

Project Overview:

Our project, CoreFoods, aims to develop a mobile fitness application that will aid users in creating healthier habits through exercise and nutritional tracking, combining AI driven recommendations. The purpose of CoreFoods is to provide individuals with access to an effective tracker with a fitness focused AI, addressing the challenges of maintaining healthy habits and developing new routines.

The goals for CoreFoods will be to:

- Promote consistent healthy habits through our focused AI
- Increase user engagement through progress tracking
- Create a simple system to track nutritional intake and exercise done

The objectives for CoreFoods will be to:

- Launch the application on the app store
- Implement calorie deficit/surplus tracker
- Implement a system to calculate amount of calories burned
- Implement the ChatGPT API into the mobile app

Project Scope:

In scope:

- Development for a android application
- Implementing ChatGPT API
- Implementing a user login system
- Developing a monolith database in SQLite
- Implementing a user input for time and intensity of exercises

Out of scope:

- Developing an IOS application
- Developing a desktop version of the application
- Developing a microservice based database
- Implementing a GPS based step tracker
- Integrating with wearable devices

The project will be developed using Android studio with the project ending once the app has been released onto the app store.

Project Objectives:

- The app will be launched onto the android app store by the end of the deadline once system testing has been completed and the app has achieved all the set out requirements.
- A calorie deficit/surplus tracker will be implemented using the users input for their nutritional intake, a mathematical algorithm taking the users input and calculating calories gained or lost
- A calories burned tracker will be implemented using the users input for their chosen exercise, intensity and time taken, a mathematical algorithm taking the users input and calculating calories burned
- An AI chatbot will be implemented into the app using the ChatGPT API which users can interact with, the AI given the Users imputed and calculated information to suggest diets or exercises

Proposed Solution:

Our proposed solution for the CoreFoods project is the development of an android based mobile fitness application that uses AI and data analytics to provide the user progress tracking and a personalized fitness experience. The app will include a user input based nutritional and exercise tracker which will be used to calculate relevant data for the user as well as for the inbuilt AI to design a fitness plan for the user to follow. The design of the CoreFoods app will be focused on motivation and accessibility, making sure that all users no matter their fitness level can make use of the app. By combining user based tracking, data analytics and AI the Solution is in line with the project's objectives.

Development will be approached using bi-weekly sprint sprints with sprint meetings where feedback is given. With the steps in our project being Requirement gathering, Design, Development, Testing and then finally deployment.

The objective to launch the app on the app store before the end of the deadline will be achieved through regular Agile sprints towards the deadline.

The objective to implement the calorie deficit/surplus tracker, the calories burned tracker and the AI chatbot will be achieved through consistent development through each sprint with meetings giving feedback and testing throughout the project.

LSEP – Professionalism:

Throughout the CoreFoods project, the team will demonstrate professionalism by maintaining clear communication, accountability, and ethical conduct in all aspects of development. Communication will be kept respectful and constructive across all platforms, including Discord, Trello, GitHub and formal meetings. Ensuring that feedback is shared productively and issues are resolved collaboratively.

Professional standards will be upheld in the technical work produced. Code will be written clearly, securely and in a maintainable manner which will follow best practices for Android development, data handling and API integration. Version control through GitHub will be used responsibly with meaningful commit messages, code reviews and documentation to support teamwork and transparency.

Finally, professionalism will be reflected in how the team represents the project externally. Documentation, demonstrations and submissions will be clear, well-structured and aligned with academic expectations. By working collaboratively, respecting roles, and adhering to both technical and ethical standards, the team aims to deliver CoreFoods in a manner that reflects strong professional practice.