

ARTIFICIAL INTELLIGENCE

INTERMEDIATE

2 DAYS

GitHub Copilot for DevOps, QA and Code Review

Apply Copilot to the work that surrounds writing features: pipeline authoring, infrastructure configuration, test generation, and review. Covers agentic code review and how to combine model reasoning with deterministic tooling so quality gates get stronger rather than noisier.

Why Copilot for DevOps, QA and Review?

Beyond feature code

Targets pipelines, configuration and tests where most time quietly goes.

Model plus deterministic tooling

Combine AI reasoning with linting and static analysis rather than replacing it.

Review that scales

Use agentic review to raise the floor on quality without adding reviewer load.

Fewer false positives

Learn to triage AI findings so teams keep trusting the signal.

What you'll be able to do

- ✓ Use Copilot to author and debug GitHub Actions workflows and YAML configuration
- ✓ Accelerate shell scripting, infrastructure-as-code and deployment scripts
- ✓ Generate and maintain test suites, including edge cases and coverage gaps
- ✓ Run agentic code review and pass findings to the coding agent for fix pull requests
- ✓ Combine model-based review with deterministic engines such as linting and static analysis
- ✓ Triage AI-generated findings and distinguish signal from noise
- ✓ Apply Copilot responsibly within existing quality and security gates

Who this is for

- DevOps and platform engineers
- QA and test automation engineers
- Developers responsible for pipelines and releases
- Tech leads owning code review standards

Curriculum

01 Pipeline and Workflow Authoring

- Generating and editing GitHub Actions workflows with Copilot
- YAML structure, reusable workflows and composite actions
- Secrets, permissions and what must never be generated unreviewed
- **Hands-on:** build a working CI pipeline from scratch

02 Infrastructure, Scripting and Configuration

- Shell scripting and command-line automation
- Infrastructure-as-code templates and configuration files
- Container, environment and deployment configuration
- Diagnosing and repairing failing pipeline runs
- **Hands-on:** debug a broken deployment workflow

03 Test Generation and Coverage

- Generating unit, integration and regression tests
- Finding coverage gaps and unhandled edge cases
- Test data, mocks, stubs and fixtures
- Keeping generated tests meaningful rather than decorative
- **Hands-on:** raise real coverage on an existing module

04 Copilot Code Review

- Requesting review and interpreting what it returns
- Agentic review: gathering full project context before suggesting changes
- Passing findings to the coding agent to generate fix pull requests
- **Hands-on:** run an agentic review across a real pull request

05 Combining AI Review with Deterministic Analysis

- Where linting and static analysis remain the authoritative signal
- Layering model reasoning on top of deterministic engines
- Triaging findings and controlling false positives
- Keeping reviewer trust intact as volume increases

06 Quality Gates and Team Practice

- Where AI belongs, and does not belong, in a release path
- Review standards and expectations for AI-generated code
- Handling security findings and the remediation workflow
- Metrics: review load, escaped defects and cycle time