

# Chatbot Development using Vertex AI in Google Cloud Platform

---

Done By: Malleeswari D

Date: 11.06.2025

## 1. Introduction:

In today's digital world, conversational agents—commonly known as chatbots—play a significant role in enhancing user interaction. This project focuses on building a chatbot using Vertex AI, Google Cloud's unified AI platform. The chatbot leverages the power of machine learning models, integrated with natural language understanding, to process user queries and deliver intelligent responses. The goal of this project is to demonstrate how easily one can design, train, and deploy a conversational chatbot using the tools and infrastructure provided by Google Cloud.

## 2. Tools & Services Used:

- Google Cloud Platform (GCP)
- Vertex AI
- Cloud Storage (for dataset)
- Cloud Functions (optional for triggers)
- Dialogflow CX (for integration, if used)

## 3. Steps Followed:

### STEP1: OPEN GOOGLE CLOUD PLATFORM

- To create a new project (VertexAIConversationDemo)
- Search Vertex AI Search
- Enable required API's
- After we entered into AI APPLICATION PAGE

### STEP2: CREATE APP

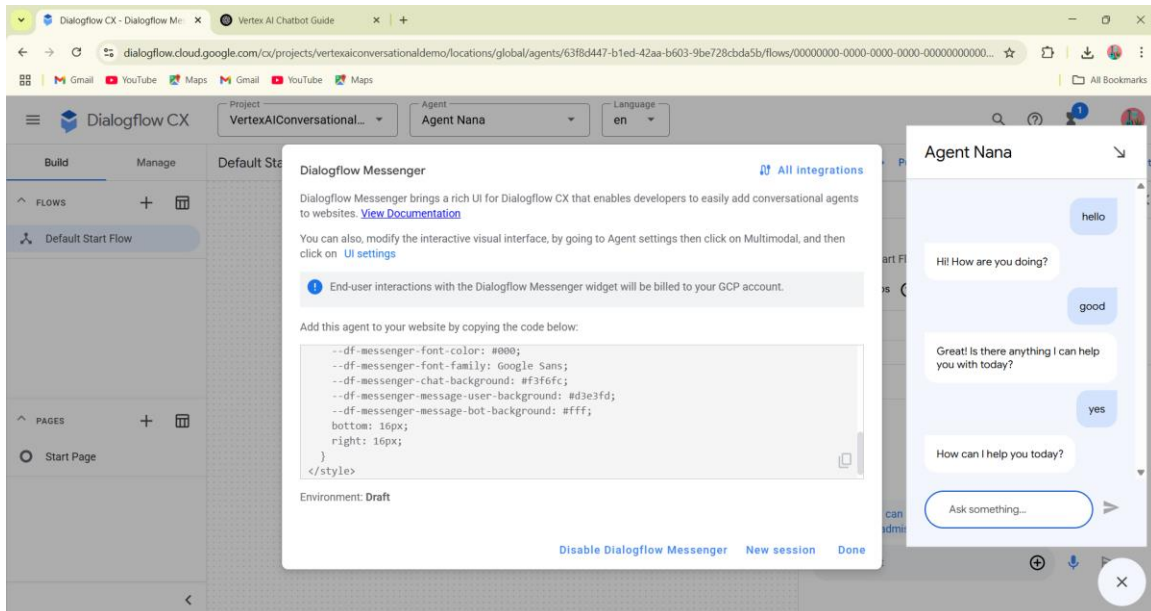
- Choose CHAT and click create
- Enable DIALOGFLOW API
- Give Agent Configuration as Nana University
- Then enter agent name as AgentNana
- Click continue icon

### STEP:3 CREATE A DATASTORE

- Click create a new datastore
- Before choosing cloud storage
- Create a json unstructured format dataset
- Create a new bucket to upload that file
- Now come back and choose cloud storage
- Select unstructured format icon and browser to give folder to continue
- Folder name is (malli\_vertex)
- Then add data store name as Demo\_Nana and click CREATE
- It visible in Available datastore
- Click to check the progress once imported it shows indexed.
- Same page click the preview icon in left corner.

### STEP:4 DIALOGFLOW CX

- Click Test Agent box at right corner
- Say Hello
- Ask university related questions because it is university based Chatbot.
- After testing process completed.
- Click the publish icon to publish.
- Select the display view
- Choose enable and click TRY IT NOW.
- Chatbot is ready to solve our query
- If we want click new session to start



## **6. Conclusion:**

This project showcases how Vertex AI enables developers to build powerful and scalable AI applications with minimal complexity. Using Vertex AI for chatbot development provides access to state-of-the-art ML models, easy dataset handling, and automated model training. By integrating this chatbot with other GCP services, businesses can improve customer service, automate responses, and gain insights into user behavior. This hands-on experience reinforced the importance of cloud-based AI tools in the modern digital ecosystem.