TOMOFIT

EECS 497

SPRING 2025

Working group	Role
Angelique Phillips	UX/UI & Testing
Elizabeth Baker	Front-end Development
Imani Williams	Back-end & Bug Reporting
Abhinav Velamakanni	Back-end & Database

GOAL

A web app for :

- ✓ Scheduling workouts
- ✓ Crafting personalized fitness profiles
- ✓ Staying motivated
- ✓ Teaming up with friends
- ✓ Creating Community

Scope of Demo :

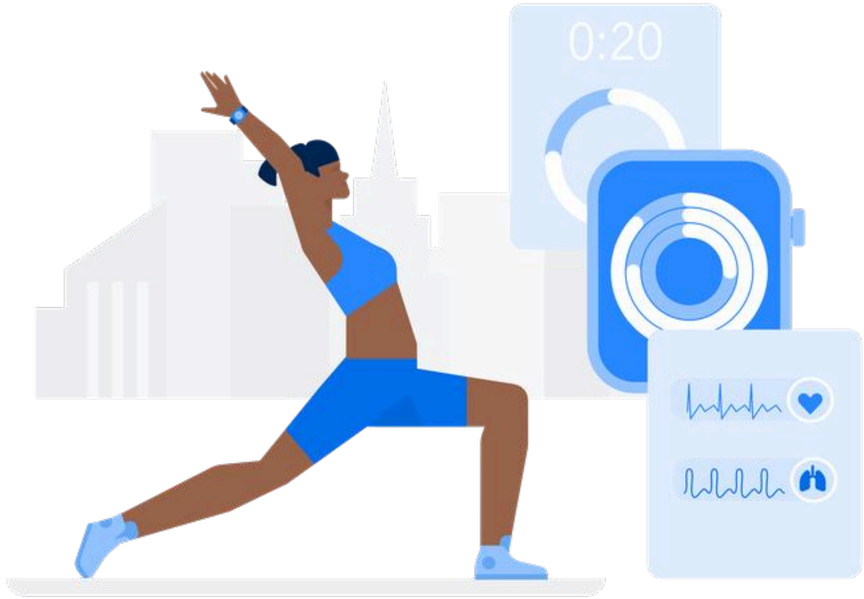
- User Scenario Walkthrough
- Live UI Demo in Final Implementation
- Technical Architecture Overview
- Challenges & Resolutions

User Scenario

Sarah – Marketing Manager at a Tech Startup

ABOUT

- ✓ Busy professional
- ✓ Wants to stay fit
- ✓ Wants to meet new people
- ✓ Values efficient use of free time



FRUSTRATIONS

- ✓ Difficulty Coordinating Schedules
- ✓ Lacks Motivation When Working Out Alone
- ✓ Unfamiliar Gym Environment Feels Intimidating

NEEDS

- ✓ Quick Session Discovery
- ✓ Clear Session Details
- ✓ A Welcoming Community

DEMO

1

Sign Up and Complete Her Profile

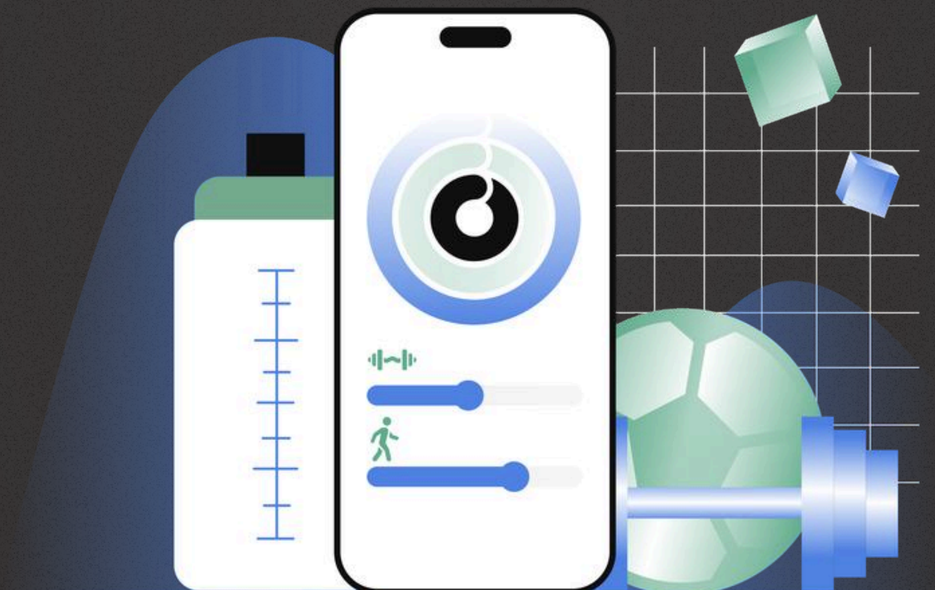
2

Create A Workout

3

Find and Join a Workout

Technical Architecture



Front-End

HTML Structure

- Home Feed
- Create/Join Workflow
- Profile
- Find Friends

Styling

- Utility-first with Tailwind CSS
- Custom overrides and theme extensions in a central style.css

JavaScript Modules

- File-to-DataURL conversion (image uploads)
- Form-validation helpers (enabling/ disabling Save buttons)

Back-End

Firebase

- Authentication (Firebase Auth)
  - Email and password sign-up and login via Firebase
  - Firebase Authentication handles session management and security

Configuration

- Connection set up using firebase-config.js
- Allows interaction with Firestore(database), Auth, and Storage

Storage

- Firebase Storage used for uploaded images (e.g., workout media)
- Frontend converts files to DataURL and backend uploads to cloud

Challenges & Resolutions

• Image Upload Failure: Wrapped getImageURL(imageKey) in try/catch, then conditionally render either the fetched URL or the seeded Base64 value
• Duplicate user operations: Immediately disabled buttons on click and re-enabled only once the operation completed

Lessons Learned

• Splitting feature logic into focused modules (profile, feed, create, friends, utilities) made the codebase more navigable and easier to debug
• Immediate user feedback is critical for good UX