Machine Learning Internship Project Report

Task 3: Customer Support Chatbot

Intern Name: Golu Rajput

Internship Program: Future Interns

Domain: Machine Learning

Task Number: 03

Project Title: Customer Support Chatbot using Dialogflow

Tools Used: Dialogflow Essentials, Google Cloud

Submission Type: Project Report

1. Introduction

Customer support chatbots are widely used in modern applications to provide instant assistance to users.
They help answer frequently asked questions, guide users, and reduce human support workload.

In this project, a Customer Support Chatbot was built using Dialogflow Essentials.
The chatbot is capable of handling greetings, basic support queries, and fallback responses when it does not understand user input.

2. Objective of the Project

The main objectives of this project are:

- To understand how chatbots work
- To design basic conversational flows

- To create intents for customer support queries
- To implement fallback handling for unknown questions
- To test the chatbot in real-time using Dialogflow console

3. Tool & Technology Used

- Dialogflow Essentials – No-code chatbot builder
- Google Cloud Platform – Agent creation and management
- Web-based Test Console – For testing chatbot responses

4. Methodology

Step 1: Agent Creation

- Created a new Dialogflow agent
- Selected Global region
- Chose English language
- Followed naming rules (no whitespace in agent name)

Step 2: Intent Creation

Created the following intents:

Greeting Intent

Handles user greetings such as:

- Hi
- Hello
- Hey
- Good morning

Bot Response Example:

"Hi! How can I help you today?"

Support Intent (Example: Forget Password)

Handles customer support queries such as:

- forget password
- reset my password
- can't login

Bot Response Example:

"You can reset your password using the 'Forgot Password' option on the login page."

Step 3: Fallback Intent

Configured Default Fallback Intent to handle unknown questions.

Fallback Response Example:

"Sorry, I didn't get that. Can you rephrase?"

This ensures the chatbot responds politely even when it does not understand the user.

5. Testing the Chatbot

- Tested intents using Dialogflow test console
- Verified correct intent matching
- Checked fallback response for unknown inputs
- Ensured greeting and support intents work correctly

Dialogflow Essentials — Intents

Global ▾

💬 **Intents**   **CREATE INTENT** ⋮

Search intents   🔍 🔻

- ● account_issue
- 🔖 Default Fallback Intent
- ● Default Welcome Intent
- ● Greeting
- ● subscription_info

Loading agents...   ⚙
en +

💬 Intents +
⛓ Entities +
📖 Knowledge [beta]
⚡ Fulfillment
🔄 Integrations

🎓 Training
☑ Validation
🕐 History
📊 Analytics

📖 Prebuilt Agents
🗂 Small Talk

Training — hi

https://dialogflow.cloud.google.com/#/agent/customersupportchatbot-roah/training

hi

Today   **10** REQUESTS   **0** NO MATCH

USER SAYS   hi
INTENT   Greeting

USER SAYS   hello
INTENT   Greeting

USER SAYS   plans available
INTENT   subscription_info

USER SAYS   plans available
INTENT   subscription_info

CLOSE   **APPROVE**

Try it now   🎤

Agent

USER SAYS   COPY CURL
hello
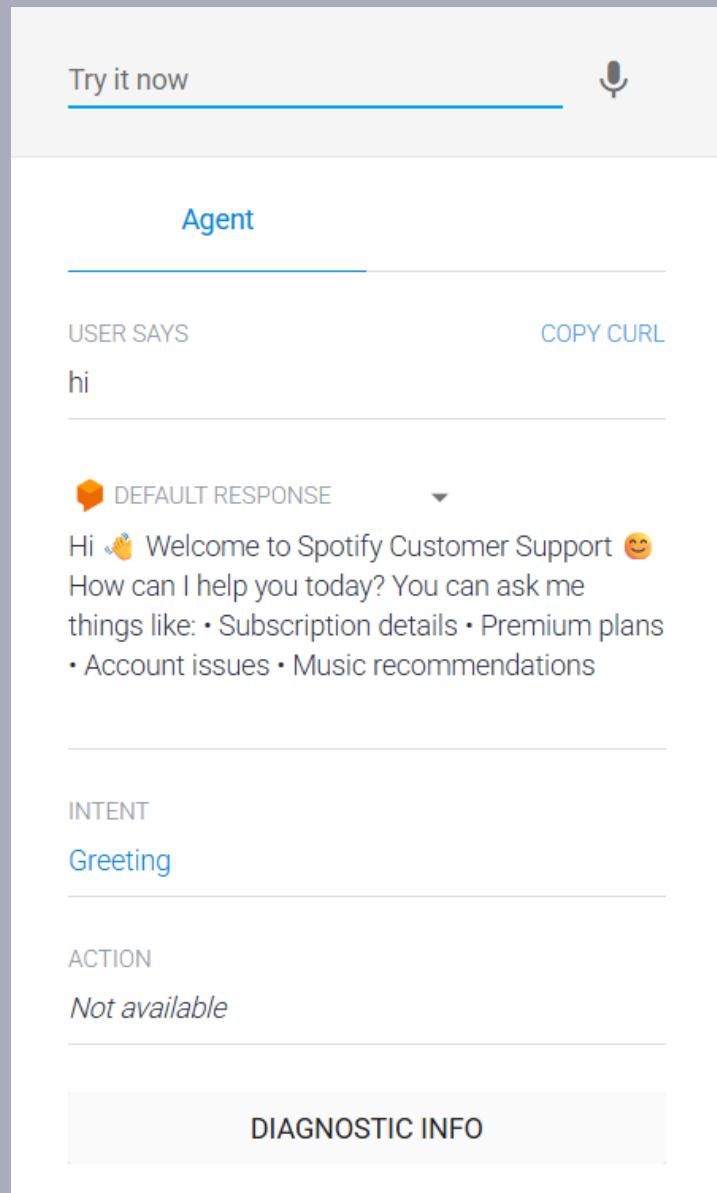
DEFAULT RESPONSE ▾

Hi 👋 Welcome to Spotify Customer Support 🎧
How can I help you today? You can ask me
things like: • Subscription details • Premium plans
• Account issues • Music recommendations

INTENT
Greeting

ACTION
Not available

DIAGNOSTIC INFO

6. Key Features Implemented

- Greeting message
- Customer support FAQs
- Smart fallback handling
- Real-time intent testing

7. Results & Observations

- Chatbot successfully identifies user intent
- Provides appropriate responses for known queries
- Handles unknown inputs gracefully using fallback intent

- Easy to modify and extend with more intents

8. Business Use Case

This chatbot can be used by companies to:

- Provide 24/7 customer support
- Reduce workload on human support teams
- Improve customer satisfaction
- Handle common queries instantly

9. Conclusion

The Customer Support Chatbot was successfully built using Dialogflow.
This project helped in understanding chatbot fundamentals, intent creation, and conversational AI design.

The chatbot can be further improved by adding more intents and integrating it with websites or messaging platforms.

10. Future Scope

- Add more advanced customer support queries
- Integrate chatbot with Telegram or website
- Use ChatGPT API for intelligent responses
- Store user queries in database for analysis