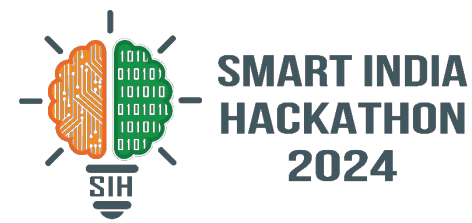# SMART INDIA HACKATHON 2024

TITLE PAGE

- **Problem Statement ID –** 1599

- **Problem Statement Title-** Student Innovation

- **Theme-** Fitness & Sports

- **PS Category-** Software

- **Team ID-** 33863

- **Team Name-** ShadeRed

Idea Title: **CoreVibe**

Proposed Solution Overview

We are going to build a web app based on Django which will leverage the use of OAuth and Health Connect API and to track fitness data of a user and give AI insight, bunch of AI features and recommendation for improving health and fitness. User can make friends and plan workout gatherings and also can get exercises recommendation based on equipments user is available with. User can set goals and their will be virtual rewards like badges for accomplishments of goals.

How it addresses the problem

Build a **web application on Django** where user will provide us with his demographics. User can socialise with their friends and plan workout gatherings.

Use of **Health Connect API** to capture user's fitness data.

Use of LLMs (Olama/HuggingFace) to give user AI insights about their fitness, also we'll give some additional features like exercise recommendation, etc.

Unique Selling Points

- Use of **LLMs** to provide **AI driven insights** and features like exercise recommender, "How was my day so far?", "Am I healthy?", etc.
- **Comprehensive Tracking:** Integrates with Health Connect to track various fitness metrics.
- **Social Features:** Make friends and plan workout gatherings.
- **Easy to navigate** and use, ensuring high user engagement.
- Setting **goals** and making **achievements.**

TECHNICAL APPROACH

Shade Red
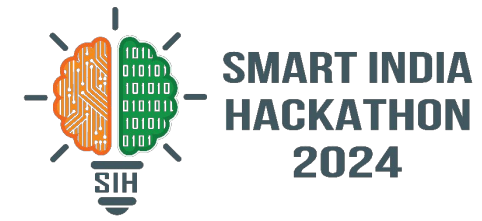
- **Programming Languages:** Python
- **Framework:** Django
- **Frontend:** React, HTML, CSS, JS
- **APIs:** Health Connect API, OAuth 2.0 for authentication
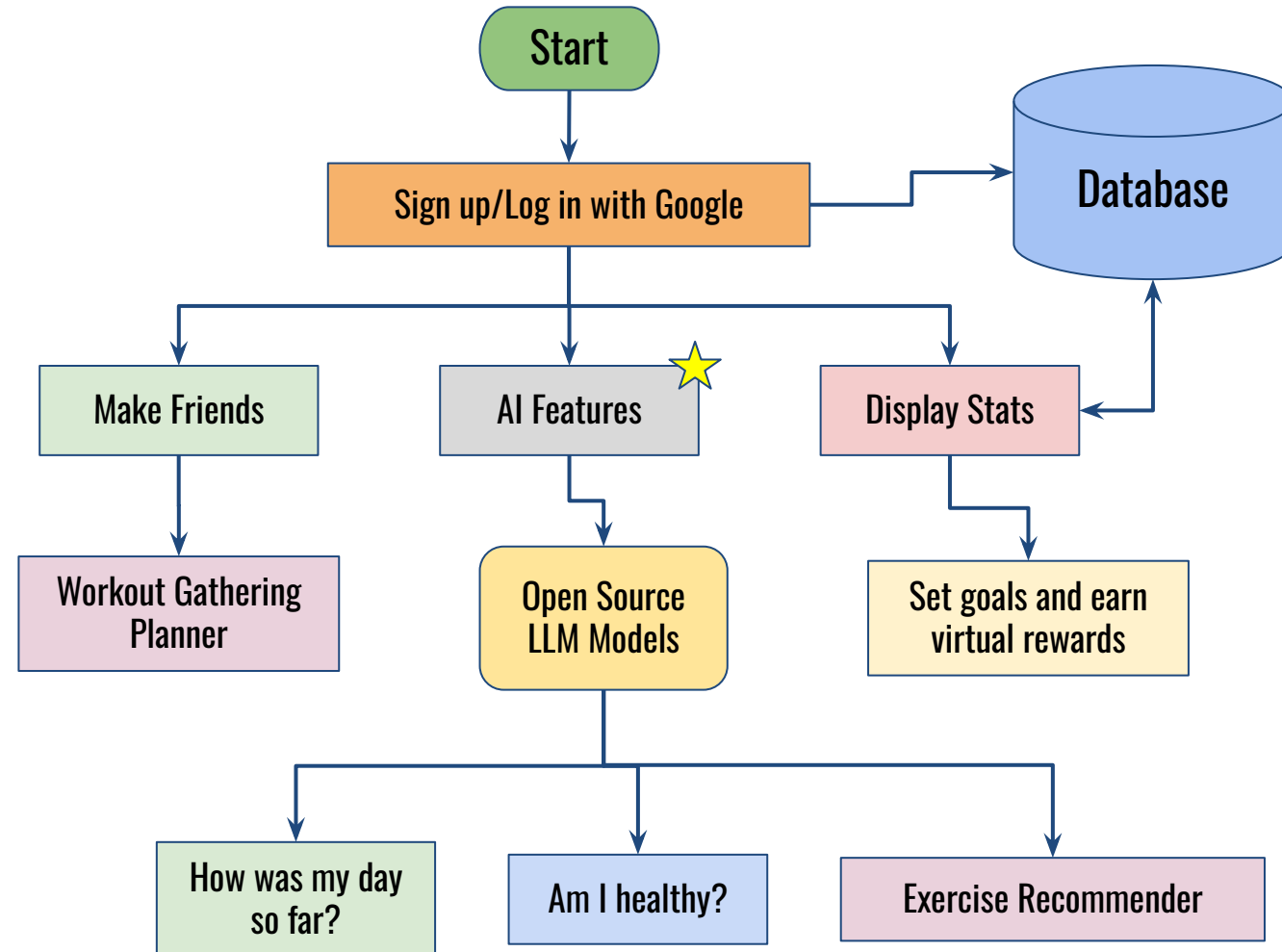- **AI Models:** Open source LLM models.
- **Database**: PostgreSQL

django | PostgreSQL | Hugging Face | Python | HTML | JS | Google Fit

```
Start
  │
  ▼
Sign up/Log in with Google ──────────► Database
  │
  ├──────────────┬──────────────┐
  ▼              ▼              ▼
Make Friends   AI Features ★   Display Stats
  │              │              │
  ▼              ▼              ▼
Workout        Open Source     Set goals and earn
Gathering      LLM Models      virtual rewards
Planner         │
                ├──────────────┬──────────────┐
                ▼              ▼              ▼
            How was my day   Am I healthy?   Exercise Recommender
            so far?
```

FEASIBILITY AND VIABILITY

Feasibility Analysis

Proven Technology: There are fine-tuned LLM models specifically for health and fitness, which can provide accurate recommendations.

High Demand: Growing interest in fitness and wellness apps creates a strong market opportunity.

Resource Availability: Access to Health Connect API and AI tools facilitates seamless development.

Mature API Ecosystem: Health Connect API is widely adopted which makes it a stable choice for integration.

Challenges and Risks

User Adoption: Convincing users to regularly interact with the app could be challenging.

Relying on third-party services like Health Connect API introduces the risk of service disruptions

Overcoming Strategies

Overcoming Strategy: Implement gamification features like daily challenges, streaks, and progress tracking to keep users motivated.

Regularly monitor third-party services for updates and changes.

IMPACT AND BENEFITS

- Using world's leading fitness API for fitness data collection that is **Health Connect API**
- Using next level open source LLM models for personalized recommendation, helping people know more from the data which they only get to see in other apps
- **Socializing and fitness in one platform.** Create group chats for workout gatherings
- Know what you can do from the availabilities you have at your home **without paying fee to a personal trainer** using our exercise recommendation feature
- Also keeping in mind **user's mental health** at the same time with mood tracking feature

Social Benefits:

- Features like workout gatherings engages user to get fit and socialize at the same time.
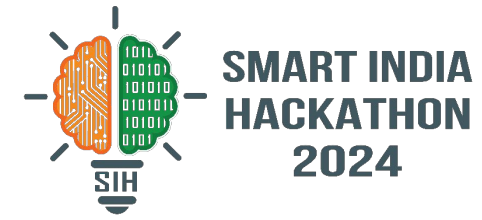- User gets more than just numerical data regarding fitness.

Economic Benefits:

- AI-driven recommendations can reduce the need for expensive personal trainers.
- Using open source LLM models to serve AI features.

Environmental Benefits:

- Promotes outdoor and home-based workouts, reducing the carbon footprint associated with gym commutes.

RESEARCH AND REFERENCES

- https://developer.android.com/health-and-fitness/guides/health-connect
- https://huggingface.co/
- https://developers.google.com/identity/protocols/oauth2
- https://chatgpt.com/?model=gpt-4o