



Build Code-First Enterprise Agents with CX Agent Studio

Course description

Build Code-First Enterprise Agents with CX Agent Studio is an advanced-level, instructor-led course designed for practitioners who want to move from manual agent configuration toward AI-assisted, code-first enterprise agent development. The course introduces SCRAPI and Antigravity as development tools for interacting with Google Cloud APIs and accelerating agent development workflows. Learners establish a local Python environment, configure the required tools, and explore agent skills and new development practices.

Participants then learn how to plan requirements and build conversational agents from scratch, work with existing agents, configure CI/CD and deployment workflows, manage application versions, and validate code using SCRAPI.

The course places strong emphasis on enterprise agent quality. Learners use SCRAPI to test and verify tools, execute golden evaluations for regression testing, run user simulations, and perform automated quality hill climbing. The course also covers migration workflows for existing Dialogflow CX agents using the SCRAPI CLI and SCRAPI skills, enabling agent development to be integrated into professional SDLC processes from local development through production.

- Course level: Advanced
- Duration: 6 hours 45 minutes

Activities

This course includes instructor-led presentations, technical demonstrations, code-first agent development, SCRAPI hands-on exercises, Antigravity CLI workflows, requirements and planning exercises, CI/CD and deployment demonstrations, automated testing scenarios, golden evaluation exercises, user simulation activities, agent quality improvement exercises, migration walkthroughs, and knowledge checks. Two hands-on labs are included.

Course objectives

In this course, you will learn to:

- Explain the transition from manual agent configuration to code-first enterprise agent development.
- Understand the role of SCRAPI in interacting with Google Cloud APIs, and set up SCRAPI for local development.
- Configure Antigravity for AI-assisted agent development.
- Apply agent skills to accelerate the development workflow.
- Plan agent requirements before implementation.
- Build a conversational agent from scratch.
- Work with an existing agent using code-first development practices.
- Configure CI/CD and deployment workflows, and manage application versions and deployments.
- Validate and lint agent code using SCRAPI.
- Use SCRAPI to test and verify tools.
- Execute golden evaluations for regression testing.
- Run user simulations to assess agent behavior.
- Use SCRAPI evaluation capabilities to analyze agent quality.
- Apply automated quality hill climbing to iteratively improve agents.
- Understand the agent migration process and select an appropriate migration approach for existing agents.
- Migrate agents using the SCRAPI CLI and SCRAPI skills.
- Integrate code-first agent development into professional SDLC workflows.
- Establish automated, data-driven testing and quality improvement practices.

Intended audience

This course is intended for professionals building, testing, and migrating enterprise conversational agents:

- Software Developers and Engineers
- AI/ML Engineers
- Conversational AI Developers
- Cloud Engineers
- Platform Engineers
- DevOps Engineers
- Technical Architects
- Solutions Architects
- Automation Specialists
- Dialogflow CX Developers
- Professionals building enterprise conversational agents
- Professionals responsible for agent testing, deployment, and migration

Prerequisites

We recommend that attendees of this course have:

- Familiarity with Google Cloud Platform.
- Familiarity with Python development is recommended.
- Understanding of conversational agents is beneficial.
- Familiarity with Dialogflow CX is beneficial for learners working with existing agents.
- Experience with software development and SDLC practices is recommended.
- Familiarity with CI/CD concepts is beneficial.
- Basic understanding of APIs and cloud-based application development is recommended.

Course outline

Module 1: Development Environment and SCRAPI

- Course introduction, module overview, and learning objectives
- Introduction to SCRAPI and how it interacts with Google Cloud APIs
- Setting up SCRAPI for local development
- Setting up Antigravity for AI-assisted development
- Preparing a local Python-based environment for enterprise agent development
- Guided setup: SCRAPI and Antigravity.
- Demo: SCRAPI and development environment walkthrough.

Module 2: Agent Skills and Development Practices

- Agent skills and the new development habit
- The shift toward AI-assisted development practices
- Applying agent skills during the development lifecycle
- Planning and requirements: translating business requirements into agent requirements
- Demo: Agent skills, with a discussion on new development habits.
- Guided exercise: Requirements planning and scenario-based agent planning.

Module 3: Build and Deploy Code-First Agents

- Building an agent from scratch using code-first development
- Working with an existing agent and extending its capabilities
- Setting up CI/CD and deployment workflows for agent applications
- Managing application versions and deployments
- Linting and validating code with SCRAPI
- Hands-on Lab: Vibe Code CX Agents with SCRAPI and the Antigravity CLI.
- Demo: CI/CD configuration, deployment, version management, and SCRAPI linting.

Module 4: Agent Quality and Evaluation

- The role of automated evaluation in enterprise agent development
- Quality hill climbing in SCRAPI
- Testing and verifying agent tools
- Executing golden evaluations for regression testing
- Running user simulations to assess agent behavior
- Mastering evals with SCRAPI and analyzing results to identify areas for improvement
- Executing automated hill climbing to iteratively improve agent performance
- Hands-on Lab: Evaluate CX Agents with SCRAPI.
- Demo: Golden evaluations, user simulations, and automated hill climbing.

Module 5: Agent Migration

- The agent migration process flow and its stages
- Deciding on a migration process and selecting an appropriate approach
- Migrating agents using the SCRAPI CLI

- Migrating agents using SCRAPI skills
- Transitioning existing Dialogflow CX agents into code-first development workflows
- Scenario: Select a migration approach.
- Demo: SCRAPI CLI migration and migration using SCRAPI skills, with review and quiz.

Your course overview ends here.
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About CloudThat

Established in 2012, CloudThat is an award-winning company and the first in India to offer cloud training and consulting services for individuals and enterprises worldwide. Recently, it won Google Cloud's New Training Partner of the Year Award for 2025, becoming the first company in the world in 2025 to hold awards from all three major cloud giants: AWS, Microsoft, and Google. CloudThat notably won consecutive AWS Training Partner of the Year (APJ) awards in 2023 and 2024 and the Microsoft Training Services Partner of the Year Award in 2024, bringing its total award count to an impressive 12 awards in the last 8 years.

CloudThat specializes in Cloud Migration, Data Platforms, DevOps, IoT, and cutting-edge technologies like Gen AI & AI/ML. As a Microsoft Solutions Partner, AWS Premier Tier Training Partner, Google Cloud Platform Partner, and collaborator with leading organizations like HPE, Oracle, Nvidia and Databricks, CloudThat has trained over 850,000 professionals across 600+ cloud certifications, empowering students and professionals worldwide to advance their skills and careers.

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