MoodSip

AI-Powered Beverage Recommendation and Awareness Platform

Project Proposal

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Contents

1 Introduction

Consumers today drink a variety of beverages—ranging from fresh juices and energy drinks to alcoholic beverages—without a clear understanding of their nutritional impact, alcohol content, or suitability for individual health conditions or moods. Despite growing awareness about healthy consumption, there is no single interactive platform that helps users make informed beverage choices while considering both non-alcoholic and alcoholic options.

MoodSip addresses this gap by combining artificial intelligence with nutritional knowledge to recommend beverages tailored to a user's mood and health, while also providing educational information about each drink's benefits, drawbacks, and responsible consumption guidelines.

2 Problem Statement

People often choose beverages based on taste, habit, or social context rather than informed health decisions. There is limited access to a centralized, easy-to-use platform that provides:

- Smart, personalized beverage recommendations across all categories
- Reliable health-related information about both alcoholic and non-alcoholic drinks
- Awareness of both positive and negative effects of common beverages
- Guidance on responsible alcohol consumption

As a result, individuals may consume drinks that are unsuitable for their health, energy needs, or specific situations.

3 Objective

To develop an AI-driven web application that:

1. Recommends beverages (including alcoholic options) based on a user's current mood, activity level, health condition, or social context
2. Educates users about the nutritional benefits, alcohol content, and potential risks of various beverages
3. Provides responsible consumption guidelines for alcoholic beverages
4. Encourages healthier drinking habits through informed decision-making

4 Features

4.1 Recommendation System

- Users input their current mood, activity, health state, or occasion (e.g., "social gathering," "relaxing evening," "post-workout")

- The AI model processes this input and suggests suitable beverages with alcohol content considerations
- Example: "Feeling stressed" → recommends "Herbal tea" or "Moderate red wine (with consumption guidelines)"

4.2 Beverage Knowledge Base

- Database covering a wide range of drinks (juices, sodas, coffees, energy drinks, beers, wines, spirits, cocktails)
- Each entry includes:
  - Nutritional facts and alcohol content (where applicable)
  - Health benefits and risks
  - Responsible consumption guidelines
  - Calorie content and sugar levels
  - Healthier alternatives and moderation tips

4.3 Interactive Information Panel

- Allows users to explore beverages by category, health concern, alcohol content, or nutrient type
- Includes visual charts (alcohol percentage, sugar levels, calories, hydration index)
- Age verification system for alcoholic beverage information

4.4 Responsible Consumption Features

- Safe drinking limits and guidelines
- Alcohol unit calculator
- Alternative non-alcoholic suggestions
- Health condition warnings (pregnancy, medications, specific health issues)

5 System Architecture

6 Workflow

1. The user enters a phrase describing their mood, condition, or occasion
2. The backend uses an AI model (e.g., DistilBERT) to identify the sentiment or context
3. The backend queries the Supabase database for beverages tagged with corresponding properties, including alcohol content considerations

Layer	Tool	Purpose
Frontend	Bolt.new (Next.js + React)	Rapid development and UI generation
Backend	Render / Railway (FastAPI)	Processes requests and serves recommendations
Database	Supabase (PostgreSQL)	Stores beverage data and user preferences
AI Model	Hugging Face / Google Gemini	Performs mood and sentiment analysis
Hosting	Vercel	Hosts frontend with scalability

Table 1: System Architecture Overview

4. The system returns top beverage recommendations along with nutritional pros, cons, and consumption guidelines

5. The frontend displays results interactively with appropriate warnings and recommendations

7 Expected Outcomes

- Increased public awareness about the health impact of various beverages, including alcohol
- Easy-to-use platform for informed beverage selection across all drink categories
- Promotion of responsible alcohol consumption practices
- Encouragement of healthier daily beverage choices
- Potential for integration with fitness and wellness applications

8 Future Scope

- Integration of voice-based inputs and conversational recommendations using Gemini API
- Community-based drink rating and reviews with moderation features
- Gamification: badges and levels for consistent healthy choices
- Personalized nutrition integration with wearable health data
- Barcode scanner for commercial beverage products
- Local bar/restaurant integration with responsible serving information

9 Conclusion

MoodSip aims to bridge the gap between consumer preference and comprehensive beverage awareness. By leveraging AI for personalized beverage recommendations across both alcoholic and non-alcoholic categories, and offering accessible educational information with responsible consumption guidelines, this project aspires to promote mindful, informed, and health-oriented beverage consumption among users in various contexts.

Note: The platform will include appropriate age verification and responsible drinking messaging in compliance with alcohol beverage industry guidelines.