convenient visual formats can also accelerate the decision-making process. Company leaders don't have to spend time parsing through the data themselves, instead using instant insights to make informed decisions.

Job Disruption

Business automation has naturally led to fears over job losses. In fact, employees believe almost one-third of their tasks could be performed by AI. Although AI has made gains in the workplace, it's had an unequal impact on different industries and professions. For example, manual jobs like secretaries are at risk of being automated, but the demand for other jobs like machine learning specialists and information security analysts has risen.

Workers in more skilled or creative positions are more likely to have their jobs augmented by AI, rather than be replaced. Whether forcing employees to learn new tools or taking over their roles, AI is set to spur upskilling efforts at both the individual and company level.

Data Privacy Issues

Companies require large volumes of data to train the models that power generative AI tools, and this process has come under intense scrutiny. Concerns over companies collecting consumers' personal data have led the FTC to open an investigation into whether OpenAI has negatively impacted consumers through its data collection methods after the company potentially violated European data protection laws.

In response, the Biden-Harris administration developed an AI Bill of Rights that lists data privacy as one of its core principles. Although this legislation doesn't carry much legal weight, it reflects the growing push to prioritize data privacy and compel AI companies to be more transparent and cautious about how they compile training data.

Increased Regulation

AI could shift the perspective on certain legal questions, depending on how generative AI lawsuits unfold in 2024. For example, the issue of intellectual property has come to the forefront in light of copyright lawsuits filed against OpenAI by writers, musicians and companies like The New York Times. These lawsuits affect how the U.S. legal system interprets what is private and public property, and a loss could spell major setbacks for OpenAI and its competitors.

Ethical issues that have surfaced in connection to generative AI have placed more pressure on the U.S. government to take a stronger stance. The Biden-Harris administration has maintained its moderate position with its latest executive order, creating rough guidelines around data privacy, civil liberties, responsible AI and other aspects of AI. However, the government could lean toward stricter regulations, depending on changes in the political climate.

Climate Change Concerns

On a far grander scale, AI is poised to have a major effect on sustainability, climate change and environmental issues. Optimists can view AI as a way to make supply chains more efficient, carrying out predictive maintenance and other procedures to reduce carbon emissions.

At the same time, AI could be seen as a key culprit in climate change. The energy and resources required to create and maintain AI models could raise carbon emissions by as much as 80 percent, dealing a devastating blow to any sustainability efforts within tech. Even if AI is applied

to climate-conscious technology, the costs of building and training models could leave society in a worse environmental situation than before.

Accelerated Speed of Innovation

In an essay about the future potential of AI, Anthropic CEO Dario Amodei hypothesizes that powerful AI technology could speed up research in the biological sciences as much as tenfold, bringing about a phenomenon he coins “the compressed 21st century,” in which 50 to 100 years of innovation might happen in the span of five to 10 years. This theory builds on the idea that truly revolutionary discoveries are made at a rate of maybe once per year, with the core limitation being a shortage of talented researchers. By increasing the cognitive power devoted to developing hypotheses and testing them out, Amodei suggests, we might close the time gap between important discoveries like the 25-year delay between CRISPR’s discovery in the ‘80s and its application to gene editing.

What Industries Will AI Impact the Most?

There’s virtually no major industry that modern AI hasn’t already affected. Here are a few of the industries undergoing the greatest changes as a result of AI.

AI in Manufacturing

Manufacturing has been benefiting from AI for years. With AI-enabled robotic arms and other manufacturing bots dating back to the 1960s and 1970s, the industry has adapted well to the powers of AI. These industrial robots typically work alongside humans to perform a limited range of tasks like assembly and stacking, and predictive analysis sensors keep equipment running smoothly.

AI in Healthcare

It may seem unlikely, but AI healthcare is already changing the way humans interact with medical providers. Thanks to its big data analysis capabilities, AI helps identify diseases more quickly and accurately, speed up and streamline drug discovery and even monitor patients through virtual nursing assistants.

AI in Finance

Banks, insurers and financial institutions leverage AI for a range of applications like detecting fraud, conducting audits and evaluating customers for loans. Traders have also used machine learning’s ability to assess millions of data points at once, so they can quickly gauge risk and make smart investing decisions.

AI in Education

AI in education will change the way humans of all ages learn. AI's use of machine learning, natural language processing and facial recognition help digitize textbooks, detect plagiarism and gauge the emotions of students to help determine who's struggling or bored. Both presently and in the future, AI tailors the experience of learning to student's individual needs.

AI in Media

Journalism is harnessing AI too, and will continue to benefit from it. One example can be seen in The Associated Press' use of Automated Insights, which produces thousands of earning reports stories per year. But as generative AI writing tools, such as ChatGPT, enter the market, questions about their use in journalism abound.

AI in Customer Service

Most people dread getting a robocall, but AI in customer service can provide the industry with data-driven tools that bring meaningful insights to both the customer and the provider. AI tools powering the customer service industry come in the form of chatbots and virtual assistants.

AI in Transportation

Transportation is one industry that is certainly teed up to be drastically changed by AI. Self-driving cars and AI travel planners are just a couple of facets of how we get from point A to point B that will be influenced by AI. Even though autonomous vehicles are far from perfect, they will one day ferry us from place to place.