Gamification of Health WebApp Project Proposal
CS 3354 – Software Engineering

Introduction

Imagine turning your health and fitness journey into a game where every healthy meal and workout gets you closer to the next level. That's exactly what our gamified health app does. It's not just another app that tracks steps or calories, it's a personal coach, a motivator, and a game all in one. Picture earning points for snapping a photo of your latest healthy meal or creating a new recipe. Those points? They unlock challenges, push you up the leaderboard, and even make your avatar grow and evolve as you progress. Whether you're trying to lose weight, build muscle, or just feel better overall, the app and use of AI will allow adjustments to your meal plans and workouts to keep you on track. As a web-based app, it will be available on any device, you can keep up with your health goals no matter where you are. Fitness made fun, rewarding, and personal.

Objectives

- Develop an app that acts as a personal fitness coach, guiding users through their health and wellness journey.
- Use AI to generate personalized meal plans and exercise routines tailored to each user's desired outcomes, such as weight loss, muscle gain, or improved overall health.
- Enable users to earn points by uploading photos of their healthy meals, promoting accountability and engagement.
- Allow users to unlock fitness challenges and compete for top spots on the leaderboard using the points they've earned.
- Provide an option for users to post healthy recipes, such as keto or other diet-friendly options, to gain additional points.
- Incorporate a randomly generated avatar that evolves and grows as users improve their rankings, adding a fun, visual element to track progress.
- Ensure accessibility by offering a web app that users can access from any device, making health tracking convenient and flexible.

Target Audience

- **Fitness Enthusiasts** - People who are already active and regularly engage in fitness routines (running, cycling, weightlifting, etc.) and they want to track their progress more efficiently and compete with friends or others through challenges and leaderboards.
- **Weight Loss Seekers** - Individuals who are focused on losing weight, that need a structured approach. The AI-powered meal plans and workouts tailored to weight loss goals help these users stay on track. The app also offers an engaging way to monitor progress, with visual rewards (avatars), points for tracking meals, and heart rate monitoring during workouts.

Value Proposition

Our app's engaging, gamified features will seek to keep users hooked but will also encourage them to invite friends and family, driving organic growth and increasing our user base. As users interact with the app, logging meals, and tracking workouts, we'll gather valuable health data that provides insights into their dietary habits, preferences, and lifestyle choices. This data opens up opportunities to strategically target users with personalized product recommendations and advertising, creating a powerful, data-driven revenue stream.

Application Features and Description

Tools and Resources

Frontend: HTML / CSS / JavaScript(React Native)

Backend: Node.js / PostgreSQL / Redis

Infrastructure: Amazon Web Services

Technologies and Libraries: Google Maps API, WebGL, Passport.js, Smart Calories - Calories Calculator(ChatGPT AI Model to detect nutritional value from a picture of food: aistartupkit.com)