



FAMM AI Engineering Programs

Course 1: AI Engineering & Agentic Systems Bootcamp

Duration: 16 Weeks (4 Months)

Mode: Live Instructor-Led Training

Build Intelligent AI Applications, RAG Systems & Autonomous AI Agents

Program Overview

Master Python, Generative AI, Prompt Engineering, RAG, Agentic AI, LangGraph, CrewAI, MCP, FastAPI and Streamlit while building real-world AI applications.

Modules

Module 1: Python Programming for AI Engineers

- Python Fundamentals
- OOP Concepts
- Functions & Modules
- Exception Handling
- JSON Processing
- API Integration
- Logging & Debugging

Module 2: Databases & Enterprise APIs

- PostgreSQL
- MongoDB
- Redis
- REST APIs
- Authentication & Authorization
- Webhooks

Module 3: Generative AI & LLM Foundations

- OpenAI
- Gemini

- Claude
- Tokenization
- Context Windows
- Model Selection

Module 4: Prompt Engineering & AI Design

- Prompt Engineering
- Prompt Chaining
- Function Calling
- Structured Outputs
- Workflow Design

Module 5: Retrieval-Augmented Generation (RAG)

- Embeddings
- Chunking
- Vector Databases
- Similarity Search
- Hybrid Search
- Hallucination Reduction

Module 6: Agentic AI Engineering

- AI Agents
- Tool Calling
- Agent Memory
- Multi-Agent Systems
- Human-in-the-Loop
- LangGraph
- CrewAI
- MCP

Module 7: AI Application Development

- FastAPI
- Streamlit
- Authentication
- Session Management
- Deployment Basics

Technologies Covered

Python • OpenAI • Gemini • Claude • LangChain • LangGraph • CrewAI • MCP • FastAPI • Streamlit • PostgreSQL • MongoDB • Redis • ChromaDB • Pinecone

Industry Projects

- AI Resume Analyzer – Build an AI-powered candidate screening platform.

- Enterprise Document Intelligence Assistant – Build a RAG-powered enterprise knowledge assistant.
- AI Customer Support Agent – Create an autonomous support assistant with tool calling.
- Multi-Agent Research Assistant – Build collaborative AI agents for research and analysis.

Career Opportunities

- AI Engineer
- Generative AI Engineer
- Agentic AI Engineer
- LLM Engineer
- AI Application Developer
- AI Solutions Engineer

Course 2: Cloud AI Engineering & MLOps Specialization

Duration: 8 Weeks (2 Months)

Mode: Live Instructor-Led Training

Deploy, Secure, Scale & Manage Enterprise AI Systems

Program Overview

Learn enterprise AI deployment using Azure AI Services, AWS AI Services, Docker, Kubernetes, DevOps, MLOps, Monitoring, Security and Governance.

Modules

Module 1: Azure AI Engineering

- Azure OpenAI
- Azure AI Foundry
- Azure AI Search
- Azure Functions
- App Services
- Storage Accounts
- Key Vault

Module 2: AWS AI Engineering

- AWS Bedrock
- Amazon Q
- Lambda
- API Gateway
- S3

- DynamoDB
- ECS
- EKS

Module 3: Containers & Kubernetes

- Docker
- Docker Compose
- Kubernetes
- Deployments
- Services
- Ingress
- Scaling

Module 4: AI DevOps & MLOps

- Git
- GitHub
- CI/CD
- GitHub Actions
- Deployment Pipelines
- Infrastructure Automation

Module 5: AI Security & Governance

- Prompt Injection Protection
- Responsible AI
- Access Controls
- Compliance
- Governance Frameworks

Module 6: Monitoring & Evaluation

- Prompt Evaluation
- Model Evaluation
- RAG Evaluation
- Observability
- Tracing
- Cost Optimization

Enterprise Capstone

Build a production-grade Enterprise AI Platform with Azure OpenAI, AWS Bedrock, RAG, Multi-Agent Workflows, Kubernetes, Security, Monitoring and CI/CD.

Technologies Covered

Azure OpenAI • Azure AI Foundry • Azure AI Search • AWS Bedrock • Amazon Q • Docker • Kubernetes • GitHub • GitHub Actions • CI/CD • Monitoring • Security • MLOps

Career Opportunities

- Cloud AI Engineer
- AI Platform Engineer
- MLOps Engineer
- AI Solutions Architect
- AI Infrastructure Engineer
- Enterprise AI Engineer

Bundle Offer: AI Engineering + Cloud AI Engineering Pathway

Total Duration: 24 Weeks (6 Months)

Includes

- Both Programs
- All Projects
- Enterprise Capstone
- Career Readiness Program
- Resume Reviews
- Mock Interviews
- Placement Assistance

Career Opportunities

- AI Engineer
- Generative AI Engineer
- Agentic AI Engineer
- Cloud AI Engineer
- AI Platform Engineer
- MLOps Engineer
- AI Solutions Architect