

Hail Storm Data Mapping App

Overview

A custom-built application that integrates hailstorm data (via AccuWeather API), maps customer locations (via Google Maps API), and automates notifications for marketing and service outreach.

Client Profile

- **Industry:** Roofing, Field Services
- **Use Case:** Quickly identify and contact customers affected by hailstorms

Goals

- Automate hail event tracking every 6 hours
- Overlay hail data and customer locations on a map
- Enable square-draw filtering to extract customer lists
- Send automated alerts and downloadable Excel reports

Technical Solution

- Scheduled pull from AccuWeather API
- Data stored and filtered in SQL Server
- Google Maps integration for real-time visualization
- Alert rules based on hail size, zip code, time window
- Role-based access for multiple users

Features

1. Hail data sync (6-hour interval)
2. Customer geo-plotting via SQL and Google Maps
3. Map selection tool for impact radius
4. Export lists as Excel files
5. Trigger email notifications

Results

- Instant visibility on hail-affected customers
- Data-driven marketing and service decisions
- Reduced manual effort for outreach

Cost & Timeline

- Development Cost: \$17,000

- API Cost: \$500/month
- Timeline: 8–10 weeks (3 milestone phases)

Tech Stack

- AccuWeather API, Google Maps API
- SQL Server backend
- Frontend: JavaScript, web interface
- Notification: Email + Excel export