

Bootcamp for Generative AI in Finance

Week	Details
Week 1	Introduction to AI, Machine Learning, and Generative AI in Finance Learning Objectives: <ol style="list-style-type: none">1. Grasp the fundamentals of AI and Machine Learning, particularly how they apply to finance.2. Become familiar with Python and essential data manipulation and visualization libraries.3. Gain a preliminary understanding of Generative AI concepts, focusing on their potential in finance.
Week 2	Core Machine Learning Techniques in Finance Learning Objectives: <ol style="list-style-type: none">1. Develop a strong understanding of supervised learning for predictive modeling.2. Learn unsupervised learning techniques, particularly clustering, for financial data.3. Understand model evaluation metrics and apply them to assess model performance.
Week 3	Introduction to Generative AI for Financial Applications Learning Objectives: <ol style="list-style-type: none">1. Understand the basic principles of Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs).2. Explore applications of generative models in finance, such as synthetic data generation for low-volume datasets.3. Gain practical experience building simple generative models to create synthetic financial data.
Week 4	Advanced Generative Techniques and NLP in Finance Learning Objectives: <ol style="list-style-type: none">1. Understand the basics of Natural Language Processing (NLP) and its applications in finance.2. Gain hands-on experience with key NLP tasks such as sentiment analysis, topic modeling, and named entity recognition (NER).3. Apply transformer models like BERT for finance-specific NLP tasks

<p>Week 5</p>	<p>Text Generation and Conversational AI for Finance</p> <p>Learning Objectives:</p> <ol style="list-style-type: none"> 1. Understand the basics of text generation using transformer-based language models like GPT. 2. Apply language models for finance-specific text generation tasks, such as summarizing market reports or creating news articles. 3. Build a simple conversational AI model for financial information retrieval and Q&A.
<p>Week 6</p>	<p>Ethics, Fairness, and Interpretability in Generative AI</p> <p>Learning Objectives:</p> <ol style="list-style-type: none"> 1. Understand the ethical considerations associated with using Generative AI in finance, including fairness and potential biases. 2. Learn how to identify and mitigate bias in Generative AI models <p style="text-align: center; color: red;">Rest of the time to work on their projects</p>
<p>Week 7</p>	<p>Capstone Project and Presentation</p> <p>Learning Objectives:</p> <ol style="list-style-type: none"> 1. Integrate and apply all knowledge gained from the bootcamp in a practical, finance-focused Generative AI project. 2. Demonstrate the ability to independently execute an end-to-end Generative AI solution, from problem identification to model deployment. 3. Present and defend project outcomes, showcasing skills in data analysis, model building, ethical considerations, and business insights.