

GenAI Project Unit 1 Submission 2

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Section: C

Problem Statement

Customer Feedback Analyzer

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

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

Build an NLP application that analyzes customer reviews and classifies them as Positive or Negative using a pre-trained transformer model.

Abstract

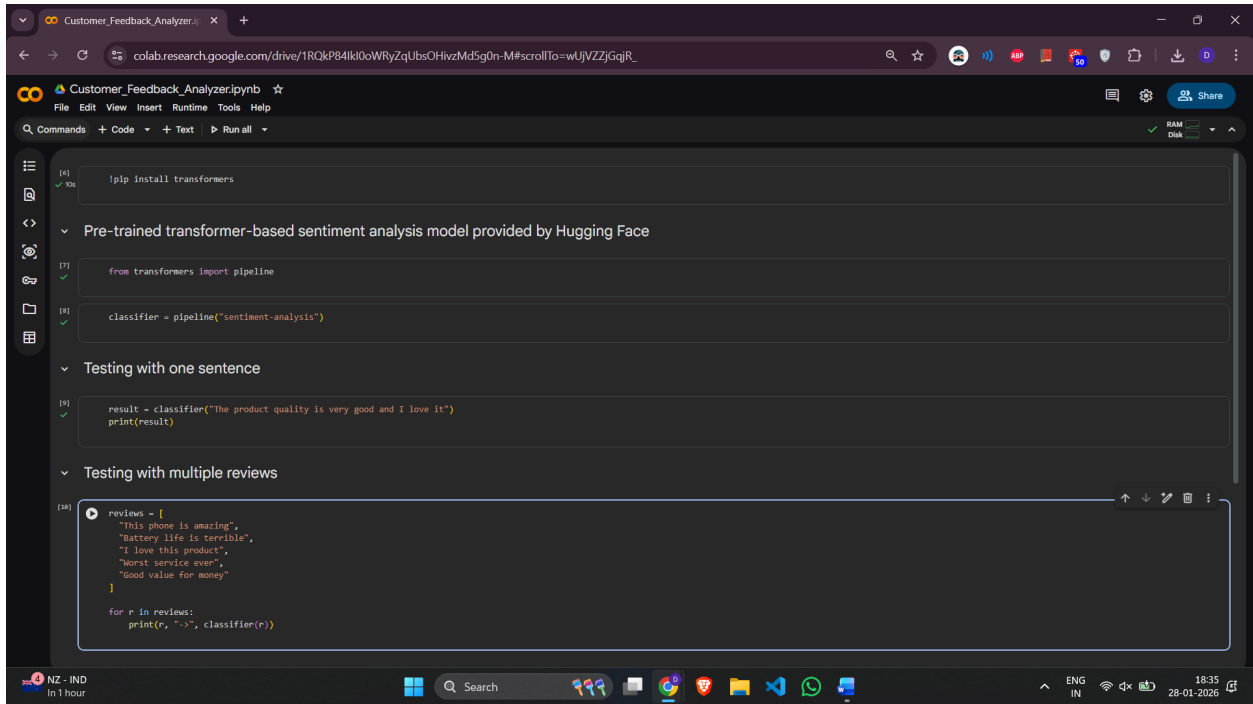
This project implements a Customer Feedback Analyzer using Hugging Face Transformers. The system takes customer review text as input and uses a sentiment analysis model to determine whether the feedback is positive or negative. The model is loaded using the pipeline API and tested on multiple sample reviews and this project demonstrates the use of pre-trained NLP models for real-world text classification tasks.

Short Documentation

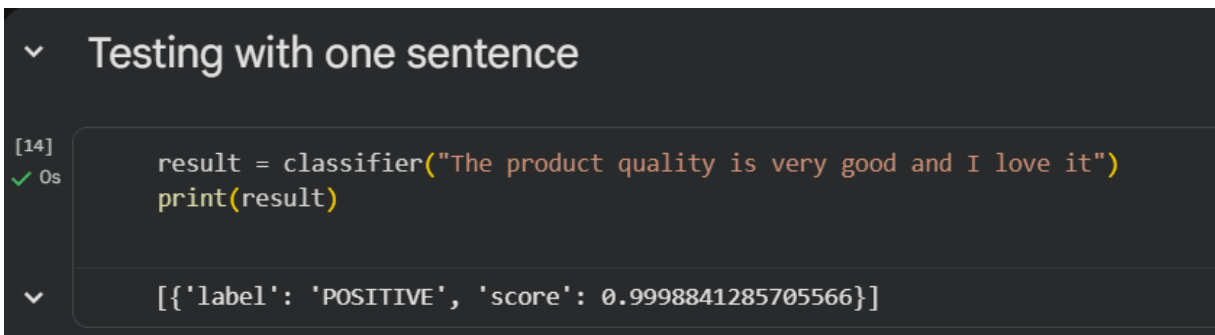
I understood that sentiment analysis is an NLP task used to determine emotional tone in the text. In this project, I used a pre-trained transformer model from Hugging Face to classify customer reviews. The pipeline API was used to simplify model loading and inference. The system accepts text input and outputs the sentiment label with a confidence score between 0 and 1. This project helped me understand how transformer models can be applied to practical scenarios like the customer feedback analysis.

Screenshots

Code Screenshot



Output Screenshots



Testing with multiple reviews

[15]

```
reviews = [
    "This phone is amazing",
    "Battery life is terrible",
    "I love this product",
    "Worst service ever",
    "Good value for money"
]

for r in reviews:
    print(r, "->", classifier(r))
```

```
... This phone is amazing -> [{'label': 'POSITIVE', 'score': 0.9998575448989868}]
Battery life is terrible -> [{'label': 'NEGATIVE', 'score': 0.9995101690292358}]
I love this product -> [{'label': 'POSITIVE', 'score': 0.9998788833618164}]
Worst service ever -> [{'label': 'NEGATIVE', 'score': 0.9997915625572205}]
Good value for money -> [{'label': 'POSITIVE', 'score': 0.9998501539230347}]
```

The screenshot shows a Google Colab notebook interface. The browser address bar displays the URL: `colab.research.google.com/drive/1RQkP84kl0cWRYzQzUbsOHivzMd5g0n-M#scrollTo=wUjVZZjGqjR_`. The notebook title is `Customer_Feedback_Analyzer.ipynb`. The interface includes a menu bar (File, Edit, View, Insert, Runtime, Tools, Help), a toolbar with icons for commands, code, text, and running, and a status bar at the bottom showing system information (NZ - IND, 18:37, 28-01-2026).

The notebook content is divided into two sections:

- Testing with one sentence:** This section shows a single line of code: `result = classifier("The product quality is very good and I love it")`, followed by the output: `[{'label': 'POSITIVE', 'score': 0.9998841285705566}]`.
- Testing with multiple reviews:** This section shows a list of reviews being processed by the classifier. The code defines a list `reviews` and iterates over it, printing the result for each review. The output shows the classifier's prediction for each review, such as `['label': 'POSITIVE', 'score': 0.9998575448989868]` for "This phone is amazing" and `['label': 'NEGATIVE', 'score': 0.9995101690292358]` for "Battery life is terrible".