



To discuss this course and customizations:  
Call: 434-509-5680 or Email: [sales@cloudcontraptions.com](mailto:sales@cloudcontraptions.com)

## Agentic Code Review and Pull Request Automation

### Class Duration

7 hours of live training delivered over 1-2 days to accommodate your scheduling needs.

### Student Prerequisites

- Professional software development experience
- Familiarity with GitHub Actions or GitLab CI
- Basic experience with at least one AI coding assistant

### Target Audience

Software engineers, tech leads, and platform/DevEx engineers who want to integrate AI agents into the pull request and code review workflow. Relevant for teams looking to accelerate reviews, reduce review burden on senior engineers, and improve code quality with AI-assisted review bots and PR automation.

### Description

This course focuses on the intersection of AI agents and the pull request lifecycle. We cover how to configure and run AI code review agents (GitHub Copilot code review, Claude Code in CI, and open-source alternatives) on pull requests, how to design automated PR quality checks (style, logic, security, test coverage gaps), and how to build agentic pipelines that can suggest or apply fixes automatically. We also address the organizational and process design questions: when AI review complements human review, how to tune false-positive rates, and how to maintain human accountability in an AI-augmented review process.

### Learning Outcomes

- Configure GitHub Copilot code review and Claude Code review agents on pull request triggers.
- Build a CI pipeline step that runs an AI code review and posts structured feedback as PR comments.
- Design automated quality checks (security, style, complexity, test gap detection) using AI agents.



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- Implement an agentic “auto-fix” pipeline for low-risk issues (formatting, linting, simple refactors).
- Define review policies that appropriately combine AI and human review for different change types.
- Measure and tune the accuracy and noise level of AI review feedback.

## Training Materials

Comprehensive courseware is distributed online at the start of class. All students receive a downloadable MP4 recording of the training.

## Software Requirements

GitHub account with Actions enabled (or GitLab equivalent), API key for at least one frontier model, and a sample repository for lab use.

## Training Topics

### The AI-Augmented Review Process

- Review bottlenecks AI can address
- What AI does well in code review vs. what humans must own
- Integrating AI review without undermining team culture

### GitHub Copilot Code Review

- Enabling Copilot code review on repositories
- Review comment format and customization
- Enterprise policy controls
- Feedback quality and tuning

### Claude Code and Custom Review Agents in CI

- Triggering Claude Code on PR events via GitHub Actions
- Structured review output: JSON comment schema
- Posting AI review feedback as PR annotations
- Scoping review focus areas via CLAUDE.md

### Open-Source Review Agents

- Overview: CodeRabbit, PR-Agent (CodiumAI), and alternatives
- Self-hosting vs. SaaS review agents
- Configuration and prompt customization



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### Automated Fix Pipelines

- Safe categories for auto-fix: formatting, obvious lint, import cleanup
- Agentic “suggest-and-commit” workflows
- Human approval gates before auto-merge
- Audit trail and rollback design

### Policy and Process Design

- Defining which PRs require human review regardless of AI score
- Calibrating confidence thresholds and false positive management
- Communicating AI review role to the team
- Spec-as-source-of-truth: reviewing code against a GitHub Spec Kit specification (covered in depth in the dedicated Spec Kit course)
- Accountability and audit requirements

### Workshop

- CI review pipeline setup lab
- Auto-fix workflow exercise
- Review policy design exercise
- Q&A session