training code: GH-300 / ENG DL 1d / EN

GitHub Copilot

The training provides developers with a comprehensive understanding of GitHub Copilot, an AI-powered tool that enhances coding efficiency. It covers responsible AI usage, features, prompt engineering, and advanced techniques. The course is designed as a blended learning experience combining instructor-led training with online materials on the Microsoft Learn platform.

Training recipients

- Developers looking to enhance their coding efficiency with AI-powered tools
- Programmers interested in learning about responsible AI usage and ethical standards
- Software engineers seeking to integrate GitHub Copilot into their development workflows
- Coders wanting to improve their prompt engineering skills for better AI-generated code suggestions

Benefits

- Responsible AI mastery – You'll learn to apply ethical standards and transparency principles in AI-powered code generation
- Enhanced coding efficiency – Through hands-on experience with GitHub Copilot's features, you'll significantly improve your coding speed and productivity
- Advanced prompt engineering skills – You'll master crafting effective prompts to optimize GitHub Copilot's performance across different programming scenarios
- Practical integration knowledge – You'll learn how to seamlessly integrate GitHub Copilot into various development environments and workflows

Training program

1. Responsible AI with GitHub Copilot
   - Introduction
   - Mitigate AI risks
   - Microsoft and GitHub’s six principles of responsible AI
2. Introduction to GitHub Copilot
   - Introduction
   - GitHub Copilot, your AI pair programmer
   - Interact with Copilot
   - Set up, configure, and troubleshoot GitHub Copilot
   - Exercise – Develop with AI-powered code suggestions by using GitHub Copilot and VS Code
3. Introduction to prompt engineering with GitHub Copilot
   - Introduction
   - Prompt engineering foundations and best practices
   - GitHub Copilot user prompt process flow
   - GitHub Copilot data
   - GitHub Copilot Large Language Models (LLMs)
4. Using advanced GitHub Copilot features
   - Introduction
   - Advanced GitHub Copilot features
   - Exercise – Set up GitHub Copilot to work with Visual Studio Code
   - Applied GitHub Copilot techniques
   - Exercise – Update a web API with GitHub Copilot
5. GitHub Copilot Across Environments: IDE, Chat, and Command Line Techniques
   - Introduction
   - Code completion with GitHub Copilot
   - GitHub Copilot Chat
   - GitHub Copilot for the Command Line
6. Management and customization considerations with GitHub Copilot
   - Introduction
   - Explore GitHub Copilot plans and their associated management and customization features
   - Explore contractual protections in GitHub Copilot and disabling matching public code
   - Manage content exclusions
   - Troubleshoot common problems with GitHub Copilot
7. Developer use cases for AI with GitHub Copilot
   - Introduction
   - Boost developer productivity with AI
   - Align with developer preferences
   - AI in the Software Development Lifecycle (SDLC)
   - Understand limitations and measure impact
8. Develop unit tests using GitHub Copilot tools
   - Introduction

- Examine the unit testing tools and environment
- Exercise – Create unit tests by using GitHub Copilot Chat
- Exercise – Create unit tests for specific conditions by using GitHub Copilot
- Exercise – Complete the “create unit tests” challenge
- Review the “create unit tests” solution

9. Introduction to GitHub Copilot Business
   - Introduction
   - About GitHub Copilot for Business
   - GitHub Copilot for Business use cases and customer stories
   - How to get started with GitHub Copilot for Business
10. Introduction to GitHub Copilot Enterprise
    - Introduction
    - About GitHub Copilot Enterprise
    - How to get started
11. Using GitHub Copilot with JavaScript
    - Introduction
    - What is GitHub Copilot
    - Exercise – Set up GitHub Copilot to work with Visual Studio Code
    - Use GitHub Copilot with JavaScript
    - Exercise – Update a JavaScript portfolio with GitHub Copilot
12. Using GitHub Copilot with Python
    - Introduction
    - What is GitHub Copilot?
    - Exercise – Set up GitHub Copilot to work with Visual Studio Code
    - Use GitHub Copilot with Python
    - Exercise – Update a Python web API with GitHub Copilot

Expected preparation of the participant

- Basic understanding of programming concepts and experience with at least one programming language
- Familiarity with integrated development environments (IDEs) and version control systems like GitHub
- Foundational knowledge of AI and machine learning principles

Training Includes

- manual in electronic form available on the platform: https://learn.microsoft.com/pl-pl/training/

- access to Altkom Akademia's student portal

Training method:

- Lecture (70%)
- Exercises (30%)

Language

- Training: English
- Materials: English

Examination method

On-line exam. Record at https://home.pearsonvue.com/Clients/Microsoft.aspx

Duration

1 days / 7 hours

Examination description

GitHub Copilot
Exam
URL:https://learn.microsoft.com/en-us/credentials/certifications/github-copilot/?practice-assessment-type=certification