

# **MELOFY: AI MOOD-BASED MUSIC RECOMMENDATION SYSTEM**

Jaime Garcia y Garcia: 13863992

Katherin Gomez Londono: 24611687

Miguel Ramal: 00060259

Spenser Gautama: 13091323

Dipesh Shrestha: 24996124



# STORY: MOOD AND MUSIC

Have you ever wished you could find music that matches your mood without scrolling through endless playlists?



- 😢 Feeling low and just want to cry to a sad song?
- ⚡ Full of energy but don't know which song to choose?

Choosing the right song for your mood takes time and mental effort!

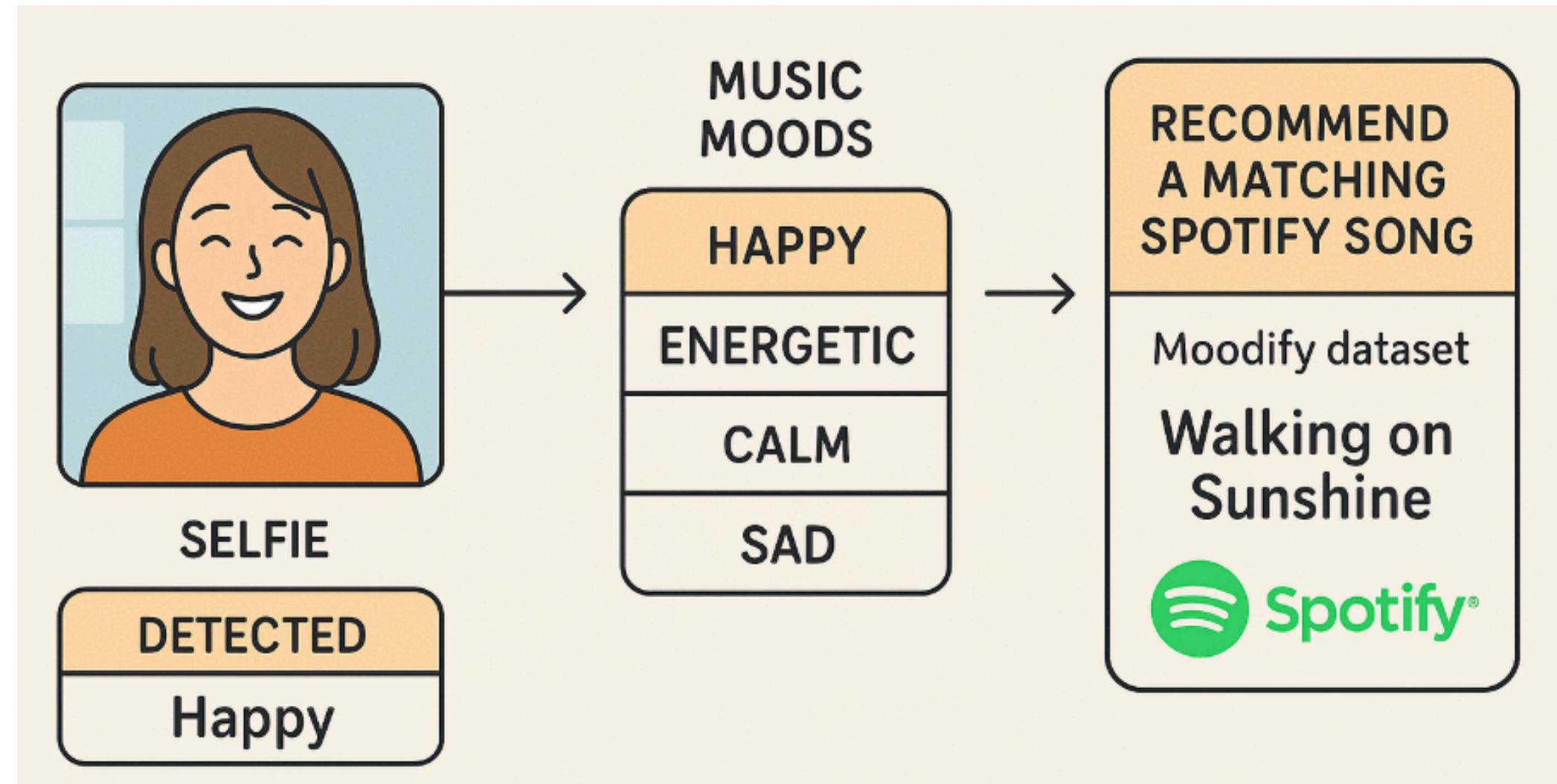


## OBJECTIVES

# WHAT ARE OUR OBJECTIVES?

- 1 Recommend music based on your mood.
- 2 Use AI to simplify music choices.
- 3 Ensure a smooth, private user experience.

## METHODOLOGY



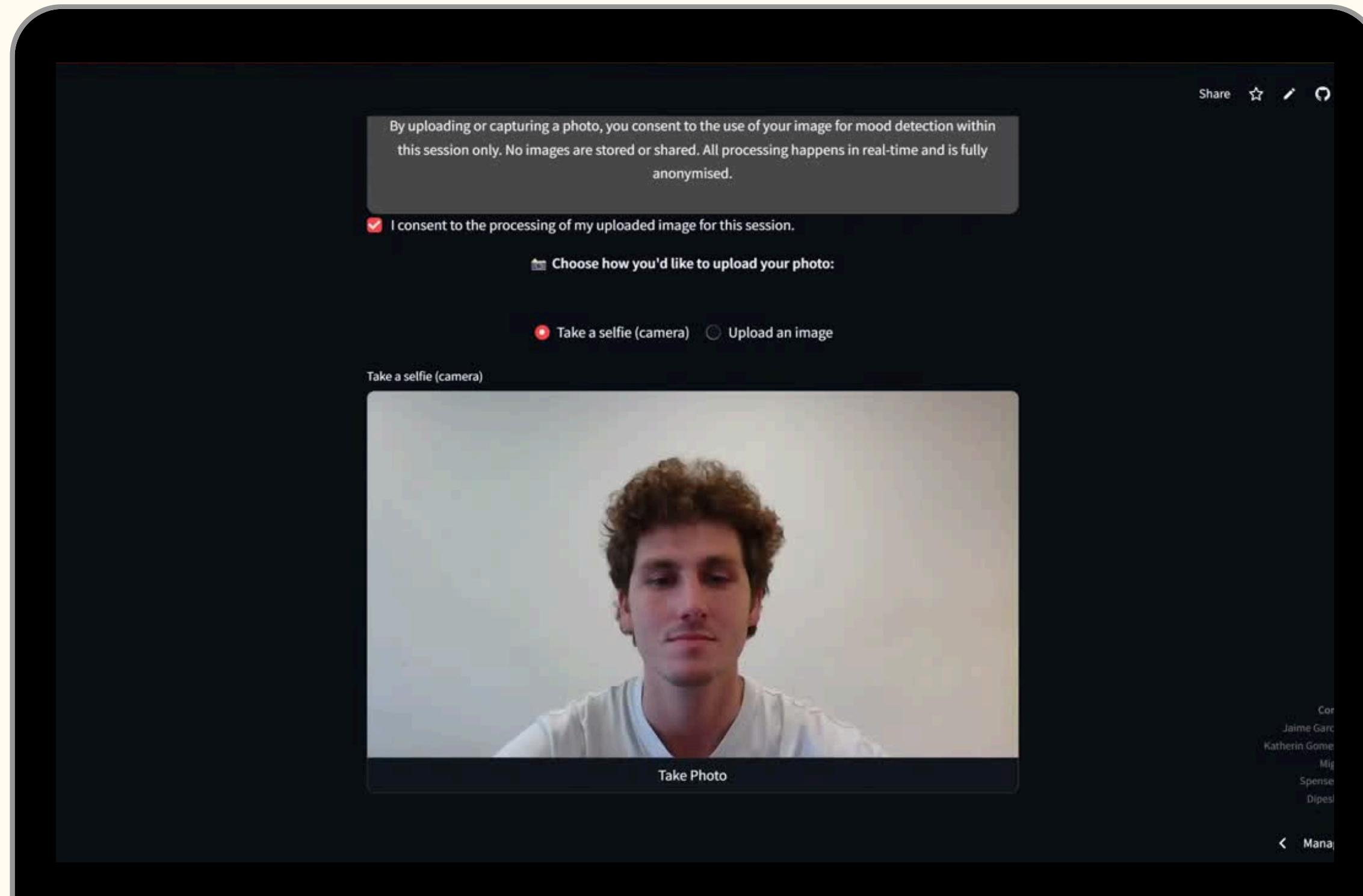
Used a pre-trained AI model and **finetuned on FER-2013 dataset** to detect facial emotion from a selfie.

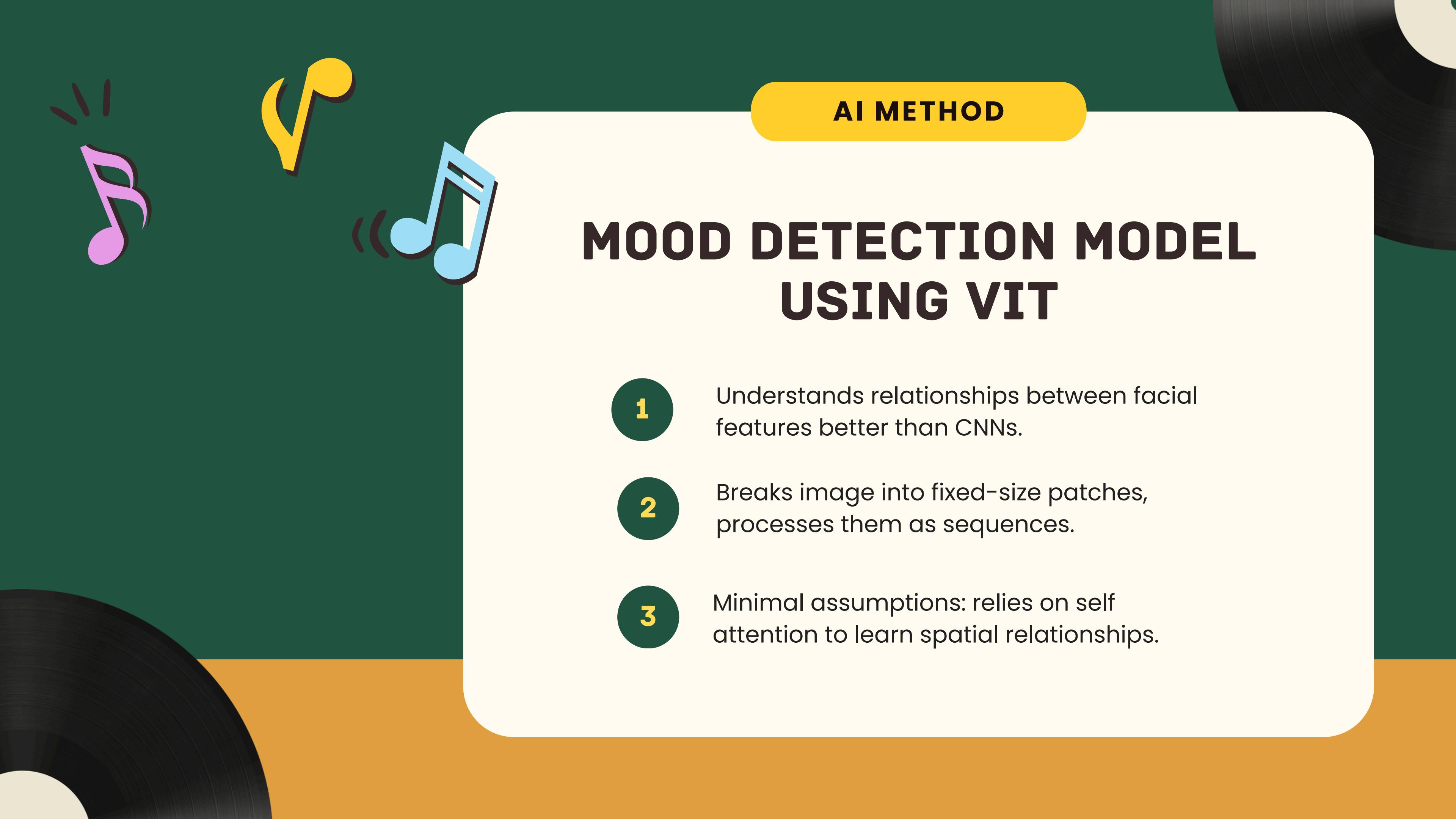


Map the detected emotion to one of four music moods from the **Moodify dataset** and recommend a song.

**DEMO**

# LET'S SEE HOW THIS WORKS!



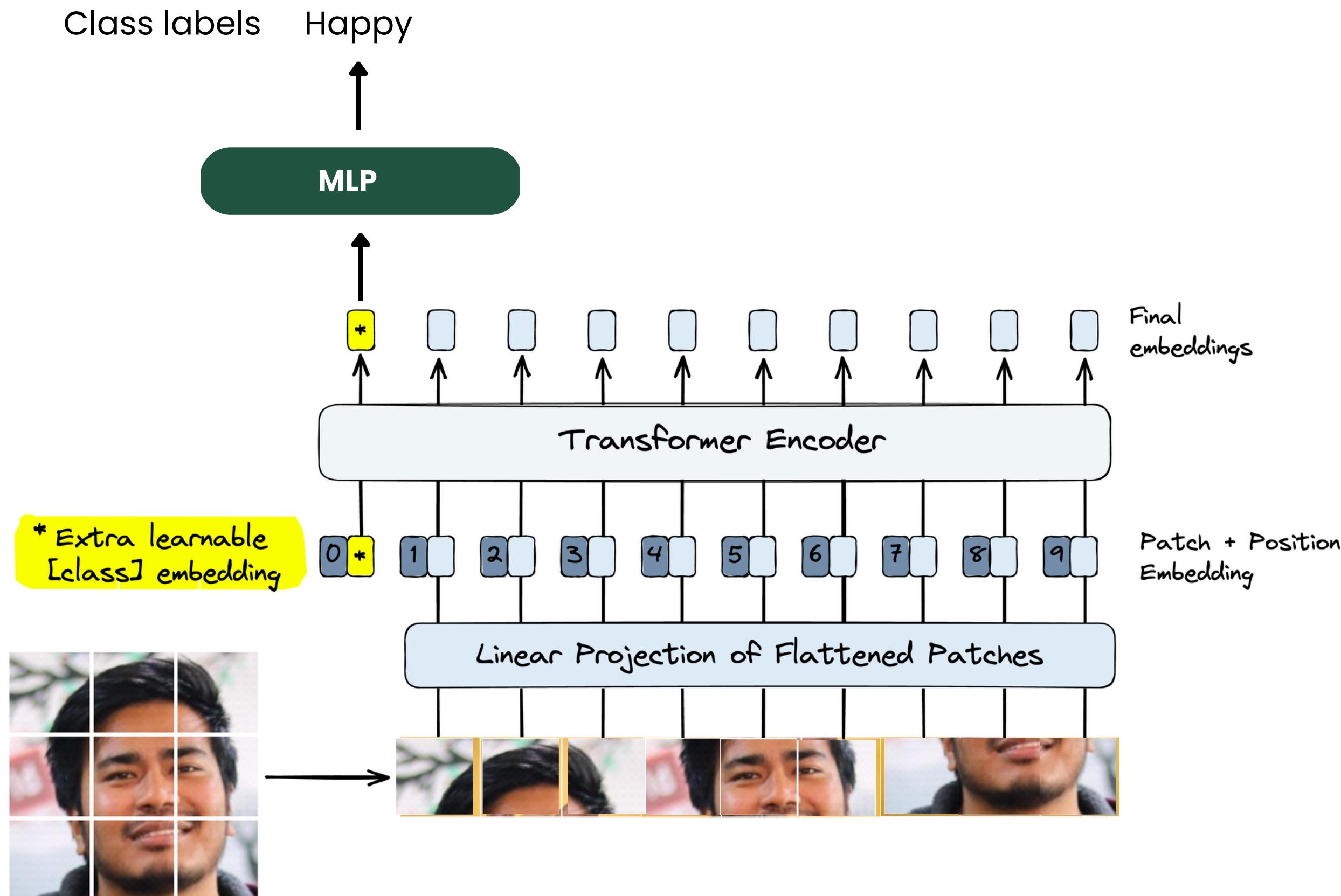


AI METHOD

# MOOD DETECTION MODEL USING VIT

- 1 Understands relationships between facial features better than CNNs.
- 2 Breaks image into fixed-size patches, processes them as sequences.
- 3 Minimal assumptions: relies on self attention to learn spatial relationships.

# HOW OUR MODEL WORKS?



# EVALUATION

## Performance Metrics

1

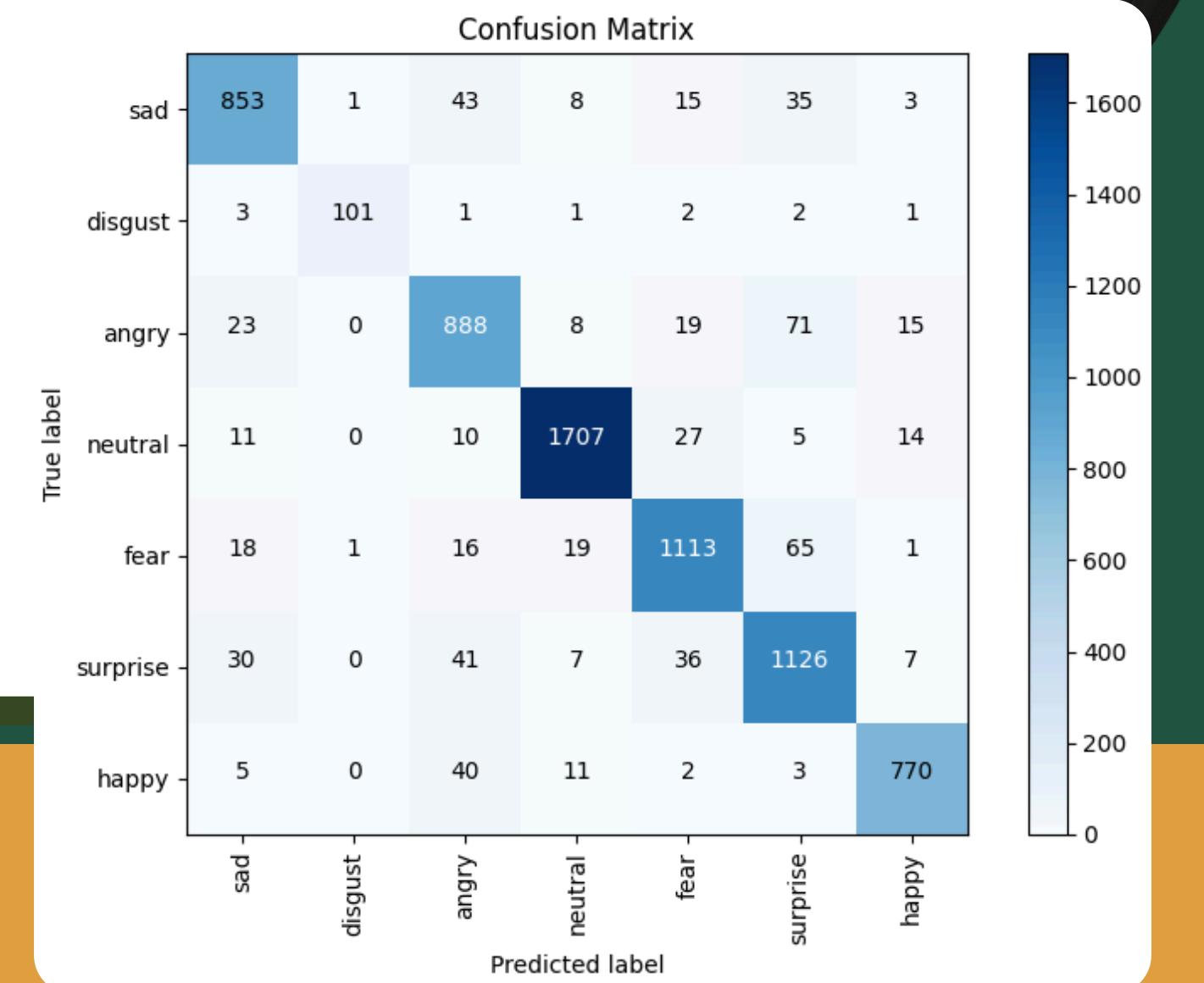
F1 score: 91.39%

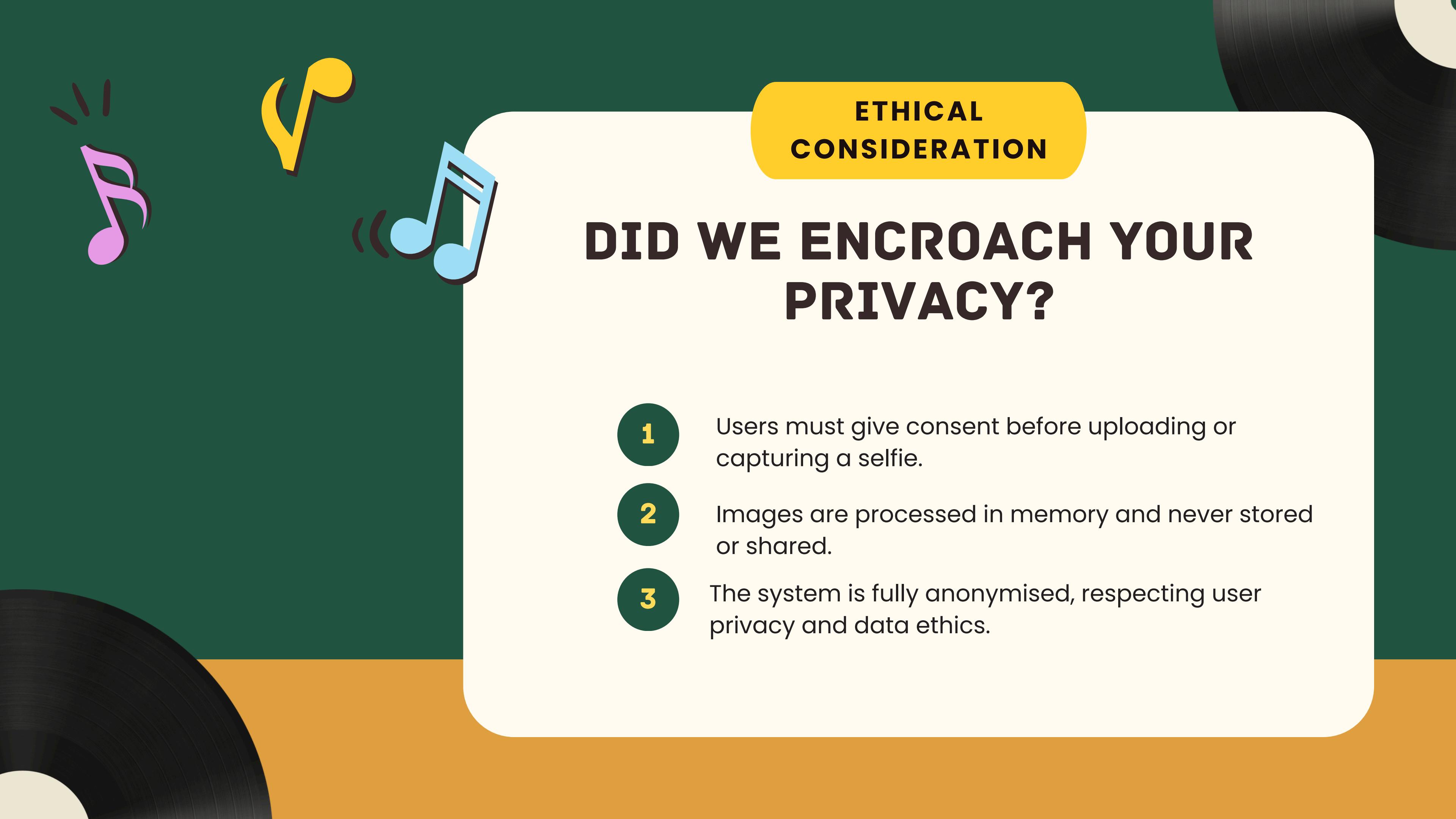
2

Accuracy: 91.36%

**For each label, Recall ~> 86% and  
Precision ~> 85%**

3





## ETHICAL CONSIDERATION

# DID WE ENCROACH YOUR PRIVACY?

- 1 Users must give consent before uploading or capturing a selfie.
- 2 Images are processed in memory and never stored or shared.
- 3 The system is fully anonymised, respecting user privacy and data ethics.



# THANK YOU!

See our members on Pod

