FUEL FINDER

INVESTOR PITCH

CSC 336
05/14/2025

Agenda

Introduction

MEET THE TEAM

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THE IDEA & ITS PURPOSE

Idea:

- A full-stack platform to help users find and track real-time gas prices at local stations.

- Integrates Google Maps to allow users to visually explore gas stations and fuel prices.

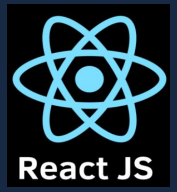
Purpose:

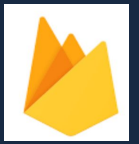
- To provide a user-friendly tool for locating nearby gas stations and comparing fuel prices.

- To enable community-driven price reporting and maintain a centralized, accessible fuel database for consumers.

TECH STACK

Front End
- Next.js, React, Tailwind CSS, Firebase JS SDK, Google Maps



Backend API
- FastAPI, Uvicorn, PostgreSQL, Firebase Admin SDK, python-dotenv


Mobile
- Expo (React Native)

Infrastructure
- SQL scripts for schema setup & Dockerfile for containerization

PROFIT MODEL

Advertising Revenue

- Partner with gas stations and automotive services (car washes, mechanics, convenience stores) for sponsored listings or promoted stations in the app.

Affiliate Partnership

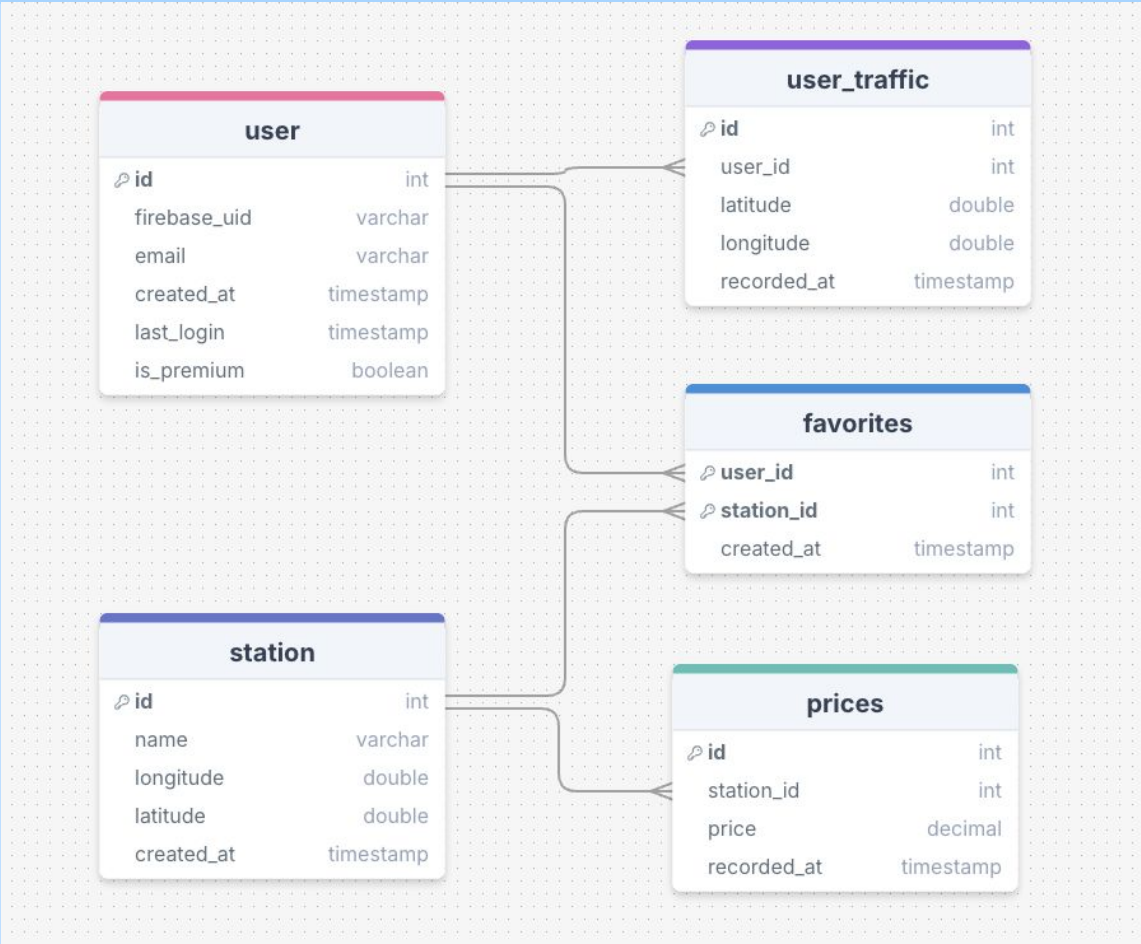
- Earn commissions through referrals to gas station reward programs, tire retailers, or car maintenance services (like AutoZone).

Premium Subscriptions

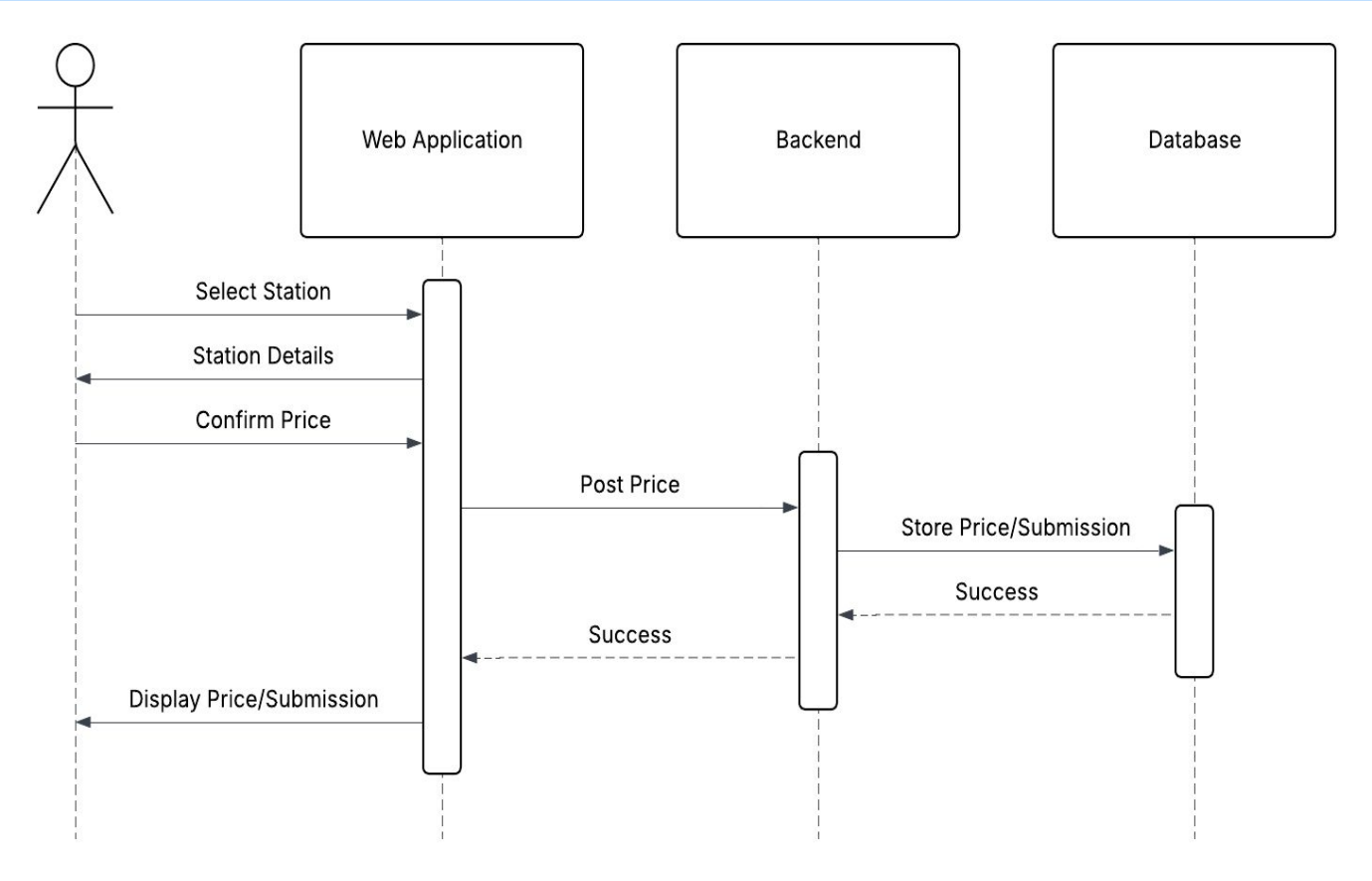
- Offer advanced features like ad-free browsing, price alerts, trip planning with optimal stops, or early access to crowdsourced data for a small monthly fee.

Database (2NF Model)

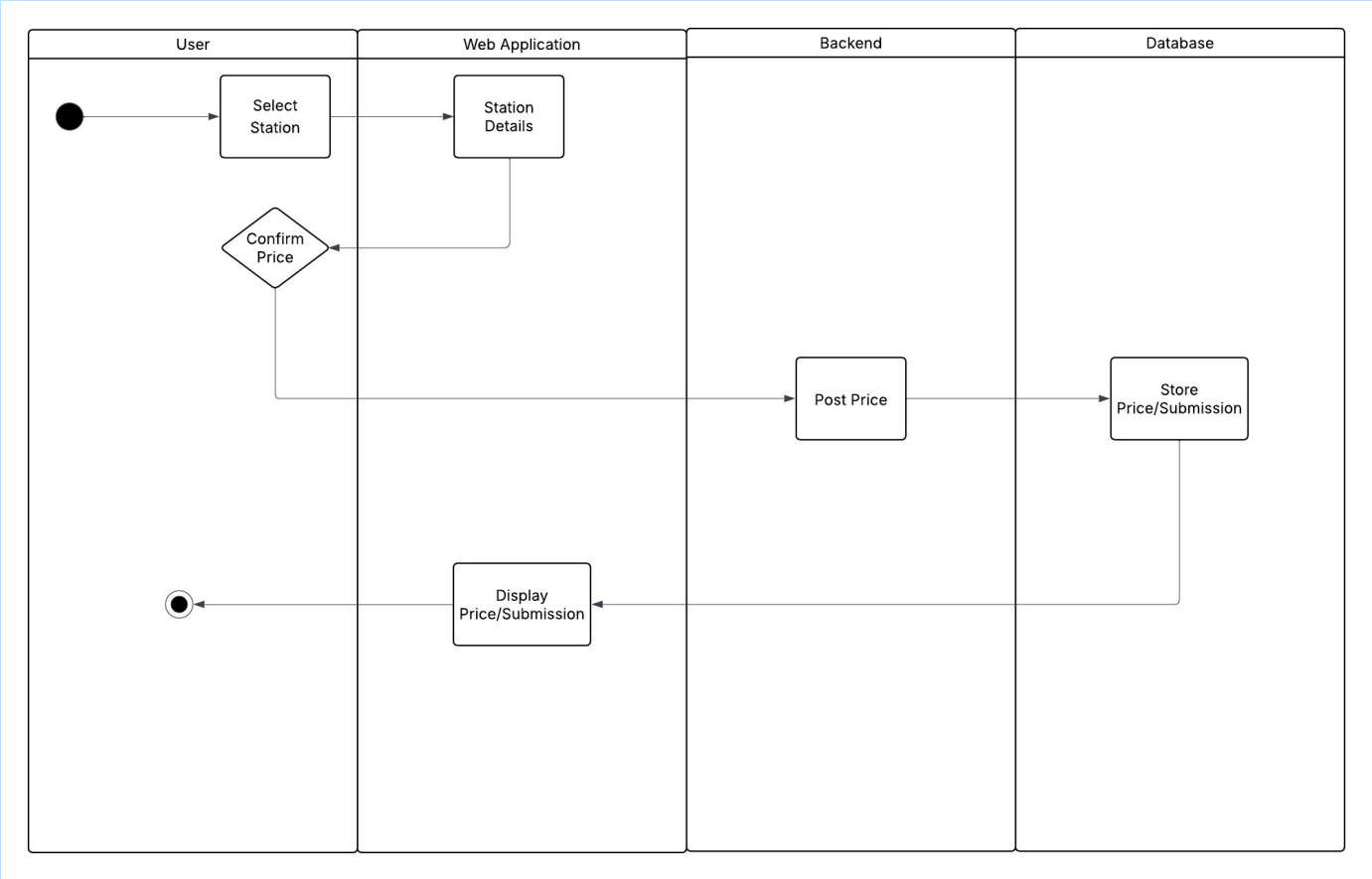
DATABASE (2NF Model)



UML Sequence Diagram



UML Activity/Flow Diagram



Landing Page Demo

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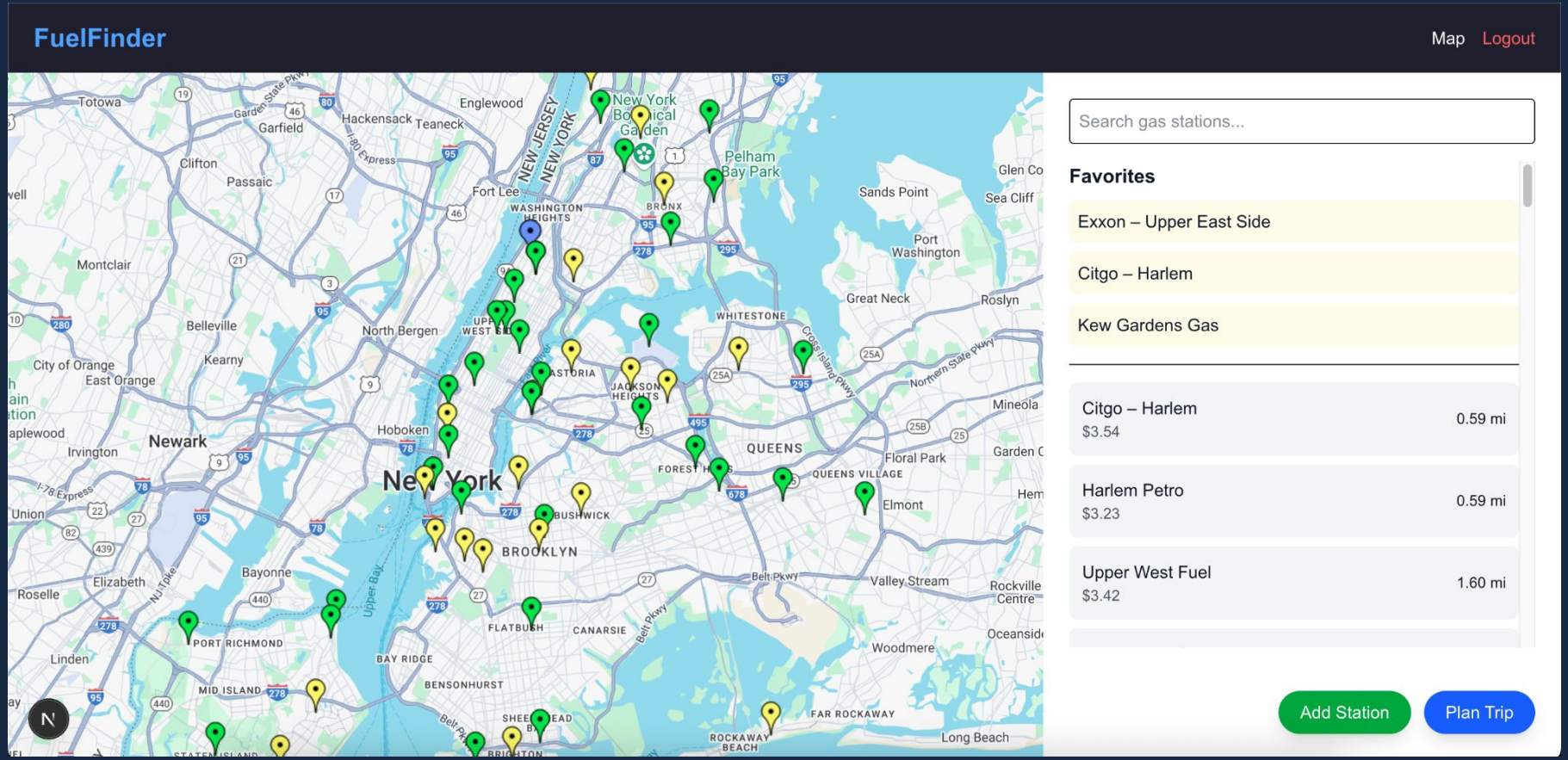


Use Cases

USER JOURNEY

1st Use Case

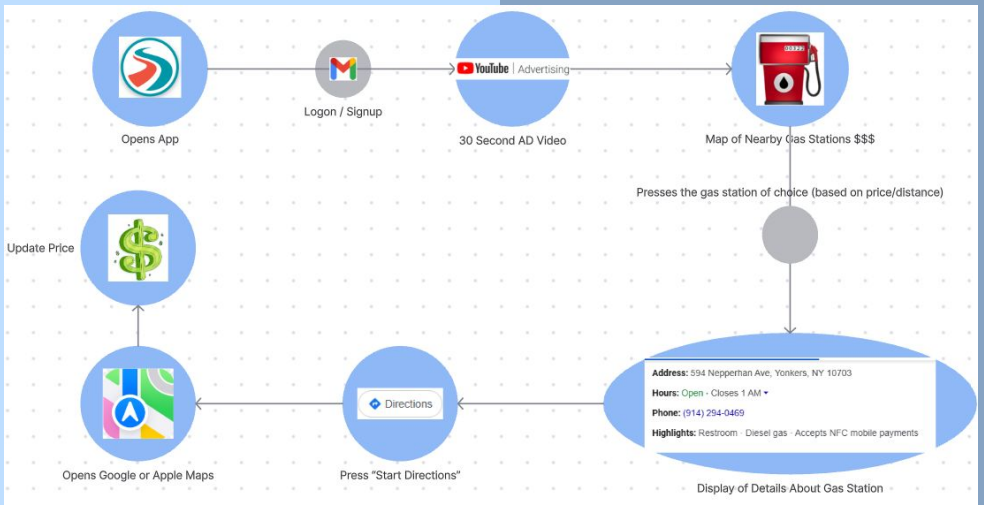
Find the Closest Nearby Gas Station

- User: Sarah, a college student on a tight budget
- Sarah opens the app before heading to class.
- She allows location access, and the app instantly displays a map with gas prices at nearby stations.
- She taps a station with the cheapest price and gets directions.
- On arrival, she verifies the price and submits a quick price confirmation to help others.

2nd Use Case

Plan a Road Trip with Optimal Fuel Stops

- User: David, a weekend traveler
- David enters his trip route from New York to Boston.
- The app calculates the best fuel stops along the way with the lowest prices and clean restrooms.
- It also shows estimated savings and gas station ratings.
- David saves the route and shares it with his friend before hitting the road.



Reporting Demo

REPORTING DEMO

Ad-Supported Free Tier

- **In-App / Banner Ads**
  • Display non-intrusive banner ads on free users' map, search results, and plan-route screens.
  • Rotate through an ad network (AdMob, Google Ad Manager) or sell directly to local businesses (gas stations, convenience stores).

- **Video Interstitial (Optional)**
  • Offer a "Watch a 30 s clip to skip ads for the next X minutes" option—extra ad inventory for higher CPM.

- **Data-Driven Targeting**
  • Use anonymized route + station usage data to target ads—for example, show coffee brand ads when users plan morning routes.

Premium Subscription (Ad-Free + Insights)

- **Price Point**: $4.99 – $9.99 / month (or $49 – $99 / year)

- **Features**:

  1. **Ad-Free Experience**: No banners, interstitials, or video ads anywhere in the UI.

  2. **Advanced Routing**:

     - Priority access to our fastest server cluster for sub-second rerouting.

     - More waypoints per trip (e.g. 5 instead of 3).

  3. **Early Access**: Beta features like traffic-aware planning, dynamic pricing alerts, etc.

Stored Procedures Demonstration

STORED PROCEDURES

First Procedure: CreateGasStation

Purpose: - Enables users to create new gas station entries in the system.

Contribution: - Expands the database of local gas stations, enhancing visibility and accessibility for users seeking nearby fuel options.

Second Procedure: CreateGasStationTable

Purpose: - Automatically creates the gas_stations table if it does not already exist.

Contribution: - Establishes the foundational schema required to store and manage gas station data, ensuring system readiness for user submissions and queries.

Job Delegation
&
Team Work

JOB DELEGATION & TEAM WORK

- UI / UX Designer / Front-end : Mustafa Donmez
- Back-End / Front-End: Muhammad Ahmed
- Front-End / Project Management: Rafid Rahman
- Database Management / Project Management: Nizar Azar
- Back-End / QA / Testing Lead: Shahed Ahmed
- Backend / Database Management: Kalelo Dukuray

Extra credit

Extra credit work

Deployment:

- Using docker for front-end and back-end deployment

AI applications:

- Sentiment analysis on gas station reviews, giving the user a summary of all the reviews of a gas station.

Multi platform integration:

- The app is providing a cross-platform interface version of the site to the users.


Thank you!
Q&A