

Project Case Study: Healthify - Your AI Wellness Assistant

GitHub Repository: <https://github.com/mukul-mschauhan/healthify>

Live App Link: <https://healthify2024.streamlit.app>

Problem Statement

In today's fast-paced and stressful world, individuals are increasingly seeking personalized health guidance. However, most people rely on generic fitness advice, costly dietitian consultations, or inaccurate web searches. There is no real-time, AI-powered assistant that offers customized fitness, nutrition, and wellness plans based on user-specific data like age, weight, medical conditions, and lifestyle. This lack of accessible personalized wellness support has resulted in suboptimal health outcomes and growing healthcare costs.

Business Objective

The objective of the Healthify project is to provide an AI-powered virtual wellness coach that offers: - **Customized fitness and diet plans** - **Mental well-being tips and tracking** - **Symptom-based recommendations** - **Voice and text-based interaction**

By democratizing access to wellness guidance through an intelligent assistant, Healthify aims to empower users to take control of their health and reduce reliance on expensive or inaccessible human consultants.

Target Users

- Working professionals with limited time for wellness planning
 - People with chronic conditions needing regular support
 - Fitness beginners or enthusiasts seeking personalized plans
 - Wellness-focused corporates aiming to support employee health
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Proposed Solution

Healthify uses Generative AI capabilities (Gemini model by Google) integrated into a Streamlit web app to deliver:

- **Personalized wellness recommendations:** Based on user input (age, weight, goals, etc.)
 - **LLM-based assistant:** Conversational flow that mimics human wellness experts
 - **Modular wellness categories:** Including Fitness, Diet, Mental Health, and Sleep
 - **Lightweight and deployable UI:** Accessible via web with no app download required
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Tech Stack

- **Frontend:** Streamlit (Python)
 - **LLM Backend:** Google Gemini 1.5 API
 - **Prompt Engineering:** Domain-specific context prompts for different wellness goals
 - **Libraries:** Python, dotenv, requests, langchain_google_genai
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Architecture Overview

1. User enters personal wellness goals and data
 2. Streamlit UI sends the request to Gemini via LangChain
 3. Prompt includes structured health and fitness context
 4. Gemini generates targeted wellness suggestions
 5. Output is formatted and displayed via dynamic Streamlit layout
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Business Impact & Industry Relevance

Healthify is a blueprint for how AI can transform preventive care and lifestyle management in the following ways: - **Reduction in dependency on traditional consultation** - **Empowerment of users to self-monitor and act on their wellness** - **Scalable deployment for wellness startups, fitness brands, and insurance partners**

Future Scope

- Integration with wearables (e.g., Fitbit, Apple Health)
 - GPT/LLM fine-tuning with medical datasets
 - Real-time health tracking dashboard
 - Multilingual voice assistant for broader accessibility
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Conclusion

Healthify bridges the gap between personalized wellness coaching and AI-driven accessibility. It demonstrates the use of cutting-edge GenAI tools to deliver real-world impact in preventive healthcare. This solution is poised to empower millions with tailored fitness, nutrition, and mental wellness support—right at their fingertips.

For access to the complete codebase and to contribute, visit: <https://github.com/mukul-mschauhan/healthify>

Explore the working prototype at: <https://healthify2024.streamlit.app>