

# Customer Experiences with Contact Center AI - Dialogflow ES

## Course Outline

### Module 1: Overview of Contact Center AI

- Define what Contact Center AI (CCAI) is and what it can do for contact centers.
- Identify each component of the CCAI Architecture: Speech Recognition, Dialogflow, Speech Synthesis, Agent Assist, and Insights AI.
- Describe the role each component plays in a CCAI solution.

### Module 2: Conversational Experiences

- List the basic principles of a conversational experience.
- Explain the role of Conversation virtual agents in a conversation experience.
- Articulate how STT (Speech to Text) can determine the quality of a conversation experience.
- Demonstrate and test how Speech adaptation can improve the speech recognition accuracy of the agent.
- Recognize the different NLU (Natural Language Understanding) and NLP (Natural Language Processing) techniques and the role they play on conversation experiences.
- Explain the different elements of a conversation (intents, entities, etc).
- Use sentiment analysis to help with the achievement of a higher-quality conversation experience.
- Improve conversation experiences by choosing different TTS voices (Wavenet vs Standard).
- Modify the speed and pitch of a synthesized voice.
- Describe how to leverage SSML to modify the tone and emphasis of a synthesized passage.

### Module 3: Fundamentals of Designing Conversations

- Identify user roles and their journeys.
- Write personas for virtual agents and users.
- Model user-agent interactions.

### Module 4: Dialogflow Product Options

- Describe two primary differences between Dialogflow Essentials (ES) and Dialogflow Customer Experience (CX).
- Identify two design principles for your virtual agent which apply regardless of whether you implement in Dialogflow ES or CX.
- Identify two ways your virtual agent implementation changes based on whether you implement in Dialogflow ES or CX.

- List the basic elements of the Dialogflow user interface.

#### Module 5: Course Review

- Review what was covered in the course as relates to the objectives.

#### Module 6: Fundamentals of building conversations with Dialogflow ES

- List the basic elements of the Dialogflow CX User Interface.
- Build a virtual agent to handle identified user journeys.
- Train the NLU model through the Dialogflow console.
- Define and test intents for a basic agent.
- Train the agent to handle expected and unexpected user scenarios.
- Recognize the different types of entities and when to use them.
- Create entities.
- Define and test entities on a basic agent.
- Implement slot filling using the Dialogflow UI.
- Describe when Mega Agent might be used.
- Demonstrate how to add access to a knowledge base for your virtual agent to answer customer questions straight from a company FAQ.

#### Module 7: Maintaining Context in a Conversation

- Create follow-up intents.
- Recognize the scenarios in which context should be used.
- Identify the possible statuses of a context (active versus inactive context).
- Implement dialogs using input and output contexts.

#### Module 8: Moving From Chat to Voice Virtual Agent

- Describe two ways that the media type changes the conversation.
- Configure the telephony gateway for testing.
- Test a basic voice agent.
- Modify the voice of the agent.
- Show how the different media types can have different responses.
- Consider the modifications needed when moving to production.
- Be aware of the telephony integration for voice in a production environment.

#### Module 9: Course Review

- Review what was covered in the course as relates to the objectives.

## Module 10: Testing and Logging

- Use Dialogflow tools for troubleshooting.
- Use Google Cloud tools for debugging your virtual agent.
- Review logs generated by virtual agent activity.
- Recognize ways an audit can be performed.

## Module 11: Taking Actions with Fulfillment

- Characterize the role of fulfillment with respect to Contact Center AI.
- Implement a virtual agent using Dialogflow ES.
- Use Cloud Firestore to store customer data.
- Implement fulfillment using Cloud Functions to read and write Firestore data.
- Describe the use of Apigee for application deployment.

## Module 12: Integrating Virtual Agents

- Describe how to use the Dialogflow API to programmatically create and modify the virtual agent.
- Describe connectivity protocols: gRPC, REST, SIP endpoints, and phone numbers over PSTN.
- Describe how to replace existing head intent detection on IVRs with Dialogflow intents.
- Describe virtual agent integration with Google Assistant.
- Describe virtual agent integration with messaging platforms.
- Describe virtual agent integration with CRM platforms (such as Salesforce and Zendesk).
- Describe virtual agent integration with enterprise communication platforms (such as Genesys, Avaya, Cisco, and Twilio).
- Explain the ability that telephony providers have of identifying the caller and how that can modify the agent design.
- Describe how to incorporate IVR features in the virtual agent.

## Module 13: Course Review

- Review what was covered in the course as relates to the objectives.

## Module 14: Environment Management

- Create Draft and Published versions of your virtual agent.
- Create environments where your virtual agent will be published.
- Load a saved version of your virtual agent to Draft.
- Change which version is loaded to an environment.

## Module 15: Drawing Insights from Recordings with SAF

- Analyze audio recordings using the Speech Analytics Framework (SAF).

#### Module 16: Intelligence Assistance for Live Agents

- Recognize use cases where Agent Assist adds value.
- Identify, collect and curate documents for knowledge base construction.
- Describe how to set up knowledge bases.
- Describe how FAQ Assist works.
- Describe how Document Assist works.
- Describe how the Agent Assist UI works.
- Describe how Dialogflow Assist works.
- Describe how Smart Reply works.
- Describe how Real-time entity extraction works.

#### Module 17: Compliance and Security

- Describe two ways security can be implemented on a CCAI integration.
- Identify current compliance measures and scenarios where compliance is needed.

#### Module 18: Best Practices

- Convert pattern matching and decision trees to smart conversational design.
- Recognize situations that require escalation to a human agent.
- Support multiple platforms, devices, languages, and dialects.
- Use Dialogflow's built-in analytics to assess the health of the virtual agent.
- Perform agent validation through the Dialogflow UI.
- Monitor conversations and Agent Assist.
- Institute a DevOps and version control framework for agent development and maintenance.
- Consider enabling spell correction to increase the virtual agent's accuracy.

#### Module 19: Implementation Methodology

- Identify the stages of the Google Enterprise Sales Process.
- Describe the Partner role in the Enterprise Sales Process.
- Detail the steps in a Contact Center AI project using Google's ESP.
- Describe the key activities of the Implementation Phase in ESP.
- Locate and understand how to use Google's support assets for Partners.

#### Module 20: Course Review

- Review what was covered in the course as relates to the objectives.