Training: Google Cloud
Develop Conversational Agents on Google Cloud

Google Cloud

TRAINING GOALS:

Conversational Agents, part of AI Applications, is an intelligent, conversational (GUI) interface. Conversational Agents uses an AI development system with access to SDKs and APIs in multiple languages. In this course, you will learn how to leverage Conversational Agents to design and build conversational agents on Google Cloud.

What you'll learn

- Understand the different kinds of conversations available with an artificial intelligent (AI) agent.
- Design an AI agent for a deterministic intent-based domain.
- Understand how a user’s request is translated into an action and response.
- Use webhooks to access data and products that are not part of the agent.
- Handle user errors and unexpected requests.
- Use the graphical user interface (GUI) to develop an agent.
- Gain a working knowledge of the testing tools available in the GUI.
- Integrate a chatbot into external user interfaces.
- Incorporate generative AI features into your agent.

Audience

- Conversational designers, developers, and business analysts

Products

- Conversational Agents
- Vertex AI Agents
- Vertex AI

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CONSPECT:

- Introduction to Conversational Agents
  - Topics
    - Google’s goals for virtual agents
    - Virtual agent product suites
  - Objectives
    - Describe the goals of virtual agent development and product suites.
  - Activities
    - Lab: Exploring the Conversational Agents User Interface
- Introduction to conversational design
  - Topics
    - Convergent and divergent approaches
    - Conversation esign strategy
  - Objectives
    - Understand virtual agent design
- Steering bot design basics
  - Topics
  - Use cases
  - Virtual agents
  - Start pages
  - Routes
  - Pages
  - Objectives
    - Design a basic steering bot using Conversational Agents
- Implementing bot design
  - Topics
    - Use case review
    - Agent architecture
    - Creating the virtual agent
    - Creating the route
    - Testing the route
  - Objectives
    - Create an agent, a route, intents, and pages.
    - Implement routes without parameters.
    - Use test agent for testing.

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- Activities
  - Lab: Conversational Agents: Bot Building Basics
- Entities
  - Topics
    - Introduction to entities
    - System entity types
    - Custom entity types
    - Managing entities in an agent
  - Objectives
    - Access entity parameters.
    - Create custom regular expression (RegEx) entities.
    - Create custom list entities.
    - Use current recommended practices for extending a system entity class.
- Parameters
  - Topics
    - Introduction to parameters
    - Parameters from intents
    - Preset parameters
    - Parameters from webhooks
  - Objectives
    - Manipulate parameters using various methods
  - Activities
    - Lab: Conversational Agents: Parameter Manipulation
- Event handlers
  - Topics
    - Definition of event handlers
    - Page, flow event handler, and scope rules
    - Form event handler and scope rules
  - Objectives
    - Understand event handlers and how they are used in Conversational Agents.
- Versions and environments
  - Topics
    - Version management in Conversational Agents
    - Environment management in Conversational Agents
  - Objectives
    - Use version testing.

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- Use environments for different audiences.
- Activities
  - Lab: Conversational Agents: Managing Environments
- Testing
  - Topics
    - Validation
    - Publication
    - Simulation
  - Objectives
    - Validate for static analysis.
    - Publish to pretest user acceptance testing (UAT).
    - Simulate for unit testing
  - Activities
    - Lab: Debugging the Agent Using Test Agent
- Fulfillment
  - Topics
    - Introduction to fulfillment
    - Examples of static fulfillment
  - Objectives
    - Use text, conditional, and custom fulfillment.
- Integrations
  - Topics
    - Google Messenger
    - Conversational Phone Gateway
  - Objectives
    - Configure Google Messenger and Conversational Phone Gateway.
- Webhooks
  - Topics
    - Why have a webhook?
    - Types of webhooks
    - Setting up a fulfillment webhook
    - Modifications for a JSON response webhook
  - Objectives
    - Recognize the different types of webhooks.
    - Set up a webhook with fulfillment response.
    - Set up a webhook JSON response

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- Route groups
  - Topics
    - Introduction to route groups
    - Managing a route group
  - Objectives
    - Set up a flow route group.
    - Set up a session route group.
  - Activities
    - Lab: Configuring a Route Group for Your Virtual Agent
- Design techniques
  - Topics
    - The concept of a flow
    - Steering bot designs
    - The concept of guardrails
    - Design principle
  - Objectives
    - Use flows to speed the development of an agent.
    - Use guardrails to prevent problems in agent design.
- Generators and generative fallback
  - Topics
    - Overview of generators
    - Overview of generative fallback
  - Objectives
    - Use generators and generative fallback in virtual agents
  - Activities
    - Lab: Conversational Agents with Generative Fallbacks

REQUIREMENTS:

Some familiarity with a graphical user interface for Conversational Agents will ease the learning process. Understanding JSON is helpful.

Difficulty level



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CERTIFICATE:

The participants will obtain certificates signed by Google Cloud (course completion).

TRAINER:

Authorized Google Cloud Trainer

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