

Build Your Road

Smart cycling assistance on bike lanes
for green city living experience

Team K2C:
WonHyo Choi, GyeongHwan Lee, Jiaao He
SW Pioneer Hackathon, USC, Jul.13 2019

Los Angeles

- 20m+ population
- 30k+ people go to work by bike
- 10k+ people ride bike for exercise
- 21k+ miles public road in LA County
- 1300+ miles bike lane in LA County
- Not good cycling experience in the city



Bike lane VS no-bike route



Motivation

- Provide better cycling environment
- Attract more people to cycling
- Make the city green and healthy



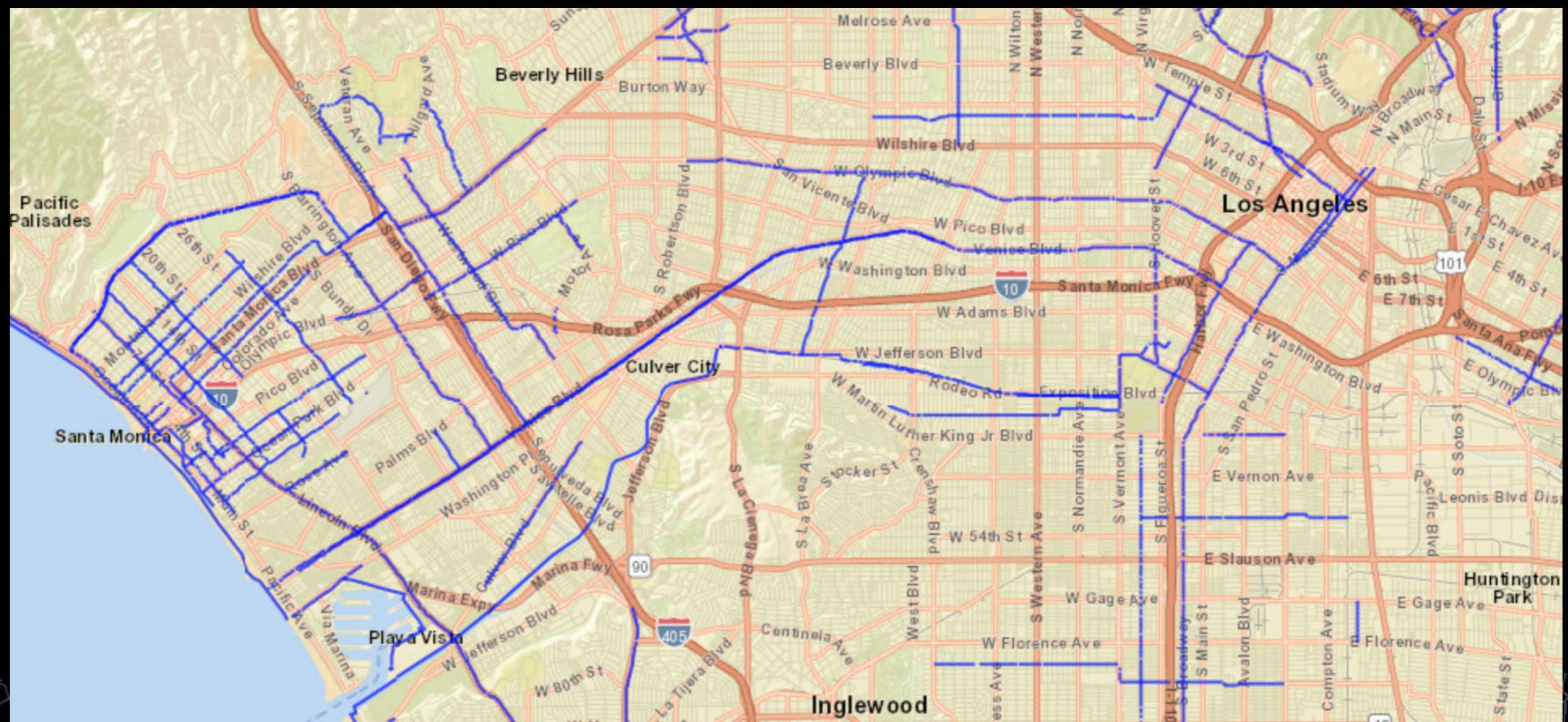
Cycling heat map

<https://www.strava.com/heatmap>



LA Bike lanes

<https://data.lacity.org>

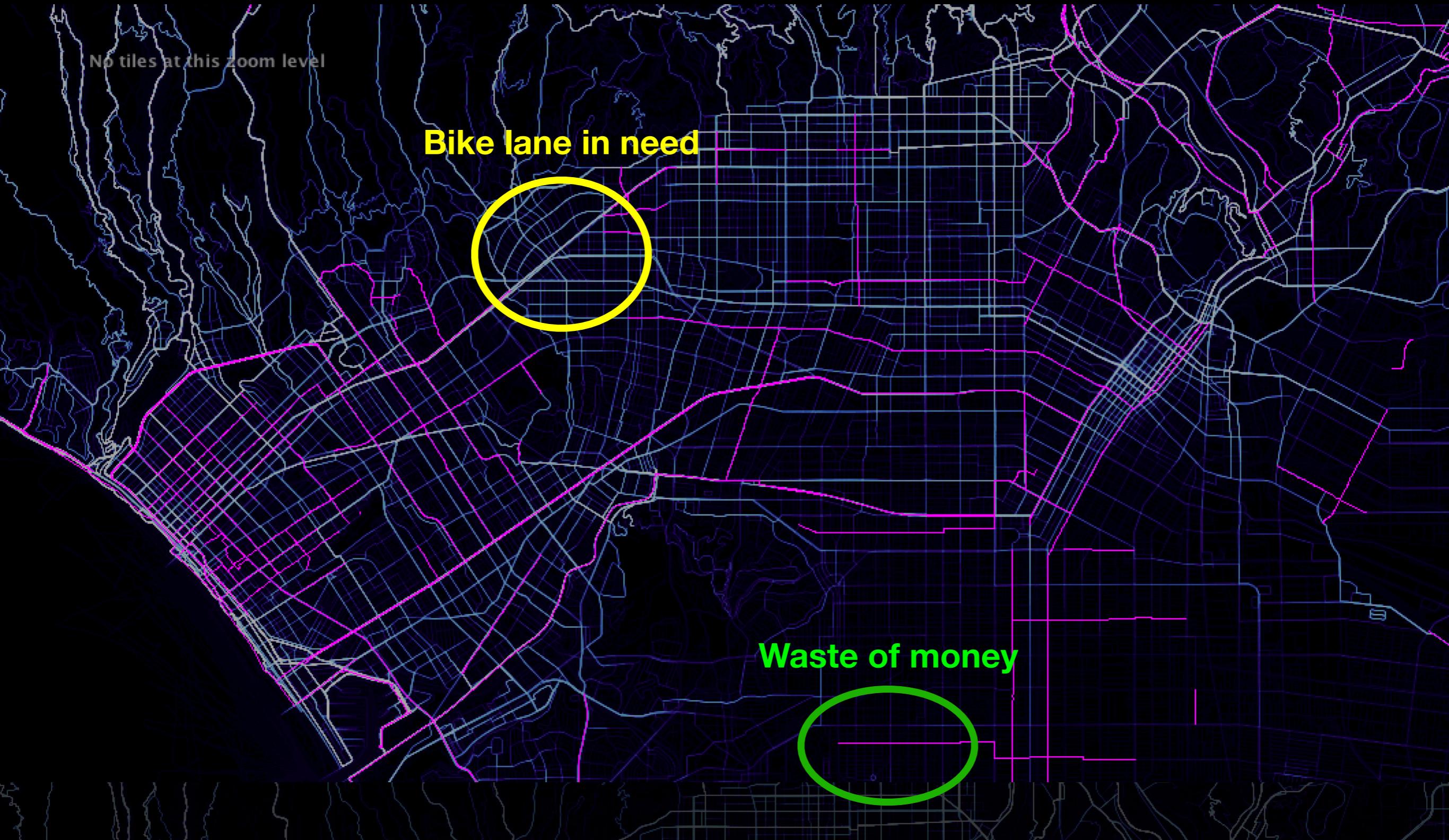


No tiles at this zoom level

Overlay using JOSM



Administrative view



Tech stack

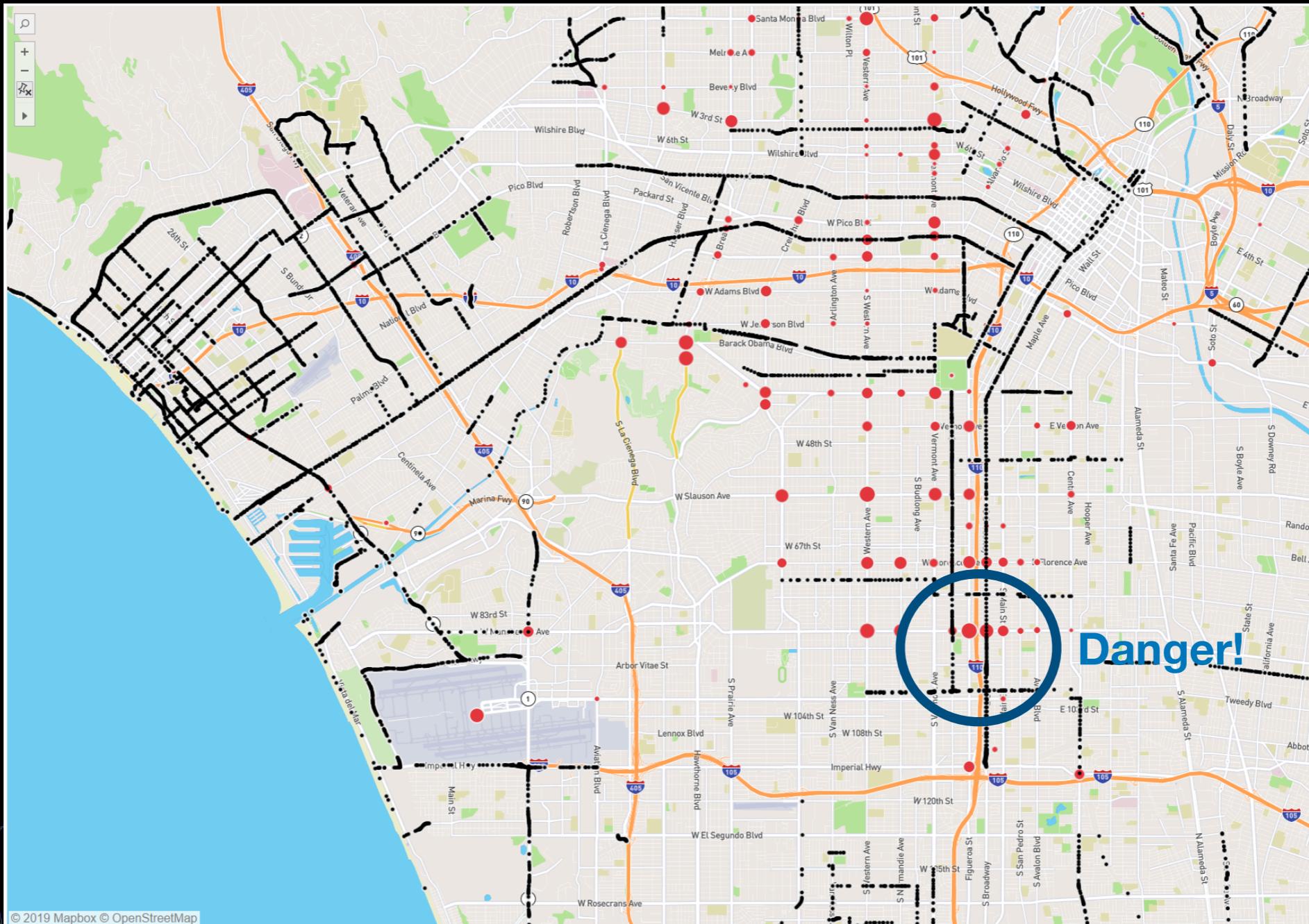
- Strava heat map
- Transportation to work Dataset
- Bike lane geometric data on data.cityla.org
- Collision data, LA311 record, etc.
- GeoJSON, GeoPandas, JOSM, Tableau
- Web service, Android/IOS/Garmin apps



End-user view

Realtime & smart route planner

using Tableau



Next steps

- Plan route for people to go to work
 - recommend interesting points around to people
 - connection from driving to metro/bicycle/scooter
- Time-of-the-day based navigation
 - streetlights
 - traffic



Q&A

