

Mastering GitHub Copilot

Take your Scrum development expertise to new heights through advanced techniques, real-world applications, and immersive hands-on experience.

GitHub Copilot is an innovative artificial intelligence-powered coding assistant. AI pair programming can significantly boost developers' productivity and efficiency in coding, TDD, automated testing, and refactoring to reduce technical debt.

In this intensive 2-day course, participants will dive deep into the advanced features and capabilities of GitHub Copilot to enhance their coding skills and streamline their development workflows. Through a combination of theoretical knowledge, hands-on exercises, and real-world examples, participants will gain the expertise required to harness the full potential of GitHub Copilot.



2 days / 16 hrs of instruction




Live Online

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By the end of this course, participants will have a comprehensive understanding of GitHub Copilot's capabilities and be able to utilize it effectively to boost their coding productivity. They will also gain insights into advanced techniques, integration strategies, and best practices for leveraging Copilot in real-world development projects.

This Course Can Help You

- Learn about GitHub Copilot and its role in modern software development, including its underlying AI technology and capabilities.
- Gain knowledge on how to install, configure, and customize GitHub Copilot in their preferred code editor or IDE.
- Master techniques for leveraging GitHub Copilot to automate code generation, reduce manual effort, and speed up coding tasks.
- Understand how GitHub Copilot provides contextual assistance, intelligent suggestions, and code completions to improve code quality and adherence to best practices.
- Explore advanced techniques such as code refactoring, optimization, collaboration, version control integration, and creating custom models to enhance GitHub Copilot's suggestions and capabilities.

Audience / Prerequisites

Professionals who would benefit from this training include:

- Software Developers
- Software Engineers
- AI Developers
- Technical Leads
- Researchers in Software Development

Course Outline

Day 1: Understanding GitHub Copilot

Part 1: Introduction to GitHub Copilot

- Overview of GitHub Copilot and its role in modern software development
- Understanding the underlying AI technology and its capabilities
- Exploring the benefits of using GitHub Copilot in various development scenarios
- *Exercise:* Participants will install and set up GitHub Copilot in their preferred code editor and explore its basic functionalities.

Part 2: Setting Up GitHub Copilot

- Installation and configuration of GitHub Copilot in different development environments
- Integration with popular code editors and IDEs
- Configuring preferences and customizing Copilot for personal coding style
- *Exercise:* Participants will configure and customize GitHub Copilot in their development environment according to their preferences.

Part 3: Leveraging GitHub Copilot for Code Generation

- Exploring Copilot's code generation capabilities for different programming languages
- Utilizing Copilot to automate repetitive code snippets and boilerplate code
- Techniques for leveraging Copilot to speed up coding tasks and reduce manual effort
- *Exercise:* Participants will work on a coding exercise where they utilize GitHub Copilot to generate code for a specific task or functionality.

Course Outline (Cont.)

Part 4: Understanding Copilot's Contextual Assistance

- Working with Copilot to get intelligent suggestions and context-aware code completions
- Leveraging Copilot to improve code quality and adhere to best practices
- Understanding how Copilot can help with debugging and error handling
- *Exercise:* Participants will work on a coding exercise where they leverage Copilot's contextual assistance to enhance code quality and address common coding issues.

Day 2: Advanced Techniques and Integration

Part 5: Advanced Code Generation with Copilot

- Harnessing Copilot's advanced capabilities to generate complex code structures
- Exploring techniques for code refactoring and optimization using Copilot
- Generating code patterns for specific software design patterns and architectural styles
- *Exercise:* Participants will tackle a coding exercise that involves using Copilot to generate advanced code structures or refactor existing code for optimization.

Part 6: Collaboration and Version Control with Copilot

- Using Copilot in a collaborative coding environment
- Best practices for integrating Copilot with version control systems like Git
- Leveraging Copilot for seamless code reviews and pull request workflows
- *Exercise:* Participants will work in pairs and collaborate on a coding exercise using Copilot, practicing code reviews and version control integration.

Course Outline (Cont.)

Part 7: Extending Copilot with Custom Models

- Overview of custom model creation for GitHub Copilot
- Building and training custom models to enhance Copilot's suggestions
- Integrating custom models into Copilot and leveraging them for specific coding tasks
- *Exercise:* Participants will explore the process of creating and training custom models for Copilot, and then utilize them in a coding exercise to see the enhanced suggestions.

Part 8: Real-World Applications and Case Studies

- Exploring real-world examples of how GitHub Copilot is transforming software development
- Case studies showcasing the benefits and challenges of using Copilot in different scenarios
- Best practices and recommendations for incorporating Copilot into existing development workflows
- *Exercise:* Participants will analyze real-world case studies and discuss the potential applications and challenges faced in each scenario. They will also brainstorm and present their ideas on how Copilot can be integrated into their own development workflows.

About Cprime Learning

Cprime Learning is the training and certification division of Cprime. We believe that maintaining relevance in today's dynamic workforce, organizations and individuals alike need to become lifelong learners! We specialize in creating custom learning solutions that provide organizations and individual learners with the critical skills necessary to thrive for the future. Through our vast network of industry experts, strategic partnerships, and unique teaching methodologies, we aim to disrupt traditional, stodgy learning models by introducing innovative curriculum based on each learner's needs.

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10k+

Classes Delivered

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Total Training
Hours Delivered

30+

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