AI / ML Project

Good Health and Well Being
Presented by: Team Core

Bankatlal Badruka College for Information Technology

Team Members:
Sundaram Kumar Mishra
S. Vijaya Lakshmi
K. Lakshmi Priya
P. Abhinav Reddy
N. Manish

1. Introduction

Healthy living requires consistency in habits like diet, exercise, and sleep. However, most people struggle due to fragmented advice sources, lack of motivation, and insufficient real-time support. This project proposes an AI-powered personal health coach that delivers empathetic, real-time wellness suggestions tailored to the user's emotional and behavioral data—thereby promoting well-being with intelligent, data-driven care.

2. Problem Statement

Individuals lack personalized feedback for sustaining healthy routines. Existing wellness tools are fragmented, non-adaptive, or emotionally unaware. Access to real-world coaching is expensive and may carry social stigma. There's a critical gap in holistic, accessible solutions that integrate physical and mental wellness.

3. Objective

To design a lightweight, personalized AI solution that:
- Tracks and analyzes health behaviors.
- Detects user mood and stress levels using basic NLP.
- Provides daily, adaptive recommendations personalized to each user.
- Encourages healthier decision-making through continuous engagement.

4. Why This Problem?

Rising rates of lifestyle diseases and mental health concerns demand scalable, consistent, and personalized wellness tools. While wearables and fitness apps give measurements, they often lack motivation and emotional context. Our AI agent bridges that gap—offering actionable, companion-like guidance toward better physical and mental health.

5. Solution

A mobile-first conversational AI assistant offering:
- Text-based emotional check-ins and guidance.
- Simple emotional context detection.
- Health behavior trend tracking (manual or via APIs).
- Adaptive, empathetic wellness coaching aligned with real-time mood and goals.

6. Overview

Our health coach combines emotion-aware AI with real health tracking, acting both as a wellness guide and a supportive digital companion. It resembles the functionality of a fitness tracker, a mental health chatbot, and a digital coach—all rolled into one simple, responsive mobile assistant.

7. Technical Implementations

AI/NLP Training: Used Python in Google Colab for emotion and intent detection models.
Emotion Analysis: Implemented basic keyword and rule-based sentiment analysis without external libraries like Transformers or spaCy.
User Input Methods: Manual logging and integration with Google Fit using API keys for data access.
Advisory Logic: Personalized recommendations based on analyzed health behavior patterns.
Architecture: Lightweight, mobile-first application supported by adaptive backend logic.
Privacy: Ensured secure handling of user data, API access via authenticated keys, and feedback-based personalization.

8. Tools and Resources Used

- Google Colab – For prototyping and model development
- Python – Core programming language
- APIs – Google Fit API with API key-based access for collecting health metrics
- Mobile SDKs – For Android/iOS interface
- Open Data Sources – Health and wellness datasets for training and logic testing

9. Conclusion

This AI-powered assistant is an innovative, human-centric health-coaching solution built with accessible tools such as Google Colab and Python. It supports users holistically by merging physical habit tracking and mental wellness support, creating a personalized and scalable platform for better everyday living. By embedding emotional intelligence into routine health interactions, this coach can redefine how users think about long-term well-being.