MoodSense: Emotion & Motivation Recommender

1. Introduction

MoodSense is a machine learning-based project that detects the emotional state of a user from their written text. It then recommends a personalized motivational quote based on the detected mood. This project aims to blend Artificial Intelligence with emotional well-being and self-care.

2. Problem Statement

In today's fast-paced world, many individuals experience emotional stress. However, they often find it difficult to seek comfort or motivation instantly. The goal of this project is to provide quick emotional support through ML-driven mood detection and personalized quote recommendation.

3. Technology Stack

- Python
- Scikit-learn
- Natural Language Processing (NLP)
- Pandas
- FPDF (for report generation)

4. Dataset Description

The dataset contains short text statements labeled with emotions such as Happy, Sad, Angry, and Fear. It is used to train a text classification model to predict emotion based on new user inputs.

5. Sample Data

Text: I feel lost and empty.
Emotion: Sad

Text: I'm so excited to start this new journey!
Emotion: Happy

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Text: Everything is going wrong today.

Emotion: Angry

Text: I'm nervous but hopeful.

Emotion: Fear

Text: Life is beautiful right now!

Emotion: Happy

6. Model Overview

The model uses Natural Language Processing techniques to convert text into vectors using TF-IDF. A Logistic Regression classifier is then trained on the emotion-labeled dataset to predict the emotion for any given user text input.

7. Results and Outputs

The trained model can correctly identify emotions from user-written text with decent accuracy. Based on the predicted emotion, a relevant motivational quote is selected and displayed to the user.

8. Motivation Quotes Example

- Sad -> 'Don't be afraid, love yourself.' - BTS
- Happy -> 'Keep shining, the world needs your light!'
- Angry -> 'Breathe. It's just a bad moment, not a bad life.'
- Fear -> 'You have already survived 100% of your worst days.'

9. Conclusion

MoodSense successfully combines machine learning with emotional awareness to provide a simple and comforting tool that recognizes feelings and supports users with relevant motivational messages.

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10. Future Scope

In the future, MoodSense can be expanded to include voice inputs, advanced deep learning models for better accuracy, and a mobile app interface for broader accessibility.

11. References

- scikit-learn.org
- kaggle.com
- nltk.org
- bts-lyrics.fandom.com