

**Introduction to GitHub Copilot**

**Course Number:** AI-108WA
**Duration:** 1 day

**Overview**

Develop code faster in Visual Studio Code and other leading development environments using GitHub Copilot as your AI-powered pair programmer. GitHub Copilot is powered by OpenAI’s language model, which has been trained on a massive dataset of public code repositories. It helps developers write code by providing suggestions for lines and entire functions, making the coding process faster and more efficient.

Accelebrate's GitHub Copilot training course teaches attendees how to use GitHub Autopilot and its AI capabilities to optimize their coding process properly. Participants not only grasp the theoretical aspects of Generative AI and GitHub Copilot but also gain the ability to apply these technologies to streamline their coding processes, enhance productivity, and innovate their approach to software development.

**Prerequisites**

All students must have experience with programming languages like Python.

**Materials**

All Generative AI with GitHub CoPilot training students receive comprehensive courseware.

**Software Needed on Each Student PC**

* A modern web browser and an Internet connection
* Visual Studio Code
* GitHub Copilot extension for Visual Studio Code
* A GitHub Copilot subscription

**Objectives**

* Transform coding with a deep understanding of generative AI and LLMs
* Take coding skills to the next level with GitHub Copilot, learning techniques that streamline development and enhance code quality
* Master AI communication through expert prompt engineering, getting precisely the code and insights you need
* Optimize workflows for faster coding, efficient debugging, and effortless management of large codebases
* Expand coding versatility across a multitude of programming languages with the adaptable assistance of GitHub Copilot
* Seamlessly integrate GitHub Copilot and adopt best practices for cleaner, more reliable code
* Spark creativity and enhance collaboration with GitHub Copilot Chat

**Outline**

* Generative AI and LLMs
	+ Power of Generative AI
	+ Technical Foundation of GenAI
	+ Opportunities Created by GenAI
	+ Challenges of GenAI
	+ Key Concerns of GenAI
	+ Generative AI and LLMs
	+ Pre-trained LLMs
	+ LLMs Use-Cases
	+ Some Common GenAI Applications
	+ ChatGPT vs. GitHub Copilot
* GitHub Copilot Introduction
	+ What is GitHub Copilot
	+ Key Features of GitHub Copilot
	+ GitHub Copilot Subscriptions
	+ How Copilot Works
	+ Components of GitHub Copilot
	+ Code Generating Using GitHub Copilot
	+ NLP and GitHub Copilot
	+ Other Interesting Capabilities
	+ Limitations
* Exploring GitHub Copilot
	+ Setting up GitHub Copilot
	+ Explore Keyboard Shortcuts
	+ Accepting Suggestions
	+ Adjusting Settings
	+ Customize Experience
* Mastering Completion
	+ Objectives
	+ Completions
	+ Tab Key
	+ Guiding Suggestions
	+ Completions for Documentation
	+ Tuning Copilot Suggestions
* Prompt Engineering Fundamentals
	+ Objectives
	+ Prompt Engineering
	+ Key Elements of Prompt
	+ Prompting Techniques
	+ Zero-Shot
	+ One-Shot
	+ Few-Shot
	+ Chain of Thought
	+ Prompt Principles
	+ How GitHub Copilot Processes Prompt
	+ Best Practices to Follow
	+ Zero-Shot Example
	+ One-Shot Example
	+ Few-Shot Example
* GitHub Copilot Language Support
	+ Objectives
	+ Python Specific Features
	+ JavaScript and TypeScript
	+ Adding Value to Existing Code
* GitHub Copilot Patterns
	+ What are Patterns?
	+ GitHub Copilot Pattern Categories
	+ Patterns at Work
	+ Practically Viable Patterns
	+ Best Practices
* Conclusion