

Accelerate App Development by Using GitHub Copilot (AZ-2007)

Duration: 1 day

Audience: Professionnel TI

Who is this training for?

- Software developers and engineers who want to integrate AI into their development processes.
- IT professionals with programming experience.
- Visual Studio Code users looking to maximize their productivity with GitHub Copilot and Copilot Chat.
- Beginner AI developers with a solid foundation in development.
- Experienced developers who want to deepen their automation and code generation skills.

Training objectives

- Understand and present the features and benefits of GitHub Copilot.
- Generate code explanations, online comments, and project documentation using GitHub Copilot.
- Develop new code using GitHub Copilot and GitHub Copilot Chat.
- Create unit tests with GitHub Copilot and GitHub Copilot Chat.
- Improve code quality, reliability, performance, and security with GitHub Copilot Chat.
- Accelerate the development of a complete project using GitHub Copilot.
- Apply GitHub Copilot to explain unknown code, write documentation, design new functionality, develop unit tests, and implement improvements.

Summary

The AZ-2007 training, officially offered by Microsoft, is designed to help developers maximize their productivity through GitHub Copilot and GitHub Copilot Chat. This course guides you through using these AI tools to accelerate application development in a Visual Studio Code environment. You'll learn how to generate code, create unit tests, document projects, and improve the quality, reliability, and security of your code. Ideal for developers who want to integrate AI-based solutions into their

workflows, this course will allow you to master the features of GitHub Copilot while adopting best practices for efficient and innovative development.

Course outline

Get started with GitHub Copilot.

- Explore AI tools from GitHub, OpenAI, and Microsoft.
- Analyze the tools, benefits, and limitations of GitHub Copilot.
- Exercise - Install GitHub Copilot extensions for Visual Studio Code.
- Learn about the autocomplete features of the GitHub Copilot extension.
- Explore the AI support features of the Copilot Chat GitHub extension.
- Exercise - Configure GitHub Copilot extensions for Visual Studio Code.
- Generate documentation using GitHub Copilot tools.
- Analyze the "document" and "explain" features of GitHub Copilot Chat.
- Exercise - Generate code explanations with GitHub Copilot Chat.
- Exercise - Generate project documentation using GitHub Copilot Chat.
- Exercise - Generate online documentation of code with GitHub Copilot Chat.
- Exercise - Take the "code documentation" challenge.
- Review the "code documentation" challenge solution.

Develop code features using GitHub Copilot tools.

- Explore the code development capabilities of GitHub Copilot.
- Review GitHub Copilot best practices.
- Exercise - Create code using line of code completions.
- Exercise - Create code using GitHub Copilot Inline Chat.
- Exercise - Take on the "create new code" challenge.
- Review the solution to the "create new code" challenge.
- Exercise - Take on the "code logic" challenge.
- Review the solution to the "code logic" challenge.

- Exercise - Convert code from one programming language to another. Create unit tests using GitHub Copilot tools.
- Explore the tools and unit testing environment.
- Exercise - Create unit tests using GitHub Copilot Chat.
- Exercise - Create unit tests for specific conditions using GitHub Copilot.
- Exercise - Take on the "create unit tests" challenge.
- Review the solution for the "create unit tests" challenge.

Implement code enhancements using GitHub Copilot tools.

- Learn about GitHub Copilot's support for code enhancements.
- Exercise – Improve code quality by using GitHub Copilot Chat.
- Exercise - Improve code reliability and performance by using GitHub Copilot Chat.
- Exercise – Improve code security by using GitHub Copilot Chat.
- Exercise - Take on the "application improvement" challenge.
- Review the solution for the "application improvement" challenge.

Guided project - Accelerate application development by using GitHub Copilot tools.

- Prepare the development environment.
- Exercise - Analyze and document code using GitHub Copilot tools.
- Exercise - Develop code features using GitHub Copilot tools.
- Exercise - Create unit tests using GitHub Copilot tools.
- Exercise - Refactor and improve sections of code using GitHub Copilot tools.

Approach and methodology

Practical and structured approach combining focused theory and guided workshops. Participants gradually accelerate application development by using GitHub Copilot through real-world exercises inspired by professional scenarios, promoting immediate application of learnings. They learn how to use AI to generate code, improve the quality of developments, and optimize team productivity. Led by a Microsoft-certified trainer, the training focuses on interactivity and the development of directly

transferable technical skills to effectively integrate GitHub Copilot into development practices in a professional context.

Prerequisites

- An active GitHub Copilot subscription is required, whether for a personal GitHub account or a GitHub account managed by an organization or company.

Recommendations

- Basics of programming and code logic Basic knowledge of Git / GitHub Using Visual Studio Code
Access to GitHub Copilot (license)