

ABOUT SIET

Sreyas Institute of Engineering and Technology (SIET), Hyderabad, is an Autonomous institution approved by AICTE. Accredited by NBA and NAAC with an A grade, it is recognized for academic excellence, modern infrastructure, and achievements in fostering innovation, research, and successful student placements.

ABOUT IEEE

The Institute of Electrical and Electronics Engineers (IEEE) is the world's largest technical organization, advancing technology through innovation, collaboration, and knowledge-sharing.

ABOUT WORKSHOP ON GEN-AI

The GEN-AI Workshop is a hands-on event designed to introduce participants to the fundamentals of Generative AI. The workshop aims to equip attendees with practical knowledge to create AI-generated content for real-world use cases.

What You Will Learn:

- Overview of Generative AI concepts, algorithms, and tools.
- Hands-on sessions on text, image, and video generation.
- Real-world applications of Generative AI in various industries.
- Step-by-step guide to fine-tuning generative models for specific tasks.
- Discussions on the future scope of Generative AI in research and innovation.

SPEAKERS

Ms. Lakshmi Vejandla, Senior Project Engineer
Mr. Siva Prasad, Project Engineer

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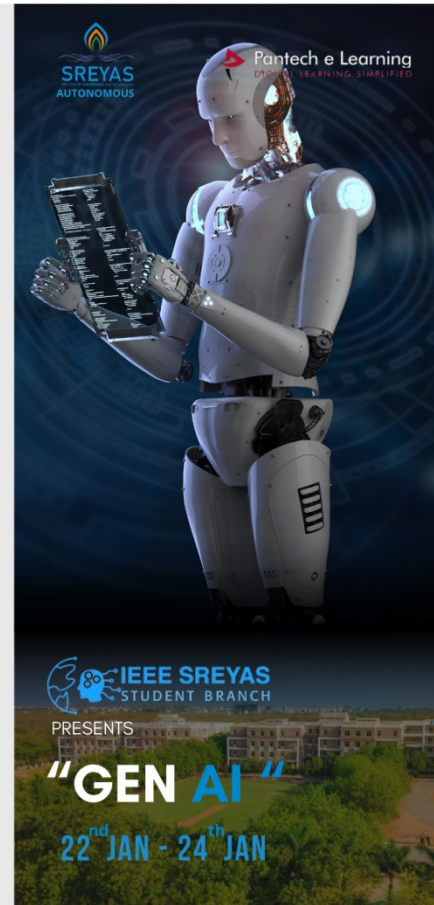
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REPORT ON GENERATIVE AI WORKSHOP

22/01/25 - 24/01/25

The Generative AI Workshop, organized by the IEEE SreyasStudent Branch in collaboration with Pantech Learning, was held from the 22nd to the 24th of January, 2025. The workshop aimed to provide participants with a comprehensive introduction to the rapidly evolving field of Generative AI, covering its applications and practical implementations. A total of 70 students from the II and III year participated.

Objectives Of The Workshop

1. Deepen participants' understanding of Generative AI and its applications across domains like healthcare, agriculture, and security.

2. Offer hands-on experience with tools such as PyTorch and OpenCV to build practical skills.
3. Encourage collaboration and networking while showcasing real-world projects in Generative AI.

Inauguration:

The three-day Generative AI Workshop commenced with an inaugural ceremony held in the New Seminar Hall, Ground Floor. The dignitaries present including Principal Dr. C. UdayaKiran, IEEE Branch Counsellor Prof. Ch. Maruthi Rao, HoD of AIML Dr. Swathi Gowroju, and the workshop speaker ,LakshmiVejandla together inaugurated the event by lighting the ceremonial lamp. They emphasized the importance of Generative AI, its future applications, and the value of implementing real-world projects to align with current technological trends.

Day 1: Overview of Generative AI

The first day, led by Ms. Lakshmi Vejandla, introduced participants to Generative AI, its applications (e.g., healthcare, self-driving cars, virtual assistants, and security), and its building blocks, including Machine Learning (ML), Deep Learning, Computer Vision, and NLP. The session also covered PyTorch basics and its installation, providing a strong foundation for the subsequent days.

Day 2: Practical Applications and Neural Networks

Day 2 focused on practical implementations, including a cancer prediction project using PyTorch and OpenCV for image processing and neural network basics. Key concepts like Torch.nn, activation functions, and optimizers were discussed. Participants worked on hands-on tasks, including fashion image classification, guided by Ms. Lakshmi Vejandla.

Day 3: Advanced Generative AI Projects

Mr. Arivazhagan led the final day, showcasing projects like plant disease detection using CNNs, text-to-image generation using GANs, and language models like GPTs. Advanced topics such as NLP for audio, text, and video processing were also covered, concluding with an interactive Q&A session.

Outcomes:

1. Participants gained practical knowledge of Generative AI and its real-world applications.
2. Hands-on experience with PyTorch, OpenCV, and neural networks.
3. Successful demonstration of projects like cancer prediction and plant disease detection.
4. Networking opportunities with experts and peers.
5. Positive feedback from participants on the quality of content and delivery.

Challenges and Recommendations:

1. Initial technical setup issues with PyTorch installation.
2. Limited time for hands-on practice due to the vast content covered.
3. Provide pre-installed software setups and allocate more time for practical sessions.

Conclusion:

The three-day workshop on Generative AI organized by the IEEE Student Branch was a resounding success, achieving its objectives of skill enhancement and knowledge sharing. The sessions led by Ms. Lakshmi Vejandla and Mr. Arivazhagan were highly appreciated for their depth and interactivity. Initiatives like these continue to highlight the IEEE SreyasStudent Branch's commitment to fostering innovation and technical excellence among students.

