Generative AI
Hands-on unit 1 submission 2

Medha Raj
PES2UG23CS334
Section ‘F’

Problem Statement -

Personal Diary Tracker

Goal: Input daily diary entries and track the "Mood Graph" over a week.

Tech: Sentiment analysis on daily text.

Abstract

This project implements a Personal Diary Mood Tracker using Natural Language Processing (NLP) and Hugging Face pretrained models. The system allows users to input daily diary entries and automatically analyzes the emotional sentiment expressed in the text. Using a pretrained sentiment analysis pipeline, each diary entry is classified as Positive or Negative, and a confidence score is generated. These scores are then visualized in a weekly mood graph, helping users understand emotional trends over time. The project demonstrates practical use of text classification, pretrained NLP models, and data visualization without the need for model training.

Short doc based on my understanding

In this project, I understood how Hugging Face pipelines can be used to perform sentiment analysis on text without training a model from scratch. The system takes daily diary entries as input and processes them using a pretrained sentiment analysis model that classifies text into positive or negative sentiment along with a confidence score.

I built a Python based application where each diary entry is analyzed, and the sentiment score is converted into a numeric value. Positive sentiments are represented using positive scores, while negative sentiments are represented using negative scores. These values are stored day-wise and plotted on a graph to visualize emotional variation across a week.

The project focuses on correct model usage, interpretation of sentiment scores, and clear visualization of results, making it a simple yet effective demonstration of NLP fundamentals covered in Unit 1.

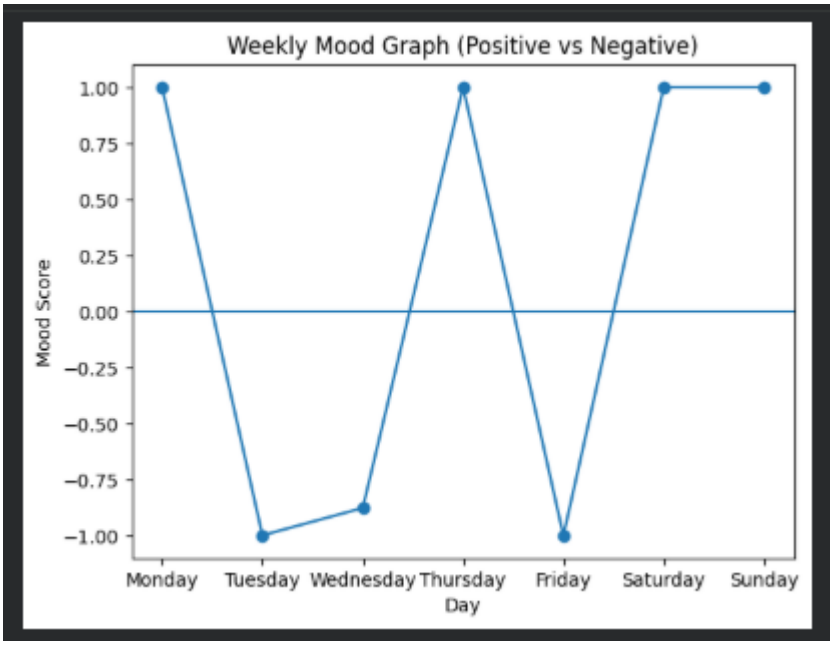
Sample Input

```
diary_entries = {
    "Monday": "I felt really happy and energetic today",
    "Tuesday": "Work was stressful and exhausting",
    "Wednesday": "It was an okay day, nothing special",
    "Thursday": "I am proud of myself for completing my tasks",
    "Friday": "Feeling tired and unmotivated",
    "Saturday": "Had fun with friends and relaxed",
    "Sunday": "Feeling calm and grateful"
}
```

Output

```
for day in mood_scores:
    print(f"{day}: {mood_labels[day]} ({mood_scores[day]:.2f})")
```

```
Monday: Positive  (1.00)
Tuesday: Negative  (-1.00)
Wednesday: Negative  (-0.88)
Thursday: Positive  (1.00)
Friday: Negative  (-1.00)
Saturday: Positive  (1.00)
Sunday: Positive  (1.00)
```


Weekly Mood Graph (Positive vs Negative)
Mood Score
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Day