

Developing in Agentic AI Systems

CODICE	GH-600T00
DURATA	1 gg
PREZZO	490,00 €
EXAM	

DESCRIZIONE

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.

TARGET

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. 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

PREREQUISITI

- A GitHub account
- Basic understanding of AI fundamentals
- Basic understanding of repositories, branches, and pull requests
- General knowledge of CI and CD concepts

CONTENUTI

Foundations of Agentic AI in GitHub

Learn how AI coding agents are transforming software development by planning, acting, and improving within GitHub workflows.

- Introduction
- Define agentic AI in the SDLC
- Explain the agent lifecycle - plan, act, evaluate
- Describe GitHub as the system of record and control plane
- Identify responsibilities, risks, anti-patterns, and traceability needs
- Apply the contributor model to agent-generated work
- Knowledge Check
- Summary

Designing Agent Architecture and SDLC Integration

Learn how agentic systems use GitHub workflows to build software safely.

- Introduction
- Map agent responsibilities to the SDLC
- Define inputs, outputs, and success criteria
- Separate planning, reasoning, and execution
- Examples of implementing PR governance with templates, checks, CODEOWNERS, rules, and environment gates
- Build reliable workflows - outputs, contexts, triggers, and cross-job handoffs
- Control and operate agents - observability, tools, MCP, secrets, hooks, and reliability
- Knowledge Check
- Summary

Tooling, MCP, and Agent Execution Environments

Learn how agents use tools, MCP, and GitHub workflows to execute tasks safely, with clear boundaries, security controls, and scalable automation.

- Introduction
- How agents interact with GitHub APIs and workflows
- Model Context Protocol (MCP) servers, registries, and allow lists

- Execution context and boundaries
- Agent execution limits and protections
- Module assessment
- Summary