**Building a chatbot using Dialogflow CX with Vertex AI**

* **Create a Google Cloud Storage bucket** to store the data that will be used to train your chatbot. [1, 2]

1. Go to the **Cloud Storage** section of the Google Cloud Console. [3]
2. Click on **Create Bucket**. [3]
3. Give the bucket a name (e.g. restaurant-data-bucket) and click on **Create**. [3]
4. Make sure that **Enforce public access prevention on this bucket** is checked. [3]
5. Click on **Upload Files** to upload the data for your chatbot (e.g. a restaurant menu in PDF format). [3]

* **Create a Dialogflow CX agent**. [4]

1. Go to the **Dialogflow CX Console** and select your project. [5]
2. Click on **Create Agent**. [6]
3. Enter a **Display Name**, **Location** (e.g. Australia-southeast1), and **Time Zone** (e.g. GMT+10:00). [7]
4. Click on **Create**. [7]

* **Create a Vertex AI Search and Conversation App**. [4]

1. Click on **Start Page** in your Dialogflow CX agent and click on **Add State Handler**. [5]
2. Check the **Data Store** option and click on **Apply**. [5]
3. Click on the **+** icon next to **Data Store**. [5]
4. Click on **Create Vertex AI Search and Conversation App** and click on **Agree**. [3]
5. Enter your **Company Name** (e.g. BUS5001-<indexnumber>-restaurant). [8]
6. Click on **Continue**. [8]
7. Click on **Create Data Store** and select **Cloud Storage**. [8]
8. Choose the **File** option and select the file you uploaded to your Google Cloud Storage bucket (e.g. restaurant-menu.pdf). [8]
9. Click on **Continue**. [8]
10. Provide a data store name (e.g. restaurant-data-store) and click on **Create**. [9]
11. Select the created data store and click on **CREATE** to finalize the Vertex AI agent creation. [10]
12. Wait for the data store to finish importing and indexing your data. [11]

* **Link the data store to your CX Agent** by refreshing the page in the CX Agent Console, adding a new state handler, and selecting **Data Store**. [12] The data store you created should be visible in the dropdown menu. [12]
* Set the **Agent Says** option to retrieve the answer from the data store and ask a follow up question (e.g. "$request.knowledge.answers. Would you like some coffee?"). [12]
* Click on **Save**. [9, 12-22]
* **Define intents and entities** to train your chatbot to understand different user inputs. [23]
* **Create pages and routes** to define the conversational flow of your chatbot. [24]
* **Use fulfillment and webhooks** to connect your chatbot to external services and databases. [25]
* **Test your agent** in the Dialogflow CX Console. [26]

The sources contain several examples of how to create specific intents, entities, pages, and routes. For example, source [27] provides instructions on how to create a simple "breakfast bot" that can take orders for coffee and breakfast. You can use these examples as a starting point for building your own chatbot.

You can find more information in the Dialogflow CX documentation: [28] <https://dialogflow.cloud.google.com/cx/docs>

You may also want to consult other resources for more in-depth information on specific aspects of building chatbots with Dialogflow CX and Vertex AI.