

Copilot Training for Software Testers

Section 1: Introduction to AI in Testing

- Evolution of AI in software testing
- GitHub Copilot – role in test automation, debugging, bug detection
- How AI understands prompts in test cases and scripts
- Future of AI in QA and automation

Section 2: Getting Started with GitHub Copilot for Testers

- Creating a GitHub account & enabling Copilot
- Installing Copilot extension in VS Code & JetBrains IDEs
- Configuring Copilot for test automation projects
- Managing permissions and test data privacy
- Understanding inline test suggestions (ghost text)
- Using block suggestions
- Shortcuts and hotkeys for faster test writing

Section 3: Prompt Engineering for Testers

- Writing effective prompts for test scripts generation
- Converting requirements stories into test scripts
- Creating test scripts from comments
- Debugging prompts

Section 4: AI-Powered Test Scripts Generation

- Writing manual test cases to automated scripts using Copilot
- Generating unit, integration,

- Regression tests
- Creating Selenium test scripts
- Using Copilot Chat to explain test scripts
- Generating mock data for testing
- Automating repetitive test patterns
- Generating API test automation
- Accelerating end-to-end test automation

Section 5: Quality Assurance with AI

- Auto-generating test documentation & reports
- Using AI for edge cases
- AI-assisted test plan reviews
- Using Copilot for performance & load testing scripts
- Reducing human error in test execution
- AI for regression suite updates

Section 6: Debugging and Defect Analysis with AI

- AI-assisted bug detection
- Explaining test failures automatically
- Suggesting fixes for test script errors
- Optimizing slow-running test cases
- Detecting security
- Automating repetitive debugging workflows
- Learning debugging patterns

Section 7: Multi-Framework Testing with AI

- AI-assisted scripting in Python
- Java automation with Copilot

- JavaScript and TypeScript testing
- Handling different syntax
- Using Copilot in UI, API, DB, and Mobile testing

Real-Time Projects

- Employee Management System – Test Automation Suite
- E-Commerce Ordering System – End-to-End Test Automation
- Bug Tracker with AI-Assisted Testing
- API Integration & Automation