

# WalletWatch

Harrie Ha, Ellie Odau, Aiden Johnson, Emir Simsek, Kishore Karthikeyan, Matt Topham

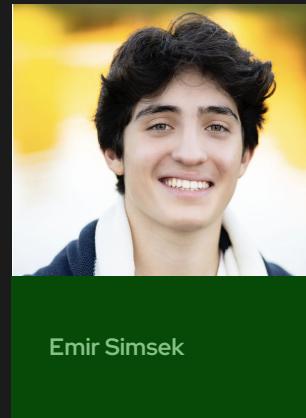
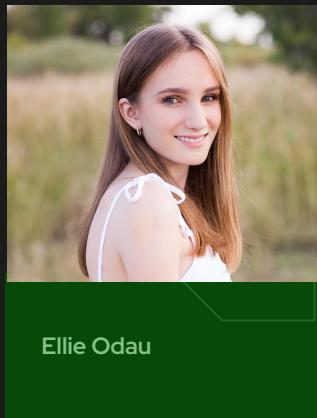


# Presentation Overview

- Meet the Team
- What is our App?
- What Tools we Used
- Application Diagram
- Challenges
- The Future



# Meet the Team



# Project Description/Mission

- A social budgeting web app that helps users manage expenses with accountability from friends
- Combines personal finance tracking social motivation
- Core features Transactions, budgets, posts, friend system, profile customization
- Vision: Make financial wellness engaging and community-driven





# Tools

Category	Tool(s) used	Purpose	Rating(★)
Project Tracker	Github Projects	Task tracking	★★★★★
VCS Repository	Github	Version control & collaboration	★★★★★
Database	PostgreSQL	Stores users, posts, transactions, budgets, etc.	★★★★★
IDE	VS Code	Coding and debugging	★★★★★
UI Tools	Handlebars, HTML, CSS, JS 	Dynamic templates & styling	★★★★★
Application Server	Node.js	Runs backend & APIs	★★★★★
Framework	Express.js	Routing and middleware	★★★★★
Deployment Environment	Render	Cloud hosting & deployment	★★★★★
External API	Google maps	Location tagging in posts	★★★★★
Testing Tool	Mocha + Chai; Postman	API endpoint testing	★★★★★

## Methods

- Project Management method: Agile Methodology
  - Scrum Master
- Project Management task tracking tool: GitHub Project Board

## Meetings

- Group Meetings:
  - 4:30-5:30 PM on Monday @ Norlin (reserved study room)

Filter by keyword or by field**Ice-box** 4 Estimate: 16 ...

contains the set of stories that are not picked up in the current sprint. These are potential stories for the project to work on in the future sprints.

group-project-013-4 #132 uploads not working on render deploy  
3 deployment CU-CSCI3308-Fall2025/gr...

group-project-013-4 #127 like/upvote/reaction buttons  
3 UI CU-CSCI3308-Fall2025/gr...

group-project-013-4 #128 map of campus posts  
8 Location functionality CU-CSCI3308-Fall2025/gr...

group-project-013-4 #129 instructions page  
2 Frontend CU-CSCI3308-Fall2025/gr...

**Backlog** 0 / 5

Estimate: 0  
This item hasn't been started

**Ready** 0 Estimate: 0

This is ready to be picked up

**In progress** 0 / 3

Estimate: 0  
This is actively being worked on

**Blocked** 0 / 5

Estimate: 0  
This item is blocked until other issues are resolved.

**Done** 41 Estimate: 227

This has been completed

group-project-013-4 #133 header nav needs mobile responsive design  
5 UX CU-CSCI3308-Fall2025/gr...

group-project-013-4 #126 add pets category or custom categories  
5 frontend CU-CSCI3308-Fall2025/gr...

group-project-013-4 #130 clickable profile names in posts  
3 frontend CU-CSCI3308-Fall2025/gr...

group-project-013-4 #87 make sure styling is consistent across pages  
3 UI CU-CSCI3308-Fall2025/gr...

group-project-013-4 #114 missing category ('Shopping') from add post modal  
3 Frontend CU-CSCI3308-Fall2025/gr...

group-project-013-4 #76 add a 'share this transaction'  
8 UX 1 #105 CU-CSCI3308-Fall2025/gr...



# How it works

WalletWatch connects users, friends, and finances through a simple, cloud-hosted architecture.

## 1. User Interaction (Frontend)

Users access the app through their browser. Pages built with HTML, CSS, JavaScript, and Handlebars let them log in, add expenses, view posts, and connect with friends.

## 2. Server Logic (Application Layer)

All requests go through a secure Node.js + Express backend, which handles authentication, routes data, and enforces friend-only visibility rules.

## 3. Data Storage (Database Layer)

The backend reads and writes information to a PostgreSQL database – storing users, transactions, posts, and friend connections.

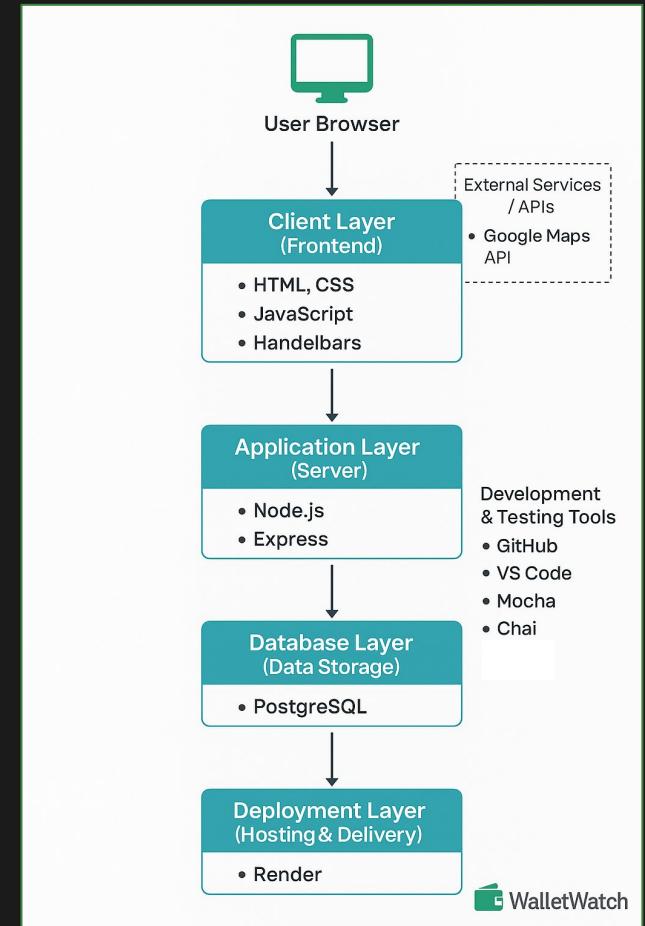
## 4. Hosting & Delivery (Deployment Layer)

Everything runs on Render, which automatically deploys updates and keeps the app live 24/7.

## 5. Integrations & Tools

External APIs like Google Maps add location tagging.

Development tools such as GitHub, VS Code, Mocha, Chai, and Github Projects to help manage, test, and track the project.



# Challenges

- Organization and communication
  - Code refactoring
  - Merge conflicts
- Balancing social/gamified aspects with privacy
  - Integrating posts, friends, budgets, and transactions into a consistent backend
  - Building a friends-only feed and handling privacy, visibility, and deleted posts
  - Creating the savings-based leaderboard with complex SQL joins and calculations
  - Debugging authentication, sessions, and protected routes

# Future Scope

## Social Improvements:

- Upvotes, reactions, comments on posts
- Comment threads: users can reply or tag friends
- Shareable "Monthly Spending Summary" posts users can publish to their feed.
- Friend recommendations based on mutual connections or spending similarities.

## Competitive/Leaderboard Gamification Improvements:

- Budget Challenges against other users, friends
- Badges/Achievements
- Seasonal competitions (e.g., "Holiday Savings Challenge").
- Leaderboard filters (weekly, monthly, category-specific).

## Google Maps/Geolocation Improvements:

- Geotagged maps with a user's past transactions
- Heatmap of where the user spends the most.

# Live Demo

<https://walletwatch-013-4-3zq7.onrender.com/>