

ASHOKRAO MANE POLYTECHNIC



Vathar tarf Vadgaon, Tal.- Hatkanangle, Dist.- Kolhapur 416112

Department of Artificial Intelligence and Machine Learning



NEWSLETTER : MindSpark - AI

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THEME - NATURAL LANGUAGE PROCESSING (NLP) INSIGHTS.....

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VISION OF DEPARTMENT

An eminent program to meet the growing needs of IT Industry and Society.

MISSION OF DEPARTMENT

- m1. Imparting quality education through a well designed curriculum which improves basic and disciplinary knowledge of the subject.
- m2. To train the students to design , develop and test emerging software system for industry and society.
- m3. To inculcate the spirit of teamwork innovation and professionalism among the students.
- m4. To train students with hands-on and soft-skills for their future jobs, higher studies and to be an entrepreneur.

CHIEF EDITOR

Ms. S. I. Mulla

EDITOR COMMITTEE :

Ms. S. R. Chougale

Ms. P.R.Koravi

Mr. V.V.Powar

ABOUT INSTITUTE

Shri Balasaheb Mane Shikshan Prasarak Mandal Ambap's, Ashokrao Mane Polytechnic, Vathar Tarf Vadgaon (AMPV) was established in 2008 and is located near Kolhapur. This Institute has AICTE approval for the Seven Diploma courses. Under the visionary leadership and administration, AMPV has emerged as a leading technological institute and is perfect destination for quality technical education. The institute has NBA accredited Programmes, 100% placements in MNCs, best academic results, well established labs. The institute was also honoured with notable awards.

ABOUT DEPARTMENT

Department of Artificial Intelligence (AI) and Machine Learning (ML) of Ashokrao Mane Polytechnic, Vathar tarf Vadgaon is established in 2024 with 60 intake now in 2025 department has 120 intake. The department is evolving over the year with upcoming technologies and upgraded industry based academics to become one of the active department of this institute. Artificial Intelligence (AI) and Machine Learning (ML) are transforming industries by enabling computers to mimic human intelligence, handling tasks like vision, speech, and decision-making, with ML automating model building from data. To meet this demand, AMPV offers a Diploma in AIML, teaching core AI concepts (logic, models, ML) and advanced topics (neural nets, NLP, deep learning, vision) to prepare students to build smart solutions for complex business problems, ensuring career growth in a tech-driven future. The curriculum provided by our department is flexible and provide opportunities for students to emphasize specific areas of interest through their chooses of appropriate measure and technical elective. The department has well equipped laboratories with latest hardware and software.

Message from Principal Desk



Dr. Y. R. Gurav
Principal,
Ashokrao Mane Polytechnic ,
Vathar Tarf Vadgaon

Dear Readers,

I am very happy to note that the Department of Artificial Intelligence and Machine Learning Engineering of Ashokrao Mane Polytechnic Vathar tarf Vadgaon, is releasing its Newsletter enumerating the various activities and achievements of their faculties and students. AIML Engineering is a versatile and ever green branch of engineering.

An Artificial Intelligence and Machine Learning engineer is a professional who develops intelligent software applications for domains such as healthcare, mobile systems, automation, data analytics, and high-performance computing. They design, test, and deploy AI models, work with large datasets, develop efficient algorithms, and ensure secure and ethical AI solutions. This field has a wide scope in upcoming and emerging technologies driven by Artificial Intelligence and Machine Learning. I congratulate all the students who have put their efforts in bringing out this newsletter publication and also appreciate the Head of the Department and all faculty members for motivating their students towards this fulfilment. I wish each one of them success in all their endeavours.

Dear Students, if you are truly committed to work hard towards your goals, nothing can stand in your way. Even if you do not succeed at first, take time to reassess your goals and make necessary adjustments based on your abilities and potential, move forward with renewed energy and determination, never stop your sincere efforts, combine hard work with smart strategies, and you will see, success will definitely follow. Making excuses are easy, but building a successful career and achieving your ambitions is far more important. And whatever happens, 'believe in yourself' & make your life a 'Remarkable'one.

Message from Editor's Desk



Ms. S. I. Mulla
H.O.D. AIML Department
Ashokrao Mane Polytechnic ,
Vathar Tarf Vadgaon

Greetings to faculties and friends!

Department of Artificial Intelligence (AI) and Machine Learning (ML) of Ashokrao Mane Polytechnic, Vathar tarf Vadgaon is established in 2024 with 60 intake and in 2025 with 120 intake. The department is evolving over the year with upcoming technologies and upgraded industry based academics to become one of the active department of this institute.

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I would like to advice all my students to first think 'inside the box' to be able to pursue their 'out of the box' goals. They should look for small improvements in their current setup and execute everything with perfection. Make full use of the educational facilities to ignite the spark within them so that they can fulfil their dreams in future.

Guru Pournima



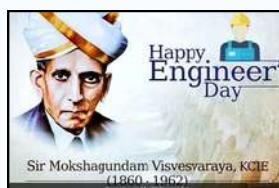
On 10th July 2025, the Artificial Intelligence and Machine Learning Department celebrated Guru Pournima with a heartfelt tribute to our esteemed teachers. The event radiated warmth and respect as students offered beautiful bouquets to express their appreciation. A key moment was the students' heartfelt speeches, expressing gratitude and recognizing the vital role their mentors play in their academic and personal growth.

Induction Programme



The induction program at Ashokrao Mane Polytechnic for the Artificial Intelligence and Machine Learning Engineering Department took place on 1st July 2025. During the event, the HOD warmly welcomed all the newly admitted students and congratulated the department toppers by presenting them with bundles of notebooks in recognition of their academic achievements. The HOD and teachers spoke to the students and shared important academic instructions and department rules, creating a good start for the new academic year.

Engineer's Day



Mokshgundam Visvesvaraya is regarded in India as one of the foremost civil engineers whose birthday,

15 September, is celebrated every year as Engineer's Day in India, Sri Lanka, and Tanzania. He is widely known as "the maker of modern Mysore" and is considered the most popular figure in Karnataka, according to Prajavani.

On the occasion of Engineers' Day, the Artificial Intelligence and Machine Learning Engineering Department of Ashokrao Mane Polytechnic proudly organized an "AI Model Making" competition in AIML all students on Friday, 15th September 2025.



The Inaugural and Welcome function was held in the presence of **Shri. Vijaysingh Mane (President of Shri. Balasaheb Mane Shikshan Prasarak Mandal, Ambap's and Director of Kolhapur District Central Cooperative Bank)**, who inaugurated the program. The event was also graced by **Dr. Y. R. Gurav (Principal, AMPV)**, **Ms. S. I. Mulla (HOD, AIML Department)**, and other dignitaries.



The competition was successfully conducted under the guidance of Mr. Sagar K. Tondale, a Software Developer in the Computer domain, Kolhapur. The Prize Distribution Ceremony was carried out at the hands of **Dr. Y. R. Gurav (Principal, AMPV)** and **Ms. S. I. Mulla (HOD, AIML Department)**, in the presence of AIML Department staff and students.

Parents Meet



The Department of Artificial Intelligence and Machine Learning Engineering successfully organized a Parents' Meet in September 2025, conducted Batch-wise. The programme was anchored and coordinated by the respective mentors. Mentors discussed academic performance, difficult subjects, exams, backlogs, personal support, attendance, communication, competitions, extracurriculars, and remedial support.

Industrial Visit



Industrial Visit at Domain Computer Education, Kolhapur

Industrial Visit had successfully conducted by Artificial Intelligence and Machine Learning Engineering Department for Second Year Artificial Intelligence and Machine Learning Engineering students on Friday, 03/10/2025 .The purpose of this visit is to provide students with exposure to real-world applications of Artificial Intelligence, Machine Learning, and Information Technology, and to enable interaction with industry professionals to understand current trends, tools, and work practices in the tech industry.

18th Foundation Day Celebration and the Inauguration of the AIML Laboratory



The Artificial Intelligence and Machine Learning (AIML) Department of Ashokrao Mane Polytechnic, Vathar, successfully organized a grand program on the occasion of the 18th Foundation Day Celebration and the Inauguration of the AIML Laboratory on 4th August 2025.



The event was graced by the esteemed presence of **President of Shri. Balasaheb Mane Shikshan Prasarak Mandal, Ambap's** and **Director of Kolhapur District Central Cooperative Bank, Shri. Vijaysingh Mane**, who inaugurated the program. **Principal Dr. Y.R. Gurav** presided over the event, highlighting the importance of AI and ML education in today's technology-driven world. Key attendees included Head of AIML Department Ms. S.I. Mulla, Mr. S.B. Pharne, Ms. S.R. Chougale, Ms. R.S. Patil, Ms. P.R. Koravi, and Ms. A.D. Yadav, who collectively contributed to the successful execution of the event. The inauguration was followed by a lab visit where the guests interacted with students and explored the newly established AIML Lab equipped with state-of-the-art facilities to foster innovation and practical learning.

Expert Lectures

Expert Talk on “Python in Machine Learning”



The Department of Artificial Intelligence and Machine Learning Engineering has arranged an expert talk on the subject "Python in Machine Learning" for second year AIML Learning engineering students'. It is mandatory expert talk as per curriculum of MSBTE. The resource person was Miss. Snehal Sonalkar, Software Developer, Bits Techno, Kolhapur.

Expert Talk on “Career Opportunity in AIML”



The Department of Artificial Intelligence and Machine Learning Engineering has arranged an expert talk on the subject "Career Opportunity in AIML" for second year AIML engineering students'. It is mandatory expert talk as per curriculum of MSBTE. The resource person was Mr. Sagar K. Tondale, Software Developer, Domain Computer , Kolhapur.

Expert Talk on “Personality Development”



The Department of Artificial Intelligence and Machine Learning Engineering has arranged an expert talk on the subject "Personality Development" for second year AIML engineering students'. It is mandatory expert talk as per curriculum of MSBTE. The resource person was Dr. V.B.Kakade, Professor, Shivaji University ,Kolhapur.

Expert Talk on “Data Analytics and Data Visualization Using Qlik Sense”



The Department of Artificial Intelligence and Machine Learning Engineering has arranged an expert talk on the subject "Data Analytics and Data Visualization Using Qlik Sense". It is mandatory expert talk as per curriculum of MSBTE. In expert talk Mr. Ranjit Hambirrao Pasale discussed on various technologies such as Back end and Front end technologies. Also discuss various job opportunity.

NSS Activities

Swachhata Abhiyan



The "Swachhata Abhiyan" witnessed active participation from the NSS volunteers of Ashokrao Mane Polytechnic, Vathar Tarf Vadgaon. Students cleaned the college campus and nearby areas, promoting hygiene and proper waste disposal. This activity helped maintain a clean environment and encouraged others to follow good cleanliness practices.

Har Ghar Tiranga Abhiyan



"Har Ghar Tiranga Abhiyan" (Campaign) is an initiative under the larger Azadi Ka Amrit Mahotsav, launched by the Government of India to commemorate 78 years of India's independence. The campaign encourages citizens to display the national flag (Tiranga) at their homes to celebrate the spirit of patriotism and unity.

Eco-Friendly Ganesh Visarjan and Nirmalya Collection Campaign



The National Service Scheme (NSS) of Ashokrao Mane Polytechnic, organized an initiative titled "Eco-Friendly Ganesh Visarjan and Nirmalya Collection Campaign" aimed at promoting environmental awareness and sustainability during the Ganesh Chaturthi festival. This activity was led by NSS coordinators and volunteers across various local locations, emphasizing the importance of eco-friendly practices.

Fire Safety Training (Demo on awareness and handling of fire extinguisher)



NSS committee of Ashokrao Mane Polytechnic, Vathar has arranged the "Fire Safety Training (Demo on awareness and handling of fire extinguisher)" under the NSS. The event is done by cooperation of the entire NSS committee member, staff and students dated 14 November 2025 as per the guidelines in Maharashtra state board of technical education.

Extra Curricular Activities

NSS Activities

Distribution of Diwali Faral



On behalf of Shri Balasaheb Mane Shikshan Prasarak Mandal, Ashokrao Mane Polytechnic Vathar, under the N.S.S. activity Diwali snacks were distributed to nomadic communities, sugarcane workers, as well as truck drivers in the states of Karnataka, Gujarat, Kerala, Madhya Pradesh, Uttar Pradesh through the department.

Tree Plantation



NSS committee of Ashokrao Mane Polytechnic, Vathar has arranged the “Tree Plantation (Vrukshotsav)” under the National Service scheme (NSS) as per the guidelines in circular of Maharashtra State Board of Technical Education(MSBTE), Mumbai

School Connect Programme



Faculty members from our department visited nearby schools to inform 10th standard students about career guidance and diploma courses offered under the Maharashtra State Board of Technical Education (MSBTE). The admission process is straightforward, with eligibility requirements based on completion of the 10th standard. Diploma courses offer a pathway to both immediate job opportunities and further education. Students can also opt for lateral entry into degree programs after completing their diplomas. **This initiative aims to guide students in making informed career choices and exploring technical education options.**

FACULTY SPEAKS



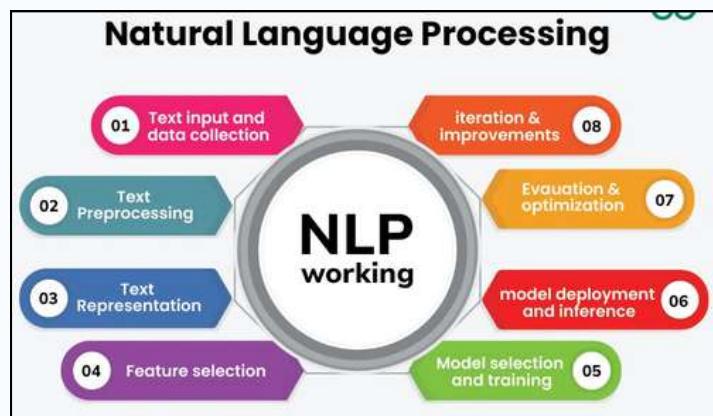
Ms. S. R. Chougale
Lecturer AIML Department
Ashokrao Mane Polytechnic ,
Vathar Tarf Vadgaon



Ms. P. R. Koravi
Lecturer AIML Department
Ashokrao Mane Polytechnic ,
Vathar Tarf Vadgaon

Natural language processing (NLP)

Natural Language Processing (NLP) is a field that combines computer science, artificial intelligence and language studies. It helps computers understand, process and create human language in a way that makes sense and is useful. With the growing amount of text data from social media, websites and other sources, NLP is becoming a key tool to gain insights and automate tasks like analyzing text or translating languages.



The image explains the overall workflow of “Natural Language Processing (NLP)” in eight steps. It starts with collecting raw text data, which is then cleaned and prepared through preprocessing. After that, the text is converted into numerical representations that a machine can understand, followed by selecting the most important features for building the model. A suitable model is then chosen and trained on the processed data. Once trained, the model is deployed so it can make predictions on new text. Its performance is evaluated and optimized, and finally, the entire process is repeated with improvements to make the system more accurate and efficient.

Ethical NLP and Bias Mitigation

Ethical Natural Language Processing (NLP) involves the responsible development and deployment of language technologies that are fair, transparent, and protect user privacy. A core component of this is bias mitigation, the proactive process of identifying, addressing, and reducing biases that models may learn from human language data.



The image presents several mitigation strategies for reducing bias in AI systems. These strategies include ensuring algorithmic transparency so that model decisions are understandable, and improving data collection and curation to create balanced and representative datasets. It also highlights the importance of enhancing diversity and inclusion in AI development to avoid one-sided systems. Regular monitoring and evaluation help detect bias over time, while ethical model designing ensures fairness is built into the system from the start. The image also emphasizes following regulatory frameworks, using human-in-the-loop approaches to allow human oversight, adopting strong ethical .

STUDENT SPEAKS



Mr. Viraj Powar
Student AIML Department
Ashokrao Mane Polytechnic ,
Vathar Tarf Vadgaon



Ms. Mayuri Sutari
Student AIML Department
Ashokrao Mane Polytechnic ,
Vathar Tarf Vadgaon

Conversational AI

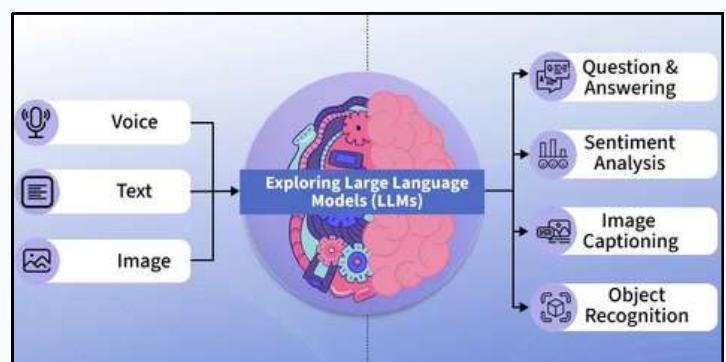
Conversational AI is artificial intelligence that enables computers to understand, process, and produce human understandable language. In this article, we will learn about Conversational AI and its working. We will also understand the advantages and challenges associated with it.



Conversational AI is an advanced form of artificial intelligence designed to communicate with humans in a way that feels natural, intelligent, and seamless. It combines technologies like natural language processing, machine learning, speech recognition, and large language models to understand human language, interpret emotions or intent, and generate accurate, context-aware responses. Conversational AI powers chatbots, virtual assistants, automated customer support systems, and voice-controlled applications that can answer questions, solve problems, guide users, and even engage in meaningful dialogue. Unlike traditional rule-based systems, conversational AI learns and improves over time, becoming more accurate and personalized with each interaction. As a result, it helps businesses improve efficiency, reduce response times, and provide 24/7 support while giving users faster, more intuitive access to information and services.

Large Language Models

Large Language Models (LLMs) are advanced AI systems built on deep neural networks designed to process, understand and generate human-like text. By using massive datasets and billions of parameters, LLMs have transformed the way humans interact with technology. It learns patterns, grammar and context from text and can answer questions, write content, translate languages and many more. Modern LLMs include ChatGPT (OpenAI), Google Gemini, Anthropic Claude, etc



The image illustrates how Large Language Models (LLMs) process different types of inputs and generate useful outputs. It shows that LLMs can accept voice, text, and image inputs, which feed into a central AI system represented by a stylized brain. From these inputs, LLMs are capable of performing several advanced tasks, including question answering, sentiment analysis, image captioning, and object recognition. Overall, the graphic highlights the versatility of LLMs in understanding and analyzing multimodal data to produce meaningful and intelligent results.

INDUSTRY SPEAKS



Dear Readers,

In today's fast-moving digital world, cybersecurity has become an essential foundation across all areas of the IT landscape, connecting system administration, computer networking, routing and switching, technical training,

student career development, and even the broader goals of business growth in the tech sector. As cyber threats become more sophisticated with AI-driven malware, ransomware-as-a-service, and coordinated attacks targeting critical infrastructure system administrators must strengthen security by enforcing strict access controls, updating and patching systems promptly, monitoring logs for anomalies, and applying zero-trust security models to protect both on-prem and cloud environments. As organizations expand their digital operations and adopt IoT, cloud computing, and remote work models, the need for highly skilled IT professionals continues to rise, making student career development more important than ever. Technical training and mentorship programs help bridge the gap between theory and practice, enabling learners to understand real-world infrastructure, identify vulnerabilities, respond to incidents, and build confidence through hands-on simulations and industry guidance. By integrating advanced cybersecurity strategies across system administration, networking, education, training, mentorship, and technological business planning, we can build a more resilient, innovative, and secure digital environment that supports current needs while preparing future generations to navigate the challenges of tomorrow.

Mr. Dayanand Kamble

Current company : BITS TECHNO

Designation: CEO

Total years of experience: 10+ years



Dear Readers,

We are proud to spotlight the dynamic leadership of the Director of Domain Company, a leading provider of comprehensive IT solutions across Kolhapur and Sangli.

With a strong focus on Network IT Solutions and Custom Software Development, Domain Company delivers cutting-edge technology and reliable infrastructure tailored to meet the evolving needs of businesses. From secure network setups to innovative app and web development, their services are designed to empower organizations with seamless digital transformation. Whether you're a startup or an established enterprise, trust Domain Company to be your technology partner in progress. Specializing in reliable infrastructure and custom digital solutions, the company supports businesses in their growth through technology. Software development involves designing, creating, and maintaining applications or systems tailored to meet specific business needs. This includes everything from mobile apps and web applications to enterprise software that helps automate processes, improve efficiency, and enhance user experience. Custom software solutions are designed to solve unique challenges and support growth by integrating with existing systems seamlessly. Network IT solutions focus on building and managing secure, reliable, and efficient network infrastructures. This includes setting up wired and wireless networks, configuring routers and switches, ensuring cybersecurity, and monitoring network performance. Effective network solutions enable smooth communication, data sharing, and secure access to resources, essential for business continuity and scalability.

Mr. Sagar Tondale

Current company name : Domain Computers

Designation: Director

Total years of experience: 17+ years

Faculty Achievements



Ms. S. R. Chougale completed successfully the NPTEL course titled Big Data Computing and acquired Silver Medal with percentage 81% in Academic Year 2025 - 26.



Ms. P. R. Koravi completed successfully the NPTEL course titled Artificial Intelligence in Industrial and Management with percentage 73% in Academic Year 2025 - 26.



Ms. A. D. Yadav completed successfully the NPTEL course titled Software Engineering with percentage 42% in Academic Year 2025.



Ms. R. S. Patil has presented paper entitled Optimizing Lightweight Deep Learning for Real Time Fabric Defect Detection with Multi - Scale and Small Defect Focus in 2025 IEEE 4th International Conference for Advancement in Technology (ICONAT) during 19th to 21th September 2025.



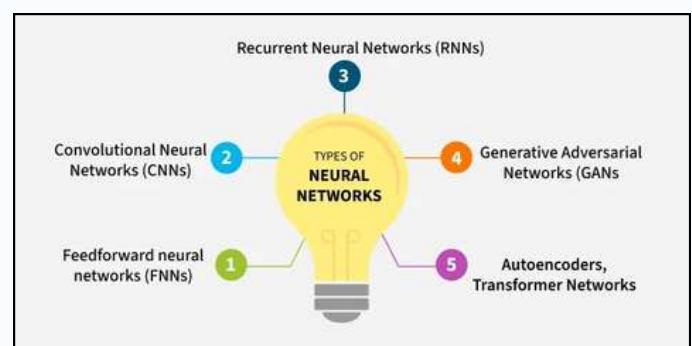
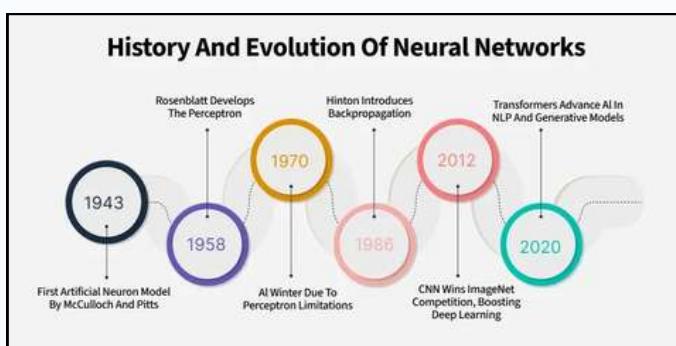
Ms. S. I. Mulla has presented the paper titled "Enhancing Vehicular Predictive Maintenance: Prediction" in the 6th International Conference on Data Science and Applications held at Malavlya National Institute of Technology Jaipur, India during July 16 - 18, 2025.

Theme For Next Issue :

Neural Network Innovation



Neural networks are machine learning models that mimic the complex functions of the human brain. These models consist of interconnected nodes or neurons that process data, learn patterns and enable tasks such as pattern recognition and decision-making.



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