

# GitHub for Developers

**Duration: 3 hours**

**Type: Webinar**

## Summary:

This session provides developers with a comprehensive introduction to GitHub, covering essential Git concepts, repository management, collaboration workflows, and advanced GitHub features. Attendees will gain hands-on experience with Git commands, branching strategies, and best practices for code collaboration. The session will also explore GitHub Copilot for AI-powered coding assistance and introduce automation with GitHub Actions.

## Key Points:

- Introduction to GitHub and Git fundamentals
- Working with GitHub repositories and branches
- Collaboration workflows, pull requests, and code reviews
- Hands-on with GitHub Copilot for AI-assisted coding
- Advanced GitHub features: CI/CD, security, and project management

## Target Audience:

- Developers

## Table of Contents

### Introduction to GitHub

- What is GitHub?
- Git vs. GitHub
- Key Features of GitHub
- Setting up a GitHub Account & Git Installation

### Git Basics

- Configuring Git
- Basic Git Commands (init, add, commit, status, log)
- Understanding Git Workflow
- Undoing Changes (reset, revert, stash)

### Working with GitHub Repositories

- Creating & Cloning Repositories
- Understanding README and .gitignore
- Working with Branches (checkout, merge, rebase)
- Pulling and Pushing Changes

### Collaboration on GitHub

- Forking Repositories & Submitting Pull Requests
- Code Review Process & Best Practices

- Handling Merge Conflicts
- Using GitHub Issues & Discussions

### **GitHub Copilot – AI-Powered Coding**

- Introduction to GitHub Copilot
- Setting Up GitHub Copilot in VS Code
- Writing Code with Copilot (Examples & Hands-on)
- Copilot Best Practices & Limitations

### **Advanced GitHub Features**

- GitHub Actions for CI/CD
- Managing Projects with GitHub Projects
- Using Releases & Tags
- Security Best Practices (Branch Protection, Secrets, Dependabot)
- **GitHub Discussions & Further Learning**
  - GitHub discussions