

GH-600T00: Developing in Agentic AI Systems

Course Description

This course is designed to build practical skills in developing, deploying, and managing agentic AI systems within GitHub-based software development workflows. The course explores how to integrate AI agents into the software development lifecycle (SDLC), including designing agent architectures, configuring tools and environments, and managing agent memory, state, and execution. Students will learn how to evaluate and optimize agent performance, implement governance and guardrails, and coordinate multi-agent systems to ensure safe, reliable, and efficient outcomes. Through hands-on learning, participants will gain the skills needed to operate, supervise, and govern AI agents in production environments using GitHub as the control plane.

Course Duration

1 day

Prerequisites

Learners should have experience with the software development lifecycle (SDLC), workflows in GitHub and controls, and code quality, security, and review practices. You should also have experience with coding agents including GitHub Copilot, MCP servers and agent customization such as custom instructions, custom agents, tools, and Copilot setup Responsibilities for this role include:

- Operating agent workflows inside the SDLC
- Supervising autonomous behavior with GitHub controls
- Evaluating and tuning agent outputs using scans and artifacts
- Configuring custom agents
- Coordinating multi-agent execution safely

Course Outline

1 - Developing in Agentic AI Systems Part 1 of 2

- Foundations of Agentic AI in GitHub
- Designing Agent Architecture and SDLC Integration
- Tooling, MCP, and Agent Execution Environments

2 - Developing in agentic AI systems part 2 of 2

- Multi-Agent systems and orchestration
- Memory, State, and Evaluation
- Governance, guardrails, and operations

Who Should Attend

Learners should have subject matter expertise in operating, integrating, supervising, and governing AI agents inside production-grade SDLC workflows and development environments, ensuring reliability, safety, and velocity using GitHub as the system of record and control plane. Learners work closely with architects, platform engineers, DevOps engineers, application developers, product managers, and security engineers to develop, deploy, operate, and manage agents that operate within the GitHub platform.