AI-ENHANCED HEALTH-CONSCIOUS FOOD CHOICES APP

INTRODUCTION

- The primary objective of this project is to develop a comprehensive solution utilizing Generative AI to empower a chatbot that aids users in making informed and health-conscious food choices. This innovative application will leverage technology to scan and analyze restaurant menus, determining the healthiness of food items based on specific nutritional parameters.

KEY FEATURES AND CHALLENGES:

Menu Scanning and Analysis (Data Collection):

Implement automatic data collection with Optical Character Recognition (OCR) technology to scan physical menus from restaurants or retrieve menus from food ordering apps, web apps, restaurant websites, or other credible digital sources.

CHALLENGES:

Challenge: Ensuring accurate text extraction from varied menu layouts and styles.

Food Evaluation Algorithm :

Create a simple algorithm to classify menu items as healthy or unhealthy, based on nutritional information like calorie count, fats, sugar, protein content, or other relevant factors determined through research.

Challenge: Determining the criteria for defining 'healthy' food.

Interactive Chatbot with Generative AI:

Integrate a basic chatbot capable of interacting with users to gather specific dietary preferences or restrictions. Utilize this information to provide personalized food recommendations.

Challenge: Designing the chatbot interaction to be natural and user-friendly.

User Interface (UI) - Bonus:

Design a simple yet effective UI that facilitates easy navigation and interaction for menu scanning and communication with the chatbot.

Challenge: Ensuring the UI is intuitive and accessible for all users, including those with limited tech experience.

Data Privacy:

Ensure secure and responsible handling of any user data collected, adhering to basic data privacy principles and regulations.

OVERVIEW OF TECHNOLOGY STACK :

Frontend: React Native

- Mention the choice of using React Native for the frontend development.
- Highlight React Native's cross-platform capabilities for mobile application development.

Backend: Python (PyTesseract, OpenCV)

- Emphasize the backend technologies, specifying Python as the primary language.
- Introduce the integration of PyTesseract for Optical Character Recognition (OCR) and OpenCV for image processing.

CONCLUSION :

This project endeavors to merge technology with nutrition, offering a practical tool for health-conscious individuals. It presents an opportunity to explore OCR, basic AI and chatbot development, and fundamental UI/UX design – all crucial skills in the tech industry. The project's success will be gauged by its ability to accurately analyze menu items and provide valuable dietary recommendations to users.

THANK YOU