Fast Lane

Developing Applications using GitHub Copilot (DGHCI)

ID DGHCI **Price** 690.— €(excl. tax) **Duration** 1 day

Course Overview

This comprehensive one-day online class, "Developing Applications using GitHub Copilot," is designed to help developers fully leverage GitHub Copilot's AI-assisted development features for real-world productivity and code quality. The course begins with configuring Copilot, prompt engineering, and model selection, then moves into practical code generation, multi-file editing, and using context and chat features for efficient development.

You will learn how to use Copilot for advanced refactoring, error fixing, and automating repetitive tasks, as well as integrating Copilot into source control workflows for better collaboration. The course covers generating high-quality documentation, including code comments and architecture diagrams with Mermaid, and explores Copilot's capabilities for unit and integration testing with Playwright MCP.

A highlight of the class is the "Asynchronous Development using Coding Agent" module, which demonstrates how to safely delegate tasks, automate testing, and streamline pull request workflows using Copilot's agent features. Throughout the course, you will work with sample code in Python, TypeScript, .NET, and Java, with concepts applicable to any language. Cloud and DevContainer scenarios are included to ensure consistent, modern development environments.

Who should attend

Developer

Course Content

GitHub Copilot Introduction

- Overview GitHub Copilot
- Enabling & Configuring Feature using Setting
- Prompt Engineering & Reusable Prompts
- Ask, Edit & Agent Mode vs Coding Agent
- AI Model comparison

Generate Code using GitHub Copilot

- Inline Code Generation and suggestions
- Understanding and using Context
- Chat Participants & Slash Commands
- Mastering Multi-File Edits
- Integrating Code from Online Resources
- Overriding LLM Data using Instructions

Using & Extending Agents Mode

- Github Copilot Agent Mode Overview & Best Practice
- Agent related Settings
- Adding Tools using Model Context Protocol (MCP)
- Manage Tool approvals
- Using Custom Models

Refactoring, Fixing Errors & Reducing Repetitive Tasks

- Semantic Search & Explaining Code
- Using Thinking Models for Architecture and Code Optimization
- Using Screenshots & Vision for Error Fixing
- Implementing Instructions for Repetitive Tasks

Testing using Copilot

- Implementing Unit Tests
- Fixing Test Errors
- Integration Tests using Playwright MCP

Using Copilot for Documentation

- Code Comments
- Generate Markdown Documentation
- Creating Mermaid Architecture Diagrams

Copilot for Git & Source Control

- Effective Commit Messages, Pull Requests
- Using Code Reviews
- Resolving Merge Conflicts
- Creating DevContainers & CodeSpaces
- Using the GitHub MCP

Asynchronous Development using Coding Agent

- Coding Agent Overview and Licensing
- Consistent Environments using DevContainers
- Setup Unit Testing for Result Validation
- Optimizing DevOps Pipelines & Triggers
- Delegating Tasks to the Coding Agent using Issues
- Pull Request & Review Workflow Best Practices

About Fast Lane

Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

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✓ Blended & Hybrid Learning
✓ Mobile Learning

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