AI with GitHub Copilot

Duration: 2 days **Price: € 1499**

Open Schedule


AI with GitHub Copilot

Audience Course AI with GitHub Copilot

The course AI with GitHub Copilot is intended for software developers, DevOps engineers, and technical teams who want to leverage AI to accelerate their development workflows using GitHub Copilot.

Prerequisites Course AI with GitHub Copilot

Participants should have programming experience with languages such as Python, JavaScript, or TypeScript. Basic understanding of Git and modern development environments is recommended.

Training Method Course AI with GitHub Copilot

This course blends theory with hands-on labs and interactive demos. Real-world software development scenarios and practical examples are used throughout.

Certificate Course AI with GitHub Copilot

Upon successful completion, attendants receive a certificate of participation in Course AI with GitHub Copilot.

Content Course AI with GitHub Copilot

The course AI with GitHub Copilot course teaches you how to enhance and streamline software development with AI assistance. You'll explore function generation, testing, documentation, secure collaboration, and ethical considerations—plus look beyond Copilot to future AI tools.

Intro to Copilot

This module introduces GitHub Copilot and the Codex model behind it. Participants learn setup, IDE integration, and supported languages. It covers how Copilot provides suggestions, when to accept or edit code, and the differences between Copilot and ChatGPT. Best practices and Copilot Labs are also briefly discussed.

Programming with Copilot

Participants learn to use Copilot for writing functions, generating tests, and refactoring. It covers documentation, debugging, and prompt strategies. The module highlights boilerplate handling, common code patterns, and how to troubleshoot less useful output from Copilot.

Collaborative Development

This module explores Copilot in team settings. It covers Git versioning, pull requests, and code reviews. Participants learn about GitHub Actions, automating tasks, and working with secure dependencies. Tips for commit messages and continuous integration are included.

AI-Powered Testing

Focus is on generating and maintaining tests using Copilot. It includes unit tests, TDD, and mocks. Tools for test coverage and quality are introduced, as well as automation, test data, and basic security checks during testing.

Security and Ethics

Participants explore safe Copilot use, covering secure coding and license handling. It addresses bias, responsible usage, IP concerns, and Copilot's data limitations. The need for human review and code compliance is emphasized.

Beyond Copilot

The final module looks at Copilot alternatives and future trends. It discusses TabNine, CodeWhisperer, and Copilot CLI. Topics include AI-powered IDEs, DevOps support, automated reviews, and how Copilot boosts developer productivity.

Modules Course AI with GitHub Copilot

Module 1: Intro to Copilot	Module 2: Programming with Copilot	Module 3: Collaborative Development
What is GitHub Copilot?	Writing Functions with Copilot	Working with Teams
Underlying AI model (Codex)	Unit Test Generation	Version Control with Git
Setup and Installation	Refactoring Legacy Code	Pair Programming with Copilot
IDE Integrations	Code Documentation	Code Review and Suggestions
Languages and Frameworks	Debugging with Copilot	Integrating with GitHub Actions
Suggestions and Completions	Pair Programming Concepts	Pull Requests and Automation
Best Practices	Handling Boilerplate Code	Managing Dependencies
Accepting and Editing	Patterns and Idioms	Secure Code Generation
Copilot Labs	Prompting for Code Snippets	Writing Commit Messages
Copilot vs ChatGPT	Troubleshooting Copilot Output	Continuous Integration
Module 4: AI-Powered Testing	**Module 5: Security and Ethics**	**Module 6: Beyond Copilot**
Unit and Integration Tests	Secure Coding Practices	Open Source Alternatives
Test Case Automation	Avoiding Leakage Credentials	CodeWhisperer and TabNine
TDD with Copilot	Managing open-source licenses	Copilot CLI
Mocks and Stubs	Bias and Fairness in Suggestions	Embedding AI in Custom IDEs
Debugging Test Failures	Compliance with Standards	Evaluating Code Models
Code Coverage Tools	Managing Copilot Suggestions	AI in DevOps
Test-driven Refactoring	Responsible Usage	AI Code Review Assistants
Test Data Generation	IP and Copyright Considerations	Future AI in Software Development
Security Testing	Training Data Issues	Developer Productivity Metrics
Code Quality Assurance	Human Review Importance	Integrating Copilot in Workflows

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