Internship on

# Essentials of Gen Al and ML



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Generative AI stands as a transformative force reshaping interactions across industries.

By revolutionizing content creation, streamlining product design, and redefining customer interactions, it drives a significant shift in business operations. Automated content generation allows efficient production of personalized marketing materials, while AI-optimized product design accelerates innovation cycles. Virtual assistants powered by Generative AI enhance customer service, offering quick and intelligent responses. Advanced data analysis facilitates informed decision-making, and personalized recommendation systems enhance user experiences. This versatile technology also contributes to enhanced cyber security, language translation, and immersive employee training, reshaping traditional business models and fostering a dynamic, technology-driven landscape.

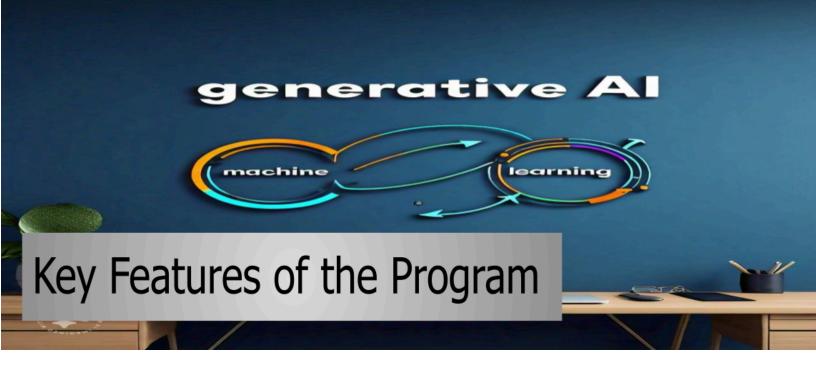
Our Generative AI and Machine Learning program, in partnership with School of Education Technology, Jadavpur University, offers an immersive learning experience at the forefront of this dynamic field. Featuring virtual classes led by industry experts, interactive hands-on projects with integrated labs, self-paced video content, masterclasses from renowned faculty from premier institutes in India and abroad, and collaborative learning with peers, this program equips participants with sought-after skills and practical knowledge of cutting-edge processes, tools, and techniques. The innovative curriculum encompasses the latest industry advancements, emerging trends, and essential topics, including generative AI, prompt engineering, large language models, machine learning, and deep learning.

Upon successful completion of the program, participants earn an internship certificate from GreenAl Services Pvt. Ltd. and School of Education Technology, Jadavpur University to help them advance their careers.



GreenAi Services Private Limited focuses on developing and implementing technologies that simulate human intelligence processes. These processes include learning, reasoning, problem-solving, perception, language understanding and even sensory experiences. Some of the key activities and areas GreenAi involved in:

<ul> <li>Machine Learning and Deep         <ul> <li>Learning</li> <li>Algorithm Development</li> <li>Model Training</li> <li>Application Development</li> </ul> </li> </ul>	<ul> <li>Data Analysis and Predictive Analysis</li> <li>Big Data Processing</li> <li>Predictive Modeling</li> </ul>
<ul> <li>Natural Language Processing</li> <li>Text Analysis</li> <li>Sentiment Analysis</li> <li>Speech recognition</li> <li>Speech recognition</li> </ul>	<ul> <li>Al Consulting and Solutions</li> <li>Custom Al Solutions</li> <li>Integration Service</li> </ul>
<ul> <li>Computer Vision</li> <li>Image Recognition</li> <li>Facial Recognition</li> <li>Augmented Reality</li> </ul>	Integration Service     Strategy and Advisory
<ul><li>Robotics</li><li>Autonomous Robots</li><li>Robot Process Automation (RPA)</li></ul>	<ul> <li>Ethics and Responsible AI</li> <li>BIAS Mitigation</li> <li>Regulatory Compliance</li> </ul>



- Program completion certificate from GreenAl Services Pvt. Ltd. and School of Education Technology, Jadavpur University
- Curriculum delivered in virtual classroom sessions by seasoned industry experts
- Exposure to the latest AI advancements, such as generative AI, LLMs, and prompt engineering
- Interactive virtual masterclasses presented by esteemed faculty from premier institutes
- Hands-on sessions and industry-oriented capstone projects
- Access to a wide array of AI tools such as ChatGPT, DALL-E 2, TensorFlow, Keras, and more

#### **Eligibility Criteria**

For admission to this Generative AI and Machine Learning course, candidates should have:

- Pre-final or final year students of bachelor's degree with an average of 50 percent or higher marks
- Basic understanding of programming concepts

#### Who Should Enroll in this Program

This Generative AI & Machine Learning program aims to provide undergraduate students with in-depth knowledge in this specialized field, helping them advance their skills in AI and Machine Learning. It creates a dynamic learning environment by bringing together individuals from diverse backgrounds, enriching the experience with a variety of perspectives.

This program is best suited for, but not limited to:

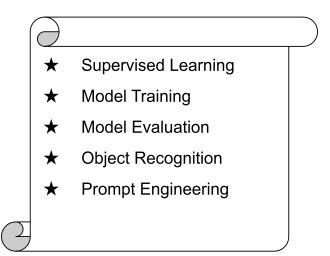
- Final or pre-final undergraduate students
- Eager to work on AI in future

#### **Program Outcomes**

By participating in this program, you will:

- Gain essential Python skills for Data Science
- Foundational machine learning techniques such as regression models, classification algorithm and clustering techniques
- Gain hands-on experience using TenorFlow and Keras.
- Deep learning principles with neural network architectures like RNNs and CNNs, using frameworks such as TensorFlow or PyTorch
- Essentials of Gen AI, Prompt engineerings, LLM and ChatGPT

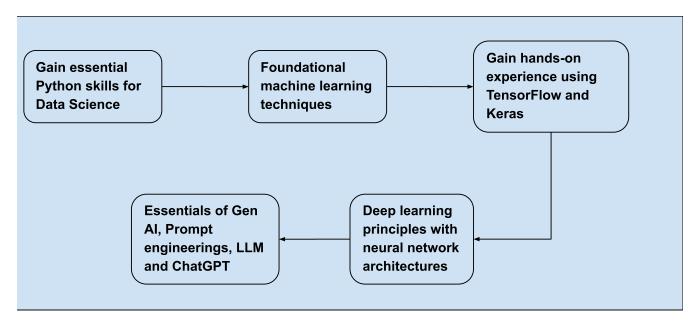
### **Topics Covered**



#### **Tools Covered**



#### **Learning Path**



# **Learning in Detail:**

#### **Essential Python Skills For Data Science**

This course offers an in-depth exploration of core data science concepts, covering crucial areas like data preparation, model development, and evaluation. You'll gain a solid grasp of Python fundamentals, including strings, Lambda functions, and lists. Additionally, you'll delve into key tools and libraries such as NumPy for efficient array handling, linear algebra for mathematical foundations, and essential statistical concepts like central tendency, dispersion, skewness, covariance, and correlation.

#### **Foundational Machine Learning Techniques**

This course covers different types of machine learning and their practical uses. You'll learn about the machine learning process, including supervised learning, regression, and classification. You'll also explore unsupervised learning, such as clustering and ensemble methods. Additionally, you'll evaluate frameworks like TensorFlow and Keras, and build a recommendation engine using PyTorch.

#### **Deep Learning**

This course provides the skills needed to deploy deep learning tools with AI/ML frameworks. You'll learn the core concepts and applications of deep learning, including its differences from machine learning. Topics include neural networks, TensorFlow 2, Keras, CNNs, RNNs, autoencoders, and PyTorch. You'll also cover forward and backward propagation, performance enhancement, model interpretability, transfer learning, and object detection. By the end, you'll be proficient in building and optimizing deep learning models using Keras and TensorFlow.

# Essentials of Gen AI, Prompt engineerings, LLM and ChatGPT

This course offers a solid introduction to Generative AI models, with a special focus on ChatGPT. Participants will learn the basics of generative AI, including prompt engineering, explainable AI, conversational AI, ChatGPT, and other major language models.

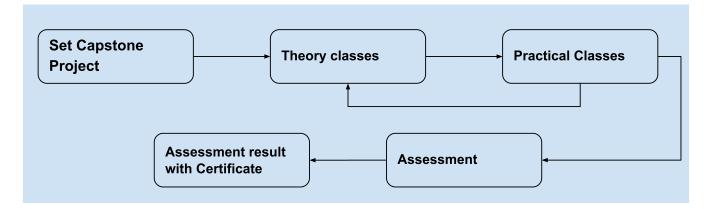
#### **Capstone Project**

Challenges will be given to learners in groups at the beginning of the course for which they will demonstrate solutions at the end of the course.

The capstone project lets you apply the skills gained during the program to tackle real industry challenges using AI and ML techniques. This final project in the core learning path will demonstrate your expertise to potential employers.

The capstone project will deepen your grasp of the AI decision-making process. You'll conduct exploratory data analysis, develop and refine models using advanced AI algorithms, and present your findings.

#### **Program Plan**



#### **Modes of Delivery**

- 1. Boot camp Mode: Applicable to Institutes with negotiable fees and batch size
- 2. Online Mode: Video content + 3 hours live online sessions + online assignment and project checking.
- 3. Hybrid Mode: Theory in Video content + 15 hours Hands-on at a designated venue + online assessment of capstone project. For date and venue check the website.

#### **Contact:**

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