

Develop Search and Agents with AI Applications

In this course, you learn how to use Agent Search and Conversational Agents to create search engines and chat applications. You will learn how to leverage Agent Search for grounding your gen AI-powered applications. You will then explore how to integrate these search engines and chat applications into your own applications. Finally, you learn how to use the agents built in AI Applications in multi-agent workflows.

**DURATION**

1 day

**LEVEL**

200 - Intermediate

**FORMAT**

Instructor-led

What you'll learn

- Ground outputs from foundation models using Agent Search.
- Create a chat application using natural language in Conversational Agents.
- Integrate your agents into multi-agent workflows using Agent Development Kit and Agent Platform.
- Explain the roles and capabilities of Search, Recommendations, and Conversational Agents in the enterprise.
- Import structured and unstructured data into data stores for AI search applications.
- Design and manage conversational playbooks using natural language instructions and examples.

Overview	5 modules · 4 labs · 4 classroom activities
Who this course is for	• Customers
Products	• Agent Platform • Agent Search on Gemini Enterprise Agent Platform • Conversational Agents • Agent Studio on Gemini Enterprise Agent Platform • Gemini Enterprise • Gemini • AI Applications
Prerequisites	• Knowledge of generative AI basic concepts and programming knowledge (Python)

Module
01

Agent Platform and AI Applications

Topics	• Agent Platform for generative AI • AI Applications: Search, Recommendations, and Agents • Use cases for Agent Search and Agents
Objectives	• Explore the options in Agent Platform for generative AI. • Identify the role of AI Applications: Search, Recommendations, and Agents. • Examine use cases for Agent Search and Agents.

Module 02

Agent Search

Topics	• Basic concepts: apps, engines, and data stores • Data sources and preparing data • Creating a data store • Configuring Agent Search • Deploy Agent Search
Objectives	• Create enterprise-grade generative AI applications with AI Applications. • Choose the appropriate engine for a search or conversation app. • Import data into a data store. • Create and configure a custom search app.
Activities	• Lab: Integrating Agent Search Into Your Application

Module 03

Grounding Applications

Topics	• Why is grounding important? • Retrieval augmented generation (RAG) • Grounding options on Google Cloud • Testing grounding in Agent Studio • Grounding using the Agent Platform SDK
Objectives	• Identify why grounding is important. • Leverage Retrieval-Augmented Generation (RAG). • Use grounding options on Google Cloud. • Test grounding using the Agent Studio and SDK.
Activities	• Lab: Grounding LLMs with Agent Search

Module 04

Conversational Agents

Topics	• Customer Engagement Suite (CES) • Deterministic vs. generative agents • Playbooks • Data store tools
Objectives	• Create conversational agents. • Manage conversations with playbooks. • Use examples to improve a playbook's response. • Leverage data store tools to perform grounding for your playbook's responses.

Module 05

Multi-agent Applications on Agent Platform

Topics	• Multi-agent applications and agentic AI • Introduction to Agent Developer Kit (ADK) • Agent Platform Agent Garden • Agent Runtime • Putting it all together with AI Applications
Objectives	• Explore the features and benefits of the Agent Development Kit (ADK). • Accelerate agent development with Agent Garden. • Use ADK to build multi-agent applications. • Leverage a Data Store tool from an ADK agent.
Activities	• Lab: Using ADK and multiple agents with AI Applications