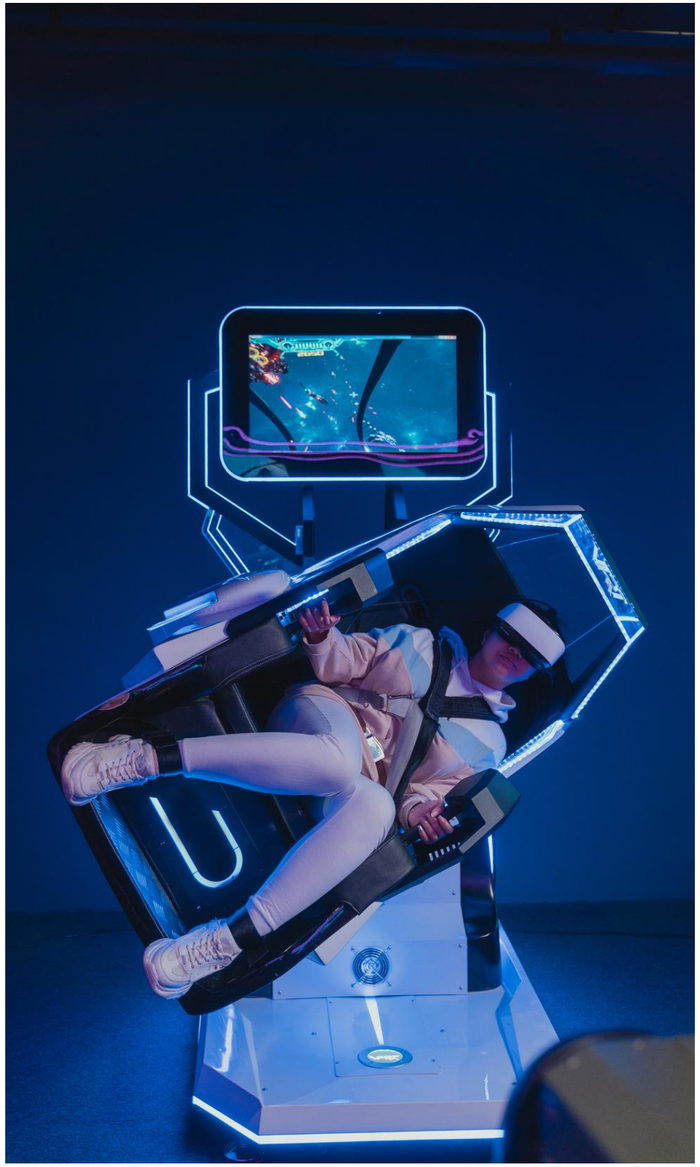
AIONIC - DEVELOPMENT OF AN AI-BASED MUSIC COMPOSITION SYSTEM

Contents

Sr. No	Title	Slide No
01	Project Overview	01
02	Problem Statement	02
03	Proposed Solution	03
04	Project Objective	04
05	Key Features	05
06	Future Enhancements	06
07	Technical Stacks	07
08	Workflow / System Flow	08
09	Conclusion	09



Project Overview

- AIONIC is an AI-based system for automatic music composition
- Generates melodies according to user mood and inputs
- Uses Machine Learning & Deep Learning for emotion and music analysis
- Integrates Spotify API for mood-based playlist suggestions
- Delivers a personalized, intelligent, and user-friendly music experience

Problem Statement

“There is no AI system that can detect a user’s mood and sentiment from input, generate personalized music, and recommend Spotify songs automatically.”

Proposed Solution

01 Detects user mood and sentiment from text or image inputs.

02 Generates personalized AI-based music matching the detected mood.

03 Recommends Spotify playlists aligned with user emotions.

04 Provides an interactive platform to play AI-generated and Spotify music seamlessly.

PROJECT OBJECTIVE

- Provide personalized music experiences based on real-time mood.
- Use AI for sentiment analysis and emotion detection.
- Automatically generate music and suggest Spotify playlists.
- Enhance user engagement and emotional well-being through music.

Key Features

01 AI Mood & Sentiment Detection: Automatically identifies user emotions from text or image inputs.

02 Personalized Music Generation: Generates AI-composed music tailored to the detected mood.

03 Spotify Playlist Integration: Recommends songs that match the user’s emotional state.

04 Interactive Playback: Seamlessly plays AI-generated tracks and Spotify playlists in one platform.

05 User History & Tracking: Records past moods, prompts, and music for easy access and reference.

Future Enhancements

01

AI Mood & Sentiment Detection

Instantly identifies emotions from text or image input.

02

Personalized AI Music Generation

Composes music that matches the user’s detected mood.

03

Spotify Playlist Recommendations

Suggests songs that align with emotional context.

04

User-Friendly Interactive Playback

Allows seamless playback of AI music and Spotify tracks.

Technical Stack

Frontend & Backend

HTML, CSS, JavaScript, Django, Python

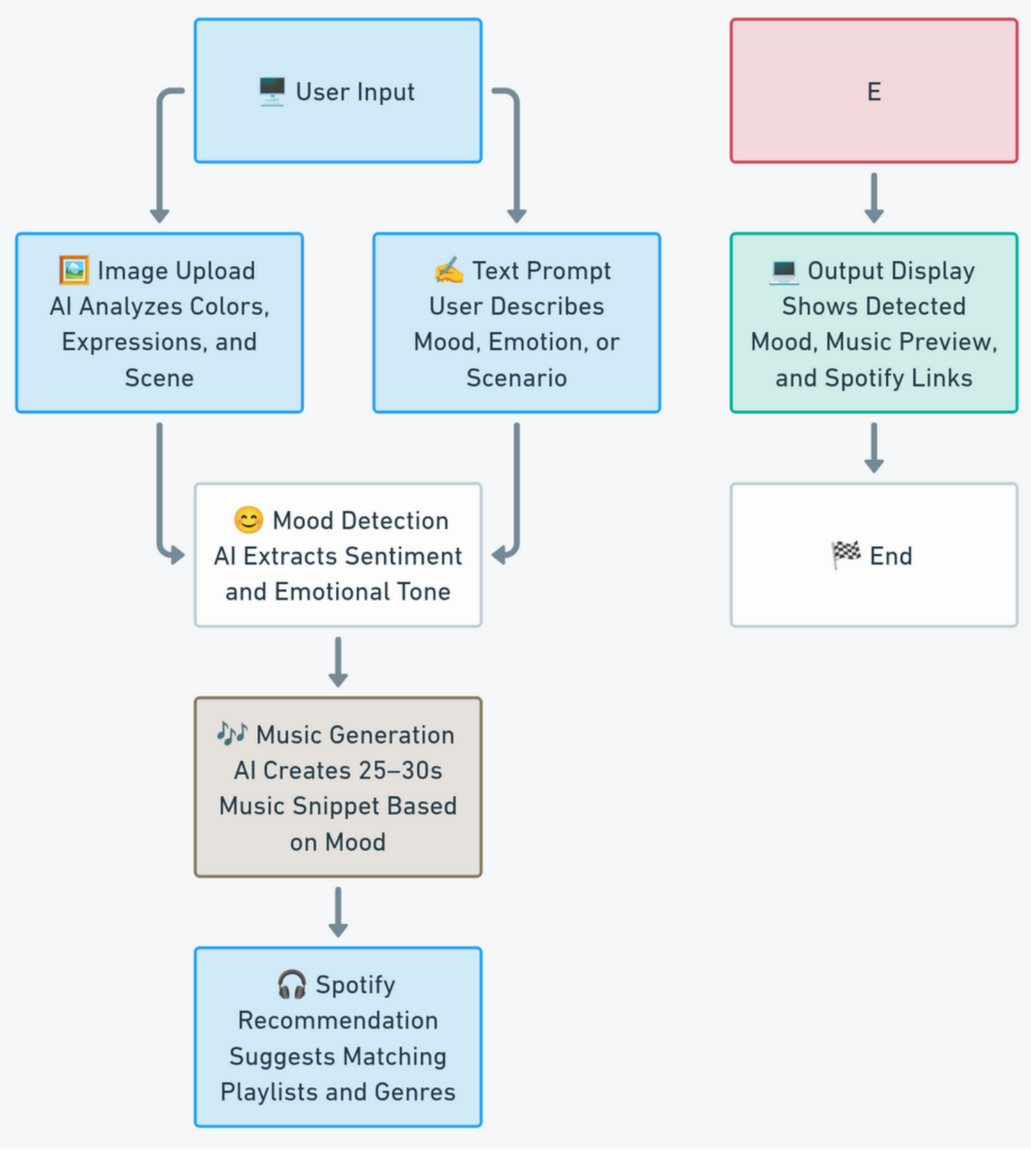
AI Models

Sentiment Analysis, Emotion Detection, Music Generation

API & Database

API, SQLite/PostgreSQL

Workflow / System Flow



Conclusion

- AIONIC provides a unique AI-driven music experience personalized to emotions.
- Integrates sentiment analysis, AI music generation, and Spotify API in one platform.
- Enhances creativity, engagement, and emotional well-being.
- Demonstrates real-world application of AI in music, wellness, and entertainment.

Thank You..!