

Predicting Traffic Accident Likelihoods in Seattle

Ming Huang



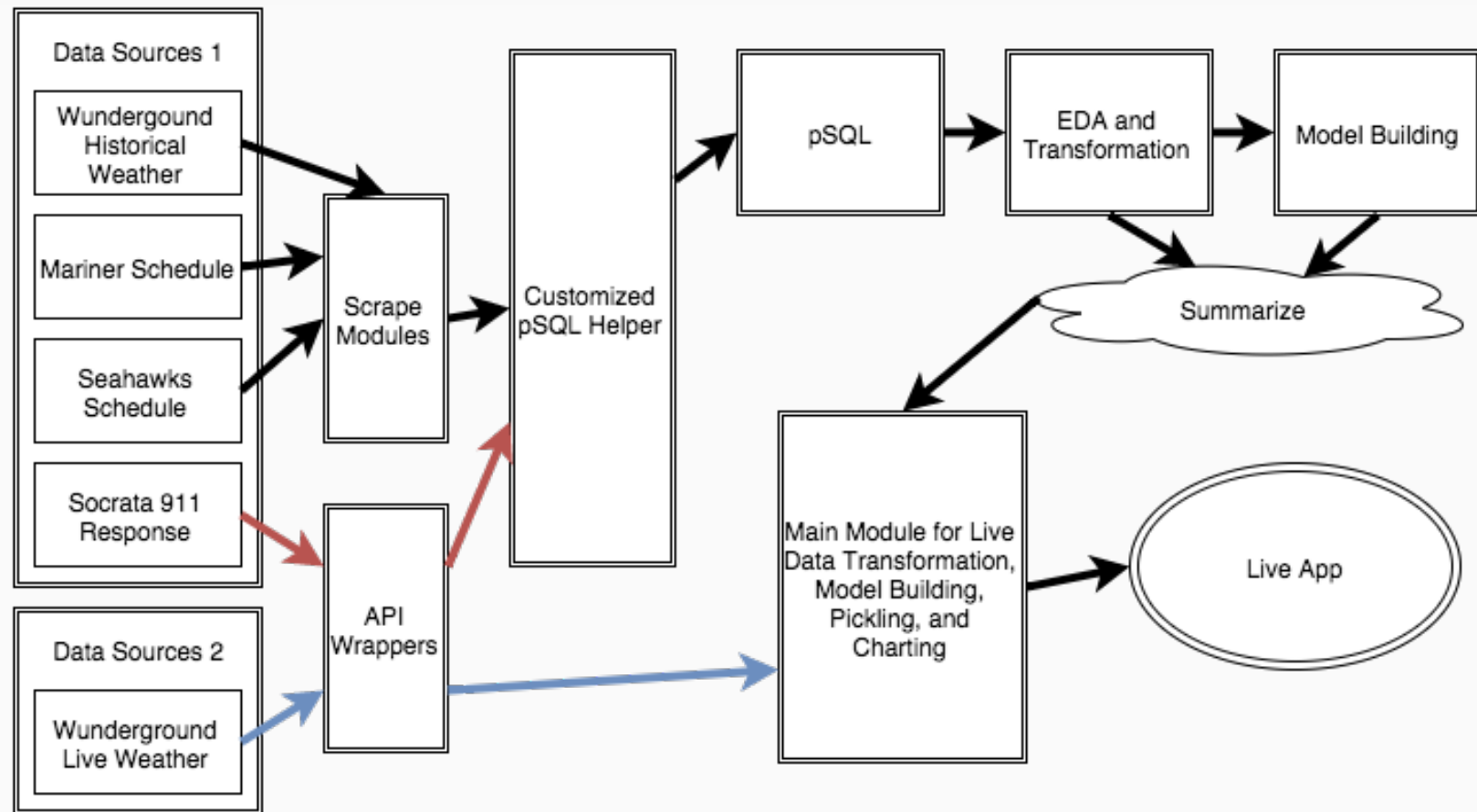
Why?

- ~10,000 collision related traffic accidents a year
- Better resource allocation of 911 response teams
- Awareness of risks

Goals of this Project

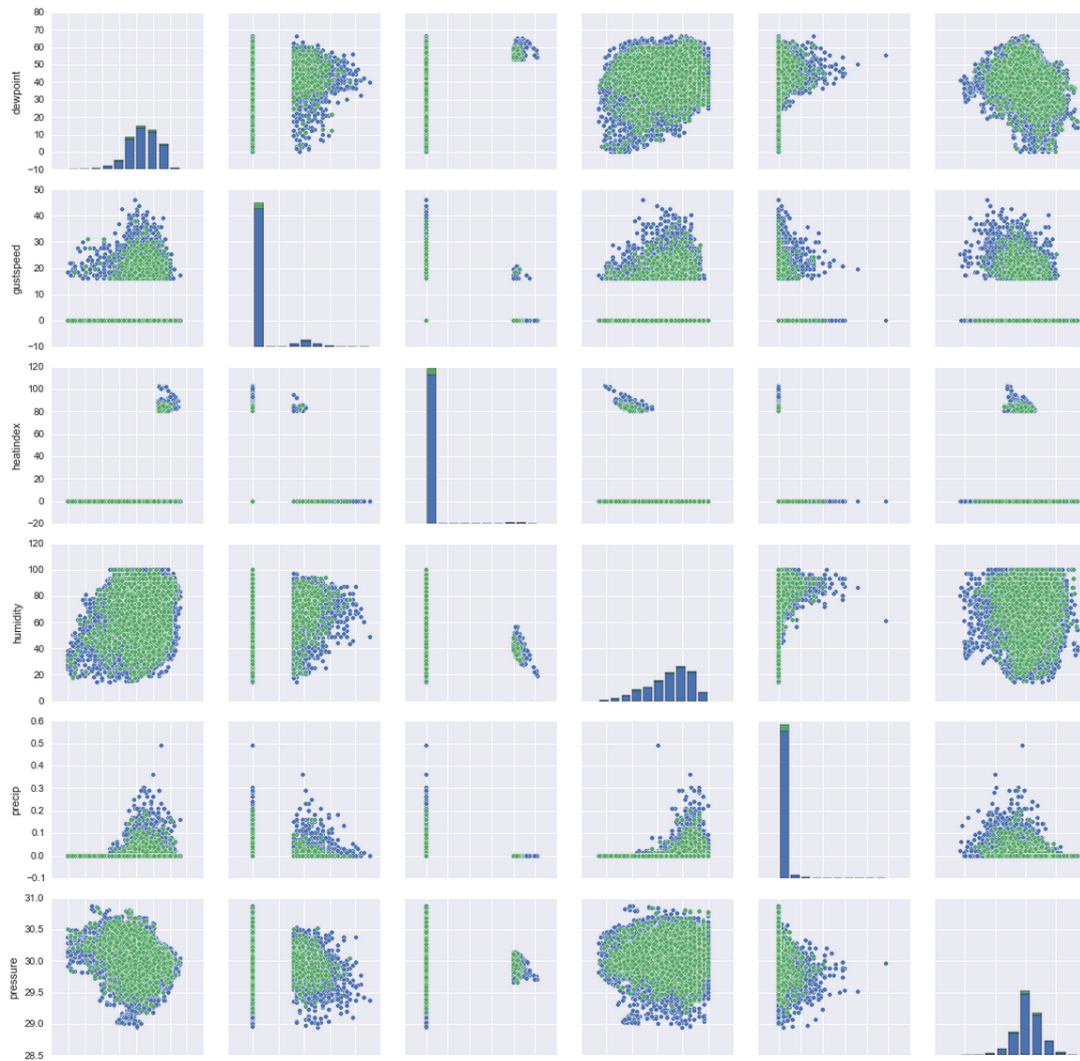
- Use publically available and relevant data
- Identify predictive features and models
- Create an automatable data pipeline
- Build a live app reporting likelihoods

Visualized Project Summary



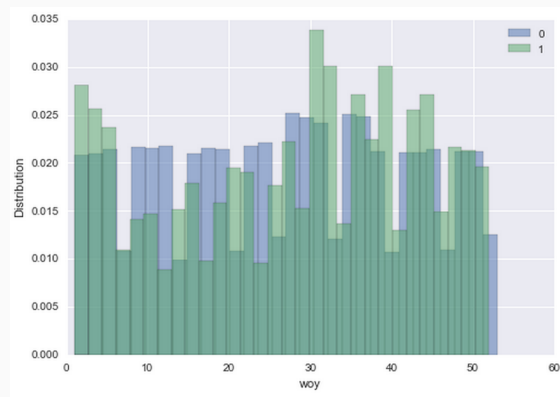
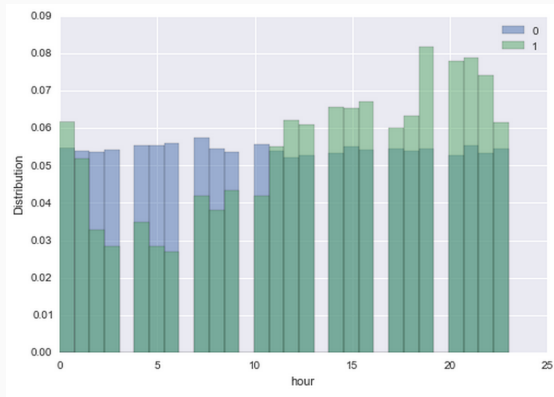
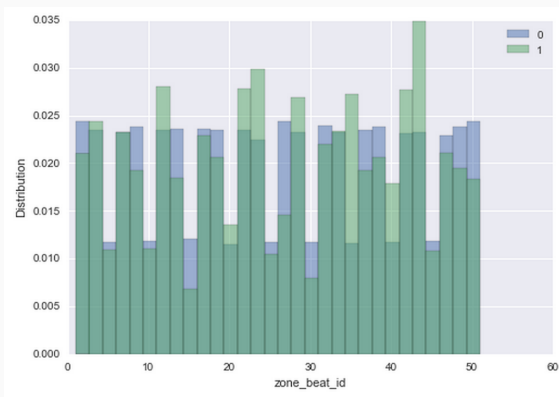
Current Findings

- Lots of unaccountable randomness
- Imbalanced classifiers
- Random Forest performed the best overall



Current Findings continued

- There are noticeable patterns
- Still plagued with randomness

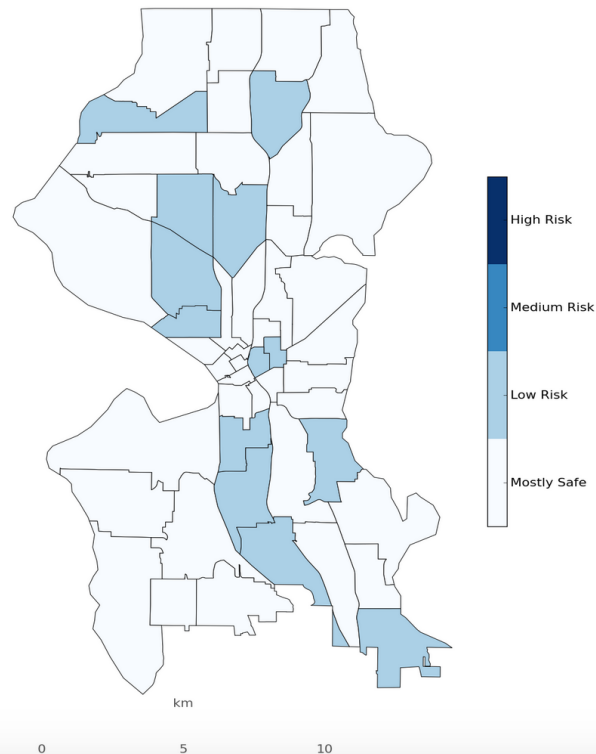


My App

- Choropleth of Seattle precincts shaded by the rate of accident risks.
- Updates automatically every 60 minutes by using the most recent Wunderground weather report

Current Traffic Accident Likelihood by Seattle Precincts

Last updated on 2015-09-24 22:10:16.450022.



Next Steps

- Add and improve on existing features
- Find ways to account for randomness
- Implement non-conventional models
- Improve App functionality and design

Thanks!

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