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SECTION: F

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CUSTOMER FEEDBACK ANALYZER

Goal: Analyze 100s of product reviews to see if people are happy or angry.

Tech: pipeline('sentiment-analysis') (Positive/Negative classification).

This project implements a **Customer Feedback Sentiment Analyzer** using pretrained Transformer models from the Hugging Face Transformers library. The goal is to automatically classify customer reviews as **positive** or **negative**, enabling faster and more scalable analysis of user feedback. Instead of manually reading large volumes of reviews, this system uses modern Natural Language Processing (NLP) techniques to produce instant sentiment predictions along with confidence scores.

The implementation uses the Hugging Face sentiment-analysis pipeline, which loads a pretrained DistilBERT-based model fine-tuned on large sentiment datasets. Since the model is already trained, the project focuses on **model inference**, not training, making it lightweight and efficient to run on standard CPU environments such as Google Colab or Jupyter Notebook. The system accepts single or multiple review texts as input and returns structured sentiment results.

This project demonstrates how Generative AI and NLP pipelines can be applied to real-world business scenarios such as product review monitoring, service feedback evaluation, and support ticket prioritization. Key advantages include minimal setup, fast execution, and reliable performance. While limitations exist for sarcasm and mixed-sentiment text, the approach provides a practical and scalable baseline for automated customer feedback analysis systems.

Short Documentation

In this project, I understood that modern NLP tasks such as sentiment detection can be solved efficiently using pretrained Transformer models instead of training models from scratch. Hugging Face provides ready-to-use pipelines that abstract tokenization, model loading, and inference into a simple interface. This allows rapid development of practical NLP applications with minimal setup and strong baseline accuracy.

Based on this understanding, I built a **Customer Feedback Sentiment Analyzer** using the Hugging Face Transformers library. The system takes customer review text as input and automatically classifies it as **positive** or **negative**, along with a confidence score. I used the sentiment-analysis pipeline, which loads a pretrained DistilBERT-based sentiment classification model. The implementation was done in a Jupyter/Colab notebook and includes single-review analysis, multiple-review processing, and summary counting of sentiment distribution.

The project demonstrates how pretrained Generative AI and NLP models can be applied to real-world problems like feedback monitoring and review analysis. It highlights practical model inference, pipeline usage, and result interpretation without requiring custom model training.

SAMPLE SCREENSHOT

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... Enter a customer review: i hated the food

Sentiment: NEGATIVE
Confidence Score: 1.0
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