

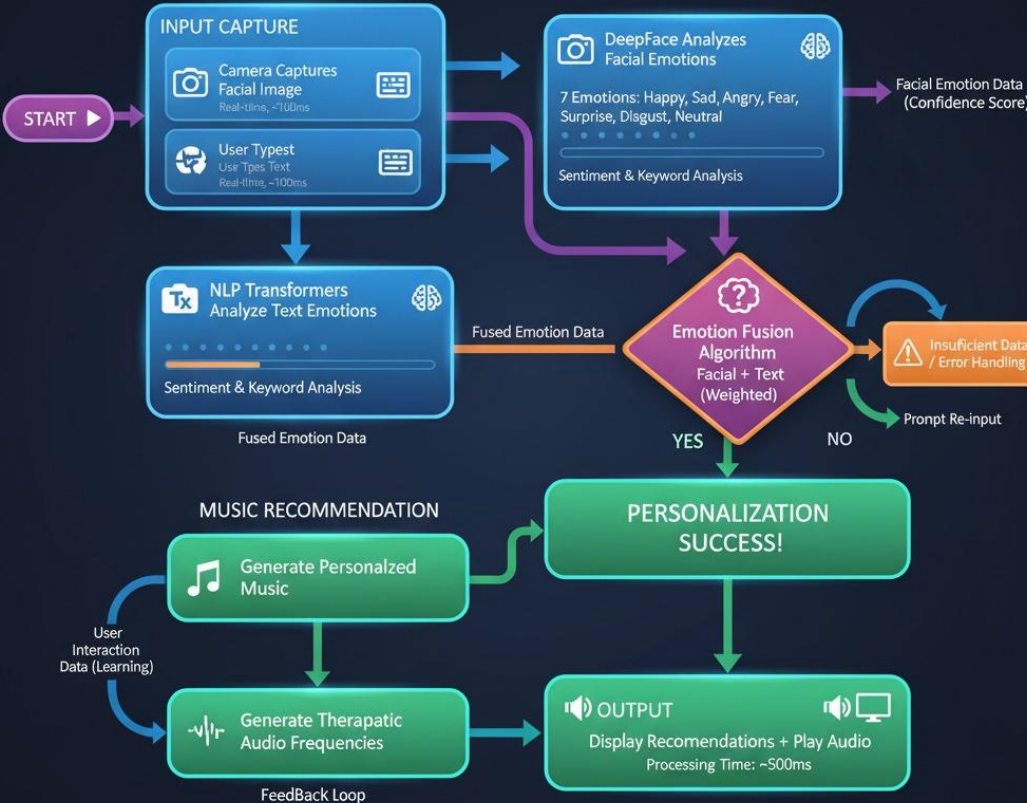
SMART INDIA HACKATHON 2025



- **Problem Statement ID** - SIH 25092
- **Problem Statement Title** - Development of a Digital Mental Health and Psychological Support System for Government of Jammu and Kashmir
- **Theme** - MedTech / BioTech / HealthTech
- **PS Category** - Software
- **Team ID** - 528
- **Team Name** - Team Y.M.I.R.
- **Team Mentor** - Dr. Nitin Jain



Y.M.I.R Real-Time Emotion Processing Pipeline



Real-time, Secure, & Adaptive



Y.M.I.R.

Yielding Melodies for Internal Restoration

An AI-powered mental health and wellness platform combining emotion detection, music therapy, binaural/isochronic beats, meditation, journaling, and community support.

TECHNICAL CONTRIBUTION

TECH STACK

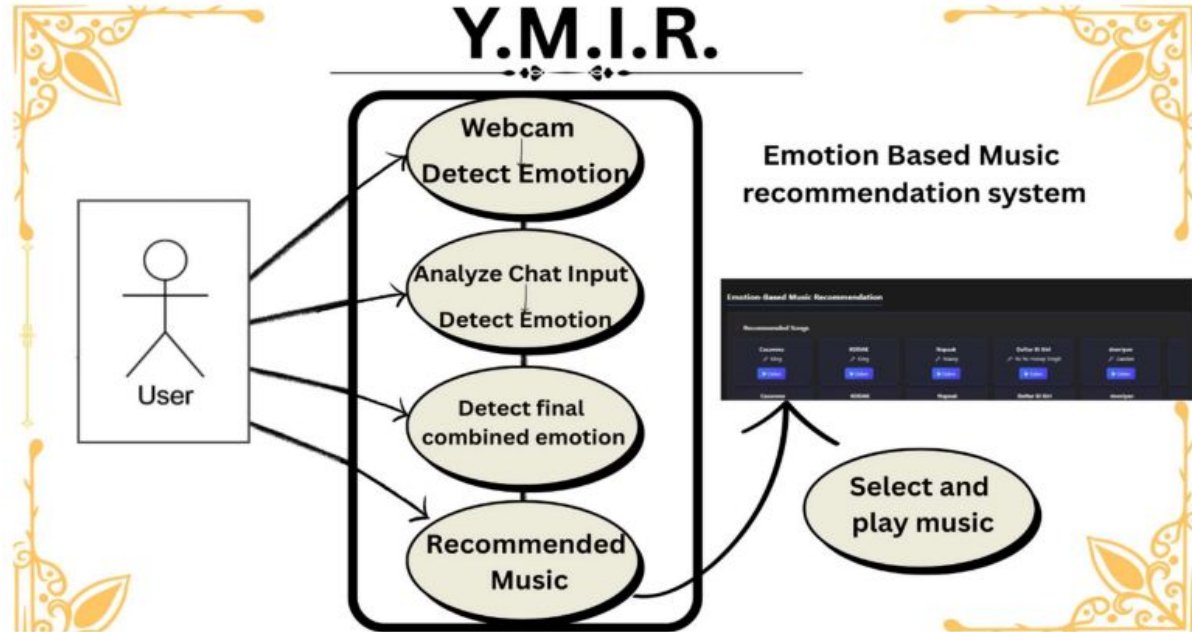
Frontend: HTML, Tailwind CSS, JavaScript

Backend: Flask (Python), SQLAlchemy (SQLite for dev, scalable to cloud DB)

AI/ML: DeepFace (CV), Transformers (NLP), Fusion Algorithm, Recommendation Engine

Experimental Section: Binaural & Isochronic Beats Generated using soundfile & simpleaudio

Database: Firebase Firestore, SQLite



SEQUENCE DIAGRAM

FEASIBILITY & VIABILITY



TECHNICAL FEASIBILITY

Uses proven AI & web technologies
Cloud-ready deployment
Regular updates of models & datasets

MARKET POTENTIAL

Growing demand for digital mental health solutions
Service-based subscription model
Institutional adoption (corporates, universities)

VIABILITY

Financially sustainable through recurring revenue

Minimal manual intervention post-deployment

POTENTIAL CHALLENGES:

Model accuracy & scalability
Data privacy & security
Continuous maintenance

STRATEGIES FOR OVERCOMING:

Regular fine-tuning with new, high-quality data, and continuous music scraping as well as user surveys for further improvement
Robust cloud infrastructure for seamless scale and optimal performance
Advanced encryption and fully automated updates for enhanced security

NOVELTY

AI-driven Music Recommendation & Therapy

Provides personalized emotional healing through intelligent music curation and adaptive AI therapy, going far beyond simple manual song selection (like Spotify).

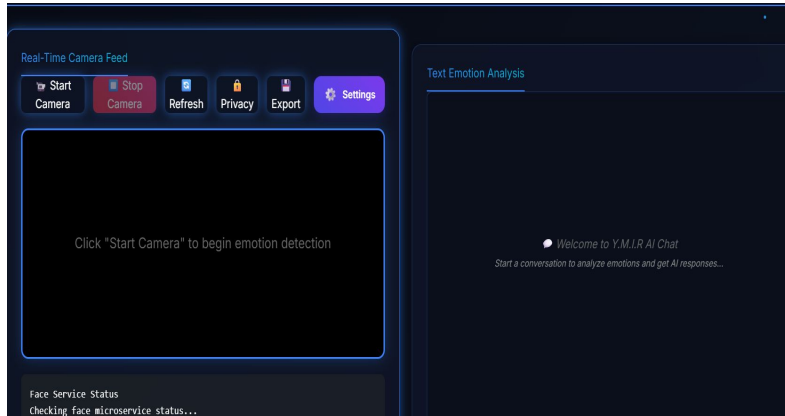
Experimental Beats for ‘Brain Entrainment’

Binaural Beats: Uses headphone-based dual-frequency tones that synchronize brainwaves, helping users achieve states of deep relaxation, focus, or stress relief.

Isochronic Beats: Employs rhythmic single-tone pulses audible without headphones, designed to naturally entrain the brain for improved calmness, concentration, and emotional balance.

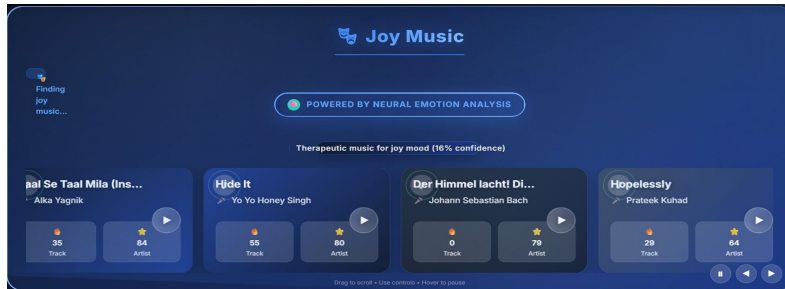
GUI IMPLEMENTATION

1

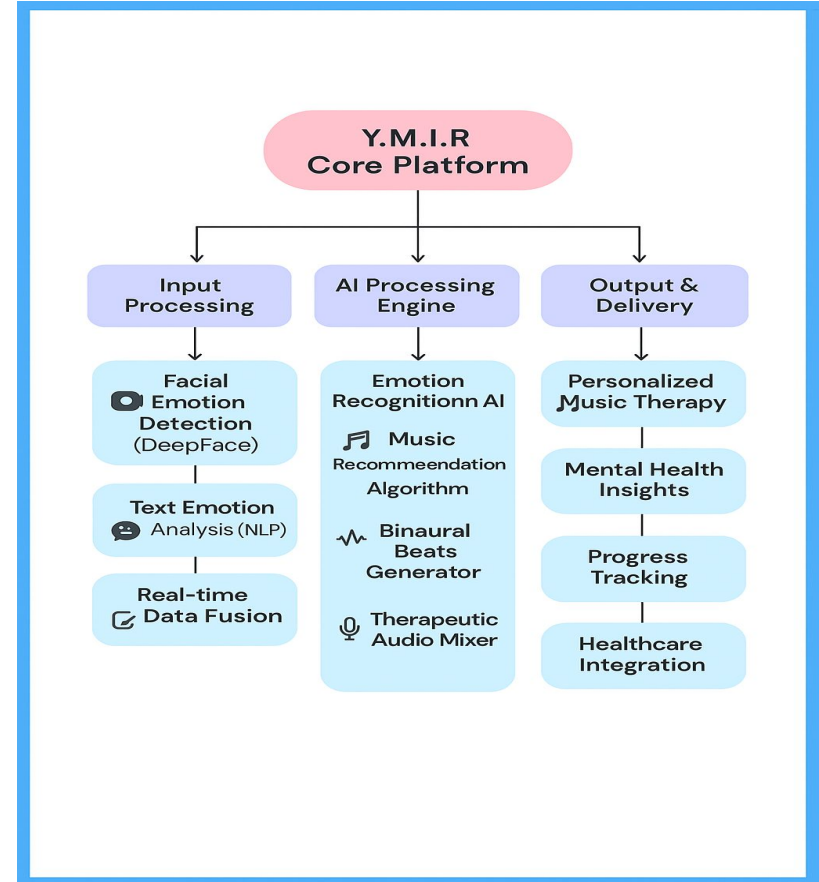


Easy to use GUI

2



Check all Recommendation
based on Emotions



FUTURE SCOPE

AI-based Movie Recommendation & Therapy

Movie recommendation system that analyzes your preferences and viewing habits to suggest personalized films from IMDB. It delivers smarter, more engaging entertainment by matching content to your unique tastes.

Online Soft Gaming Sessions with AI Background Music

Creating immersive online soft gaming sessions enhanced with AI-generated adaptive background music for a next-level, stress-free gaming experience. This platform combines casual gameplay with dynamic soundscapes, shaping the future of interactive entertainment.

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