Revolutionizing Customer Support with an Intelligent Chatbot (Using Twitter Dataset)

```
# Install necessary libraries
!pip install transformers
!pip install pandas
!pip install gradio
Collecting semantic-version~=2.0 (from gradio)
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      Collecting starlette<1.0,>=0.40.0 (from gradio)
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# Import Libraries
import pandas as pd
from transformers import AutoTokenizer, AutoModelForSeg2SegLM
import gradio as gr
# Upload the Twitter Customer Support Dataset
from google.colab import files
uploaded = files.upload()
```

Choose Files sample.csv

• sample.csv(text/csv) - 17357 bytes, last modified: 4/29/2025 - 100% done Saving sample.csv to sample.csv

Load Dataset

Note: Replace 'customer_support_tweets.csv' with the actual uploaded filename if different
df = pd.read_csv('sample.csv')

Explore Dataset df.head()

10:26 AM			Twitter_Customer_Support_Chatbot.ipynb - Colab				
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2	119239	105835	True	Wed Oct 11 13:00:09 +0000 2017	@76328 I really hope you all change but I'm su	119238	Na
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                            <string>:5: FutureWarning:
     4
# Preprocess Dataset
# Focus on inbound customer queries only
customer_queries = df[df['inbound'] == True]['text'].dropna().tolist()
# Load Pre-trained Conversational AI Model
model_name = "facebook/blenderbot-400M-distill"
tokenizer = AutoTokenizer.from_pretrained(model_name)
model = AutoModelForSeq2SeqLM.from_pretrained(model_name)
/usr/local/lib/python3.11/dist-packages/huggingface_hub/utils/_auth.py:94: UserWarning:
     The secret `HF_TOKEN` does not exist in your Colab secrets.
     To authenticate with the Hugging Face Hub, create a token in your settings tab (<a href="https://huggingface.co/settings/tokens">https://huggingface.co/settings/tokens</a>), set it as:
     You will be able to reuse this secret in all of your notebooks.
     Please note that authentication is recommended but still optional to access public models or datasets.
       warnings.warn(
# Define Chatbot Response Function
def customer_support_response(user_input):
    inputs = tokenizer([user_input], return_tensors="pt", truncation=True)
   outputs = model.generate(**inputs, max_length=100)
   reply = tokenizer.decode(outputs[0], skip_special_tokens=True)
    return reply
```