The Applicants' Workout Application

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Names

Team Members

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Project Advisor

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Goals

Quick and easy entry of data

Clear visualization

Data security

Personal optimization

Intellectual Merits

- Minimized user actions
- Automatic workout logging
- Utilization of AI optimization

Broader Impacts

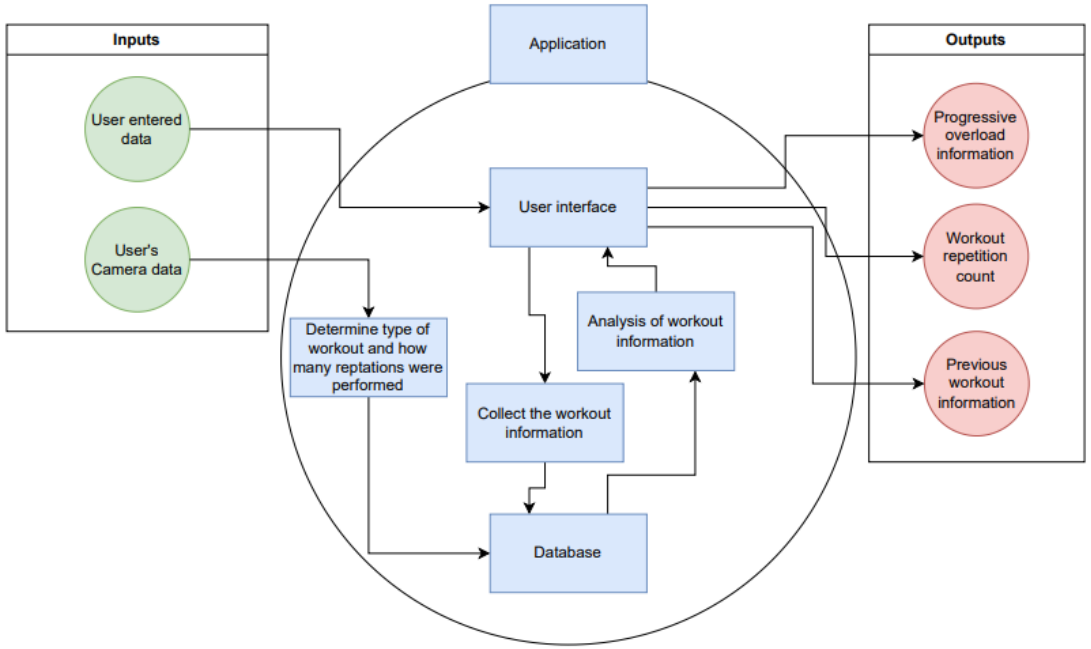
Allows individuals to have more time

Allows individuals to optimize their workout performance

Allows individuals to track progress quickly and cleanly

Design Specifications

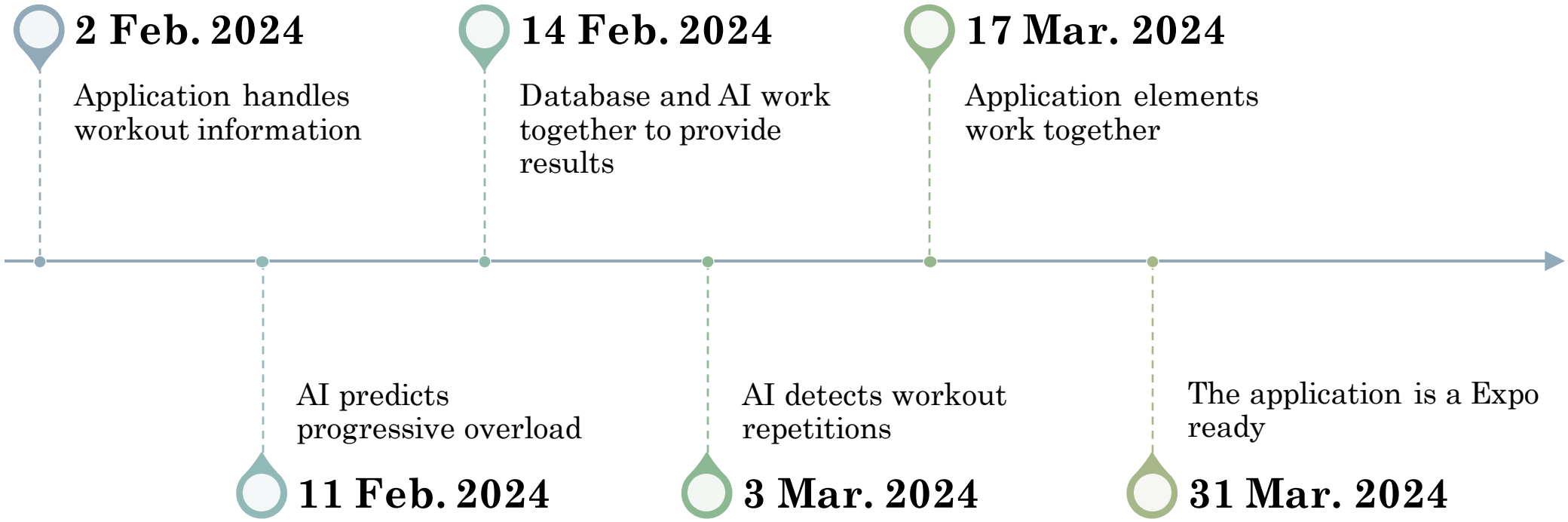
- Flutter SDK (application)
- Computer vision (workout tracking)
- Logistic regression (overload prediction)
- SQLite (database)



Technologies

- Workout tracking software
  - Identifies number of repetitions
  - Breaks down the camera input to determine information
- Progressive overload prediction
  - Using logistic regression
  - Personalized to each individual user

Milestones


2 Feb. 2024
Application handles workout information
14 Feb. 2024
Database and AI work together to provide results
17 Mar. 2024
Application elements work together
AI predicts progressive overload
11 Feb. 2024
AI detects workout repetitions
3 Mar. 2024
The application is a Expo ready
31 Mar. 2024

Results

- Complete
  - User interface major component complete
  - Database major components complete
  - Workout tracking algorithm with reasonable results
  - Predicted muscle overload algorithm with reasonable results
- To-do
  - Increase accuracy of workout tracking algorithm
  - Increase accuracy of predicted muscle overload algorithm
  - Making improvements to the minor components of the user interface and database
  - Testing the application

Challenges

- Limiting scale
- Obtaining clear requirements
- Technology development
- Collecting enough data