**DAY-10**

**Chatbot for Product Recommendation**

**1.Objective:**

Build a simple chatbot in **Google Collab** that helps users receive product suggestions across different categories like **Electronics**, **Clothing**, **Books**, and **Sports**

**2**. **Tools Required:**

* Google Account
* Google Colab (no installations required)
* Basic Python knowledge

**Step 1: Open Google Colab**

1. Visit https://colab.research.google.com
2. Click on **"New Notebook"**.
3. Rename the notebook to Product\_Recommendation\_Chatbot.

**Step 2: Install and Import Gradio**

In the first cell of the Colab notebook, paste this code and run it:

!pip install gradio

import gradio as gr

* This installs the Gradio library to build the chatbot interface.

**Step 3: Define Product Data Dictionary**

Paste the following code in a new cell:

product\_data = {

"electronics": {

"items": ["Smartphone", "Laptop", "Camera", "Earbuds"],

"suggestions": {

"smartphone": ["iPhone 15 Pro Max", "Samsung Galaxy S24 Ultra"],

"laptop": ["MacBook Air M3", "Dell XPS 15 2024"],

"camera": ["Canon EOS R8", "Sony Alpha A7 IV"],

"earbuds": ["Apple AirPods Pro 2", "Sony WF-1000XM5"]

}

},

"clothing": {

"items": ["T-shirt", "Jeans", "Jacket", "Shoes"],

"suggestions": {

"t-shirt": ["Nike Dry Fit Tee", "H&M Graphic Tee"],

"jeans": ["Levi's 511", "Diesel Slim Fit"],

"jacket": ["North Face Puffer", "Zara Biker Jacket"],

"shoes": ["Adidas Ultraboost", "Nike Air Max"]

}

},

"books": {

"items": ["Novel", "Biography", "Comics", "Magazine"],

"suggestions": {

"novel": ["The Silent Patient", "It Ends With Us"],

"biography": ["Steve Jobs by Walter Isaacson", "Becoming by Michelle Obama"],

"comics": ["Batman: The Killing Joke", "Spider-Man: Blue"],

"magazine": ["Time", "National Geographic"]

}

},

"sports": {

"items": ["Football", "Basketball", "Cricket Bat", "Yoga Mat"],

"suggestions": {

"football": ["Adidas FIFA Pro", "Nike Flight Ball"],

"basketball": ["Spalding NBA Ball", "Wilson Evolution"],

"cricket bat": ["MRF Genius", "SG Scorer Classic"],

"yoga mat": ["Lululemon Reversible Mat", "Manduka Pro Yoga Mat"]

}

}

}

* This sets up the product categories, items, and suggestions.

**Step 4: Define the Chatbot Function**

Paste this in a new cell:

def product\_chatbot(user\_message):

msg = user\_message.lower()

# Check for category

for category, content in product\_data.items():

if category in msg:

items = ", ".join(content["items"])

return f" {category.capitalize()} Products: {items}\n\nType a specific item like '{content['items'][0]}' to get suggestions."

# Check for sub-item suggestions

for category, content in product\_data.items():

for item, suggestions in content["suggestions"].items():

if item in msg:

return f" Top {item.capitalize()} Suggestions:\n1. {suggestions[0]}\n2. {suggestions[1]}"

#Fallback

return " I can suggest products in Electronics, Clothing, Books, or Sports. Try typing a category or a specific item."

**Step 5: Build the Gradio Interface**

iface = gr.Interface(fn=product\_chatbot,

inputs="text",

outputs="text",

title="🛍️ Product Recommendation Chatbot",

description="Ask for categories like Electronics, Clothing, Books or Sports. Then type a specific item to get suggestions!")

iface.launch()

Click **Run**. A Gradio interface will appear with a text box where you can chat with the bot.

* **Testing the Chatbot**

Try typing these:

* electronics → shows all electronics items
* smartphone → shows 2 latest phone suggestions
* books → shows all book types
* magazine → shows 2 magazines

**OUTPUT**



