

Agentic DevOps with GitHub and GitHub Copilot

Course Overview

Duration - 12 Hours | Level - Intermediate

This is a comprehensive workshop designed for developers to master GitHub and boost their coding efficiency with GitHub Copilot. We will cover the essentials of GitHub, including repository management, Markdown, pull requests, and conflict resolution. Participants will delve into automating workflows with GitHub Actions, ensuring code security, and leveraging GitHub Copilot for AI-powered coding assistance.

Course Modules

Day 1

Module 01: Agentic DevOps with GitHub

- Overview of Agentic DevOps
- Microsoft Agentic DevOps solution
- Agentic DevOps Tooling -Overview
- GitHub Models
- GitHub Copilot Agent mode
- GitHub Copilot Coding Agent
- GitHub Model Context Protocol server
- GitHub app for Teams
- Azure SRE agent
- Speed up AI development with GitHub Models (Model as a Service)
- Upgrade GitHub Models to Azure AI Foundry Models

Module 02: Secure Code with GitHub Advanced Security

- Overview of GitHub Advanced Security (GHAS)
- Securing your repository supply chain
- Securing code game
- Identifying security weaknesses with Condell
- Copilot secret scanning
- Copilot Autofix for OSS

Hands on Labs

Secure your repository's supply chain

Enable CodeQL to secure your source code

Remove commit history from a Git Repository and push the changes to GitHub

Enable secret scanning and commit a token

Day 2

Module 03: Agentic DevOps with GitHub Copilot

Challenges and Developer tools

GitHub Copilot: Evolution and Overview

Key features and capabilities

Code Referencing and Refactoring

GitHub Copilot Extensibility Platform

AI-Powered Coding with GitHub Copilot and Agents

Build Copilot Agents and Copilot skillsets

Build Copilot extensions

Code assessment to remediating app code faster with AI agents

Building Copilot Agents and Copilot skillsets

Building Copilot extensions

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Build a fitness app with GitHub Copilot agent mode

Reduce Technical Debt using GitHub Copilot Coding Agent

Create and configure GitHub App for your Copilot Extension

Build and setup Copilot skillset

Configure and use MCP server in Copilot Chat

Day 3

Module 04: Accelerate App Modernization and Azure development with GitHub Copilot

App modernization overview

App modernization scenario and guidance

Modernize apps with GitHub Copilot

Agentic DevOps for Azure

End to end developer experience-DevOps Tool stack

Agent mode + GitHub Copilot for Azure

Azure tools in Agent mode

Azure Tools extension pack

Connect Azure AI Foundry to GitHub Copilot Chat

Coding Agent + Azure MCP Server

Azure SRE agent

SRE agent meets SWE in GitHub Copilot

Hands on Labs

Connect Azure AI Foundry to your Dev Workflow

Integrate AI in Apps with GitHub Copilot & Azure Developer CLI