Agentic Software Engineering using GitHub Copilot (GHAGENTS)

ID GHAGENTS **Price** CHF 2,490.—(excl. VAT) **Duration** 4 days

Who should attend

- Software Engineers interested in leveraging AI agents to enhance their coding productivity and capabilities
- Software Architects looking to understand how to integrate and manage AI agents within software development lifecycles
- Team Leads and Managers aiming to explore how AI agents can be utilized to optimize team workflows and project outcomes

Prerequisites

- Experience with software development at a professional level
- A GitHub Copilot license with a credit allowance, or a configured bring-your-own-key (BYOK) endpoint. Usage-based billing makes this a required setup step, not an optional one.

Course Content

Module 1: GitHub Copilot Fundamentals & Agent Mode Basics

- Getting Started with Copilot & Vision
- Selecting & Configuring Models
- AI-Assisted Coding Essentials
- Agent Mode Basics
- Pull Requests & Code Reviews
- Configuring & Governing Copilot
- Working in the Terminal

Module 2: GitHub Copilot Agentic Harness

- Shaping Copilot with Instructions
- Reusable Prompt Workflows
- Model Context Protocol & MCP Registry
- Custom Agents
  - Agents Overview
  - Repository Agents
  - Claude Agents
- Reusable Domain Knowledge with Skills
- Distributing Capabilities with Plugins
- Giving Copilot Memory
- Context Window Optimization & Prompt Caching
- GitHub Copilot Hooks

Module 3: Implementing Agentic Coding

- Subagents as Subject-Matter Experts
- Deep Research with /research
- Multi-Agent Orchestration
- Delegating Tasks to Cloud Agents
- Agentic Browser Automation
- Upgrading & Modernization

Module 4: Agent Sessions

- The Agents Window
- Agent Host Protocol (AHP vs ACP)
- Remote Agent Sessions over SSH & Dev Tunnels
- Session Management
- Session Persistence & /chronicle
- Troubleshooting Agent Sessions

Module 5: GitHub Copilot CLI

- GitHub Copilot CLI
- Business Case: HR Document Updates Automation
- GitHub Agentic Workflows
- Extending the CLI with MCP Servers & Skills
- Codebase Q&A and Onboarding

Module 6: GitHub Copilot SDK

- GitHub Copilot SDK
- Building Agents with Custom Tools
- Implementing & Using MCP Apps
- Deploying an SDK Agent to Azure
- Building a Multi-Agent System

Module 7: GitHub Copilot App

- Meet the Desktop Agents App
- Sessions from Issues, Prompts & Pull Requests
- The Validation Loop
- Scheduled Automations
- Syncing Skills & MCP Servers

Module 8: Agentic DevOps

- Testing using Copilot

- Documentation using Copilot
- Automation using Azure CLI
- Infrastructure as Code (azd, Bicep & Terraform)
- Azure DevOps Pipelines & GitHub Actions

Module 9: Governance, Cost & Observability

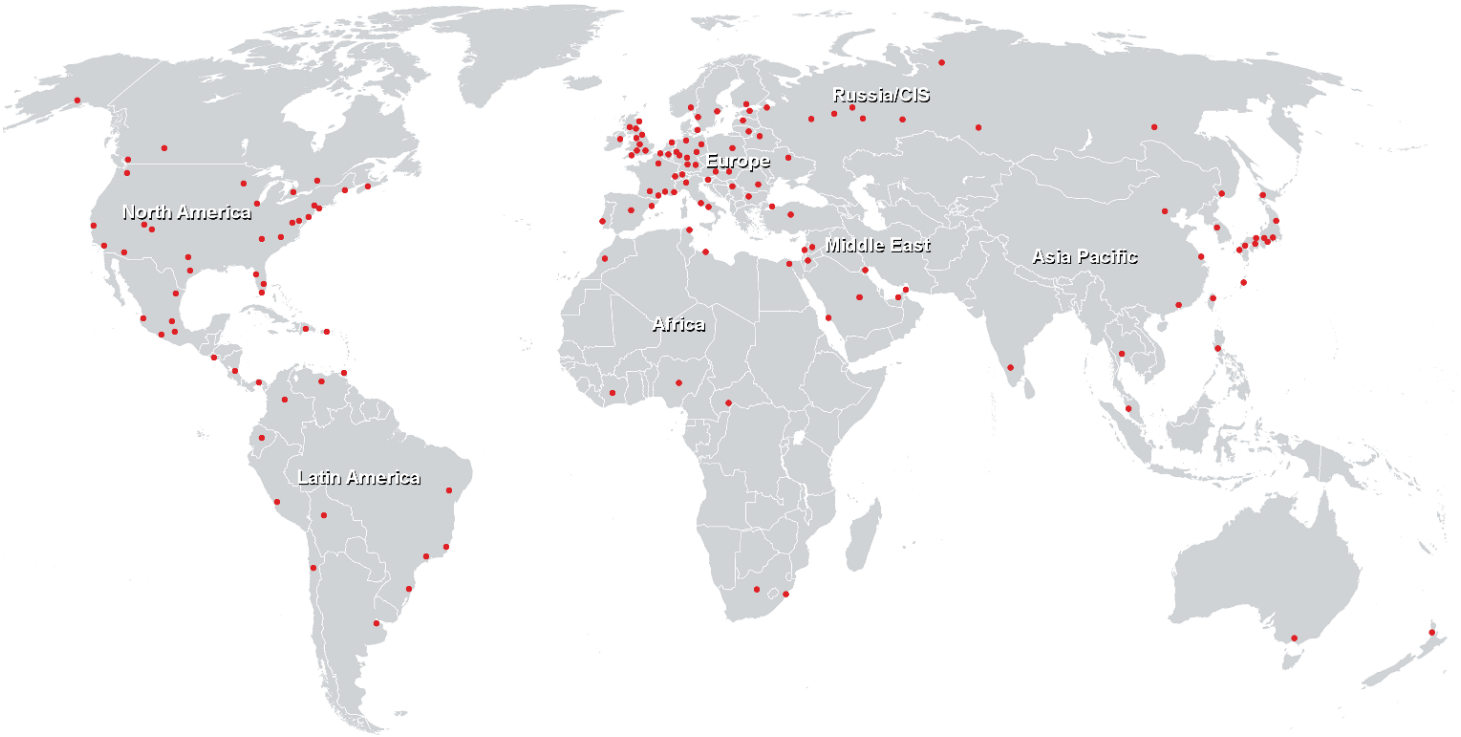
- Trust, Safety & the Permission Model
- Cost Model & AI Credits
- Cutting Token Cost with Open-Source Models
    - Using Open-Source Models in VS Code
    - Using Open-Source Models in the Copilot CLI
- Enterprise Policy & Managed Settings
- Observability with OpenTelemetry
- EU AI Act, GDPR & Accessibility Compliance

Module 10: Spec-Driven Development & Delivery

- Why Spec-Driven Development
- Spec-Driven Workflow
- Constitution, Specification and Technical Plan
- From Tasks to Working Code
- Getting Started with GitHub Spec Kit
- Sample Case: Implement a Product Feature

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Training Centres worldwide





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