

Generative AI Internship Course Syllabus (45 / 90 / 180 Days) in the same style as your Data Science syllabus.

Program Highlights

45 Days – Foundation in Generative AI

Module 1: Introduction to Artificial Intelligence and Generative AI

- Introduction to AI, ML, Deep Learning, and Generative AI
- Evolution of Artificial Intelligence
- Applications of Generative AI across industries
- Understanding AI workflows and ecosystems
- Introduction to modern AI use cases

Module 2: Python Programming for AI

- Python syntax and programming fundamentals
- Variables, Data Types, Loops, Functions
- Object-Oriented Programming (OOP)
- Working with APIs and JSON
- File handling and data processing

Module 3: Data Handling and AI Foundations

- Data preprocessing basics
- Working with CSV and JSON datasets
- Data cleaning concepts
- Exploratory analysis for AI systems
- Preparing structured data for AI applications

Module 4: Prompt Engineering Fundamentals

- Introduction to Prompt Engineering
- Zero-shot Prompting
- Few-shot Prompting
- Chain-of-Thought Prompting
- Prompt optimization techniques

- Structured outputs and formatting

Module 5: Large Language Models (LLMs)

- Understanding LLM architecture
- Tokenization and embeddings
- Transformers overview
- Context windows and memory concepts
- Model limitations and optimization

Module 6: AI Tools and Productivity Platforms

- AI content generation tools
- Research assistants
- AI coding assistants
- AI-powered document creation
- Workflow productivity automation

Module 7: AI Application Development

- Building AI chatbots
- Creating document assistants
- AI-powered recommendation systems
- Content generation applications
- Introduction to deployment

Module 8: Real-Life Projects

- AI Chatbot
- Resume Generator
- AI Content Generator
- Document Analyzer
- AI Assistant Mini Project