# 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

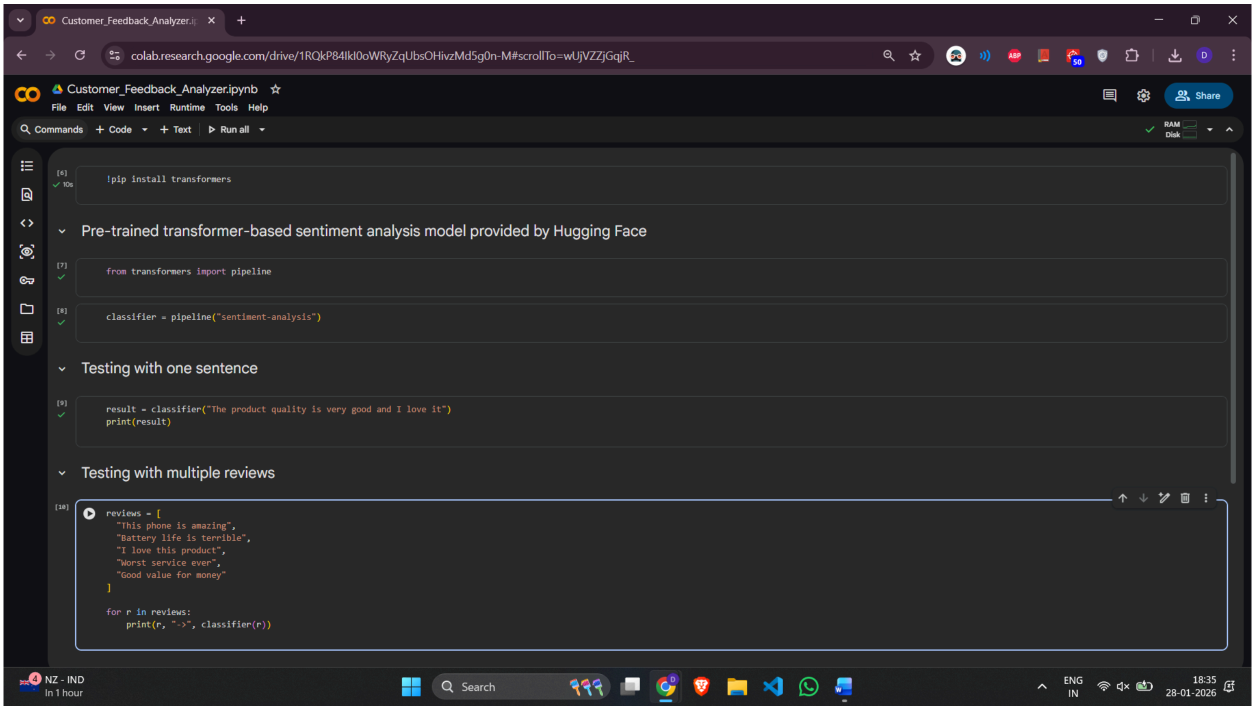
This project implements a Customer Feedback Analyzer using Hugging Face Transformers. The system takes customer review text as input and uses a sentiment analysis model to determine whether the feedback is positive or negative. The model is loaded using the pipeline API and tested on multiple sample 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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```
[6]
!pip install transformers
```

Pre-trained transformer-based sentiment analysis model provided by Hugging Face

```
[7]
from transformers import pipeline
```

```
[8]
classifier = pipeline("sentiment-analysis")
```

Testing with one sentence

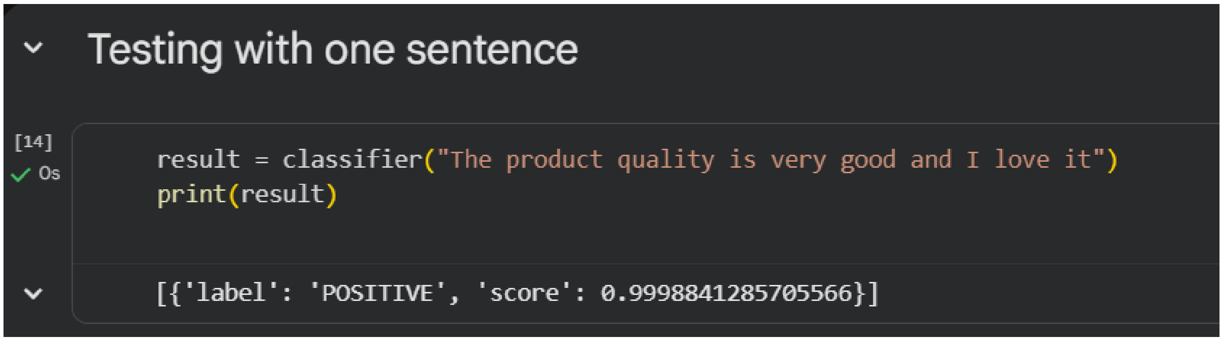
```
[9]
result = classifier("The product quality is very good and I love it")
print(result)
```

Testing with multiple reviews

```
[10]
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))
```

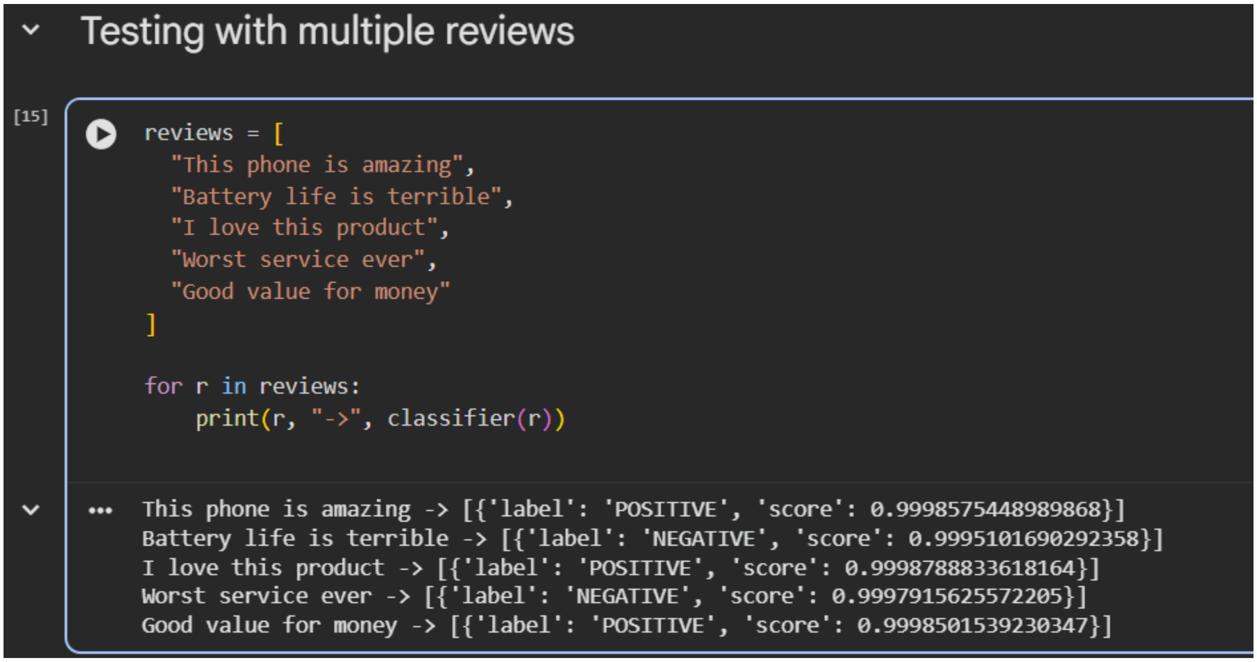
## Output Screenshots



Testing with one sentence

```
[14]
0s
result = classifier("The product quality is very good and I love it")
print(result)
```

```
[{'label': 'POSITIVE', 'score': 0.9998841285705566}]
```



## Testing with multiple reviews

[15]

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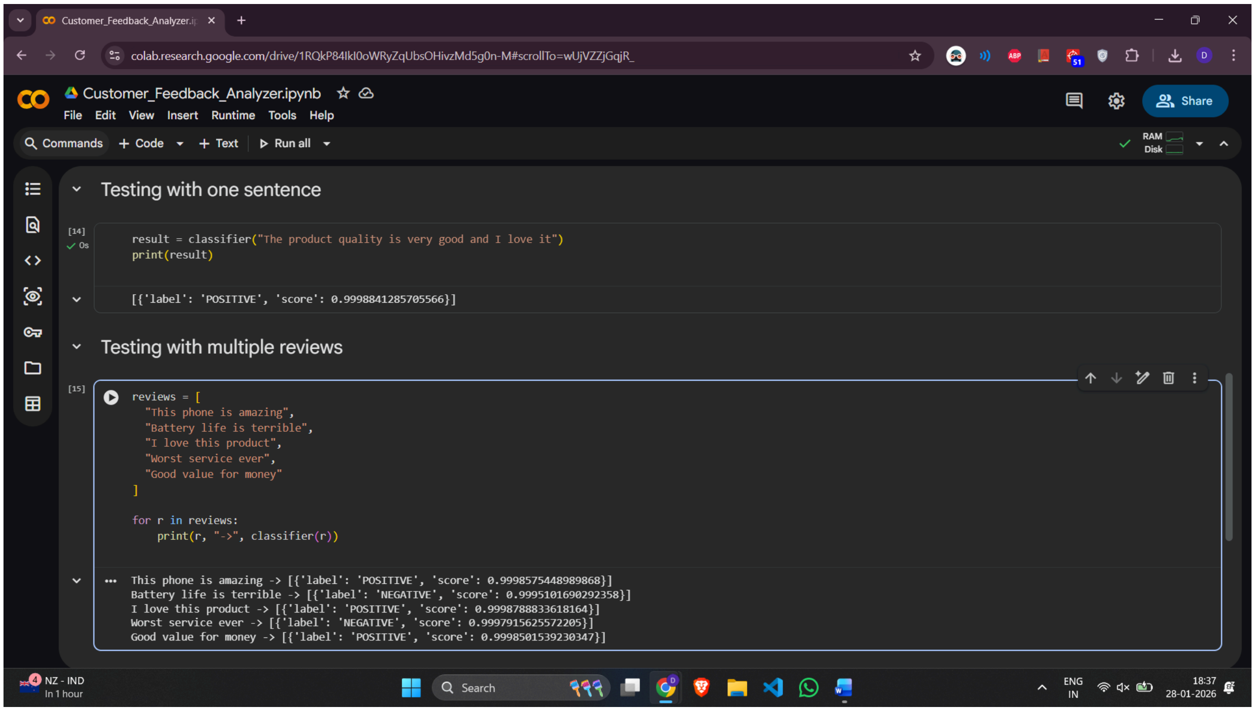
```
This phone is amazing -> [{'label': 'POSITIVE', 'score': 0.9998575448989868}]
Battery life is terrible -> [{'label': 'NEGATIVE', 'score': 0.9995101690292358}]
I love this product -> [{'label': 'POSITIVE', 'score': 0.9998788833618164}]
Worst service ever -> [{'label': 'NEGATIVE', 'score': 0.9997915625572205}]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


Customer_Feedback_Analyzer.ip
colab.research.google.com/drive/1RQkP84Ikl0oWRyZqUbsOHivzMd5g0n-M#scrollTo=wUjVZZjGqjR_
Customer_Feedback_Analyzer.ipynb
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## Testing with one sentence

[14] ✓ 0s

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## Testing with multiple reviews

[15]

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