



HAZARDOUS ROAD CONDITIONS FOR BICYCLISTS IN THE CITY OF MADISON

JAMIE LARSON

COURSERA CAPSTONE FINAL PRESENTATION

BACKGROUND

- Madison has received Platinum Bicycle Friendly Designation
- 113 motor vehicle and bike accidents
- 2 of the accidents were fatal
- Alcohol was involved in 6 of these crashes



OBJECTIVE

- The overall objective is to inform the city of *Madison* on areas that need focus for improvements for bicycle safety.
- This evaluation of hazards and locations of accidents will help the city of *Madison* to determine where limited resources will be best used.

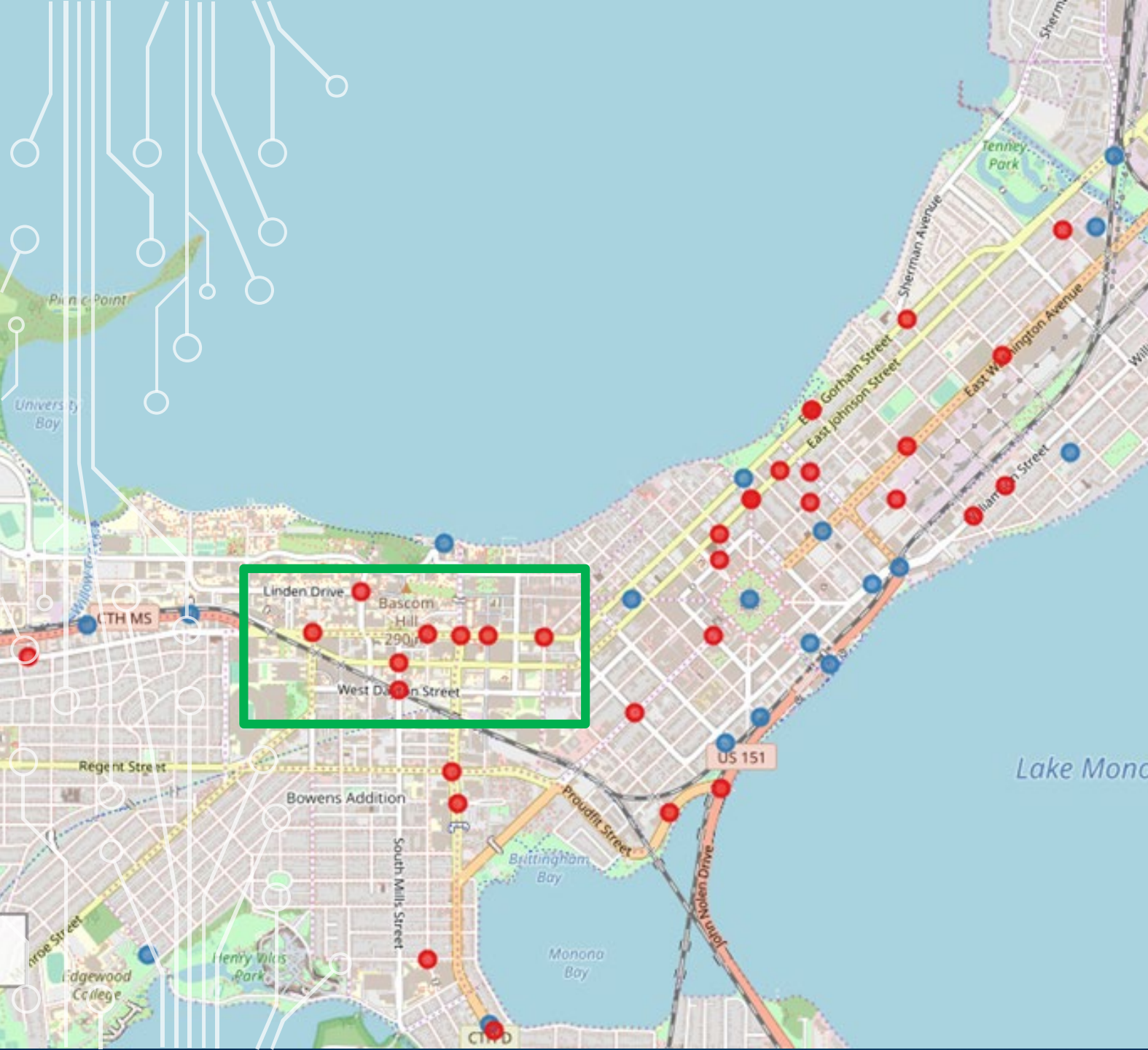


DATA

- Bike Hazards data provided by the City of Madison via their [GeoData@Wisconsin](#) website
- Bike accidents data from the Community Maps - Wisconsin County TSC Crash Mapping website
- FourSquare, this data houses the top venues within the city of Madison

METHODS

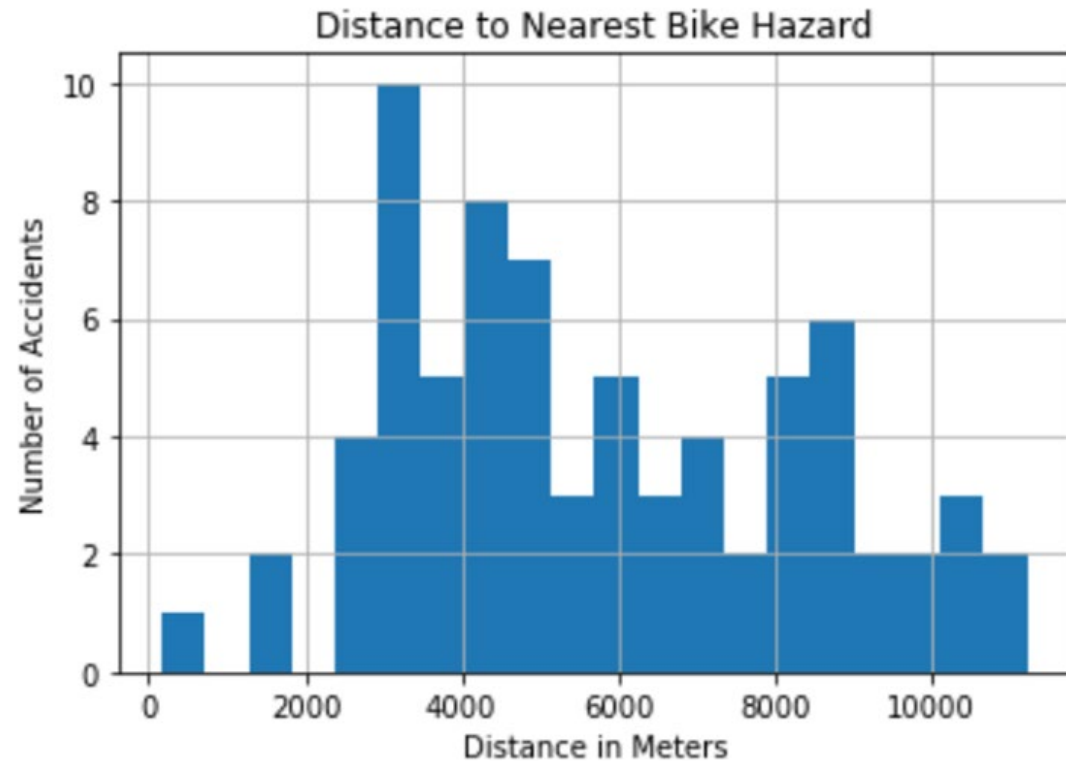
- List of hazards created by excluding those without jurisdiction
 - 94 hazards included out of a total of 221 hazards listed
- Calculated distance of hazards to reported accidents
- Quantified the most common hazards in *Madison*
- Explored top venues in the city and those closest to reported accidents



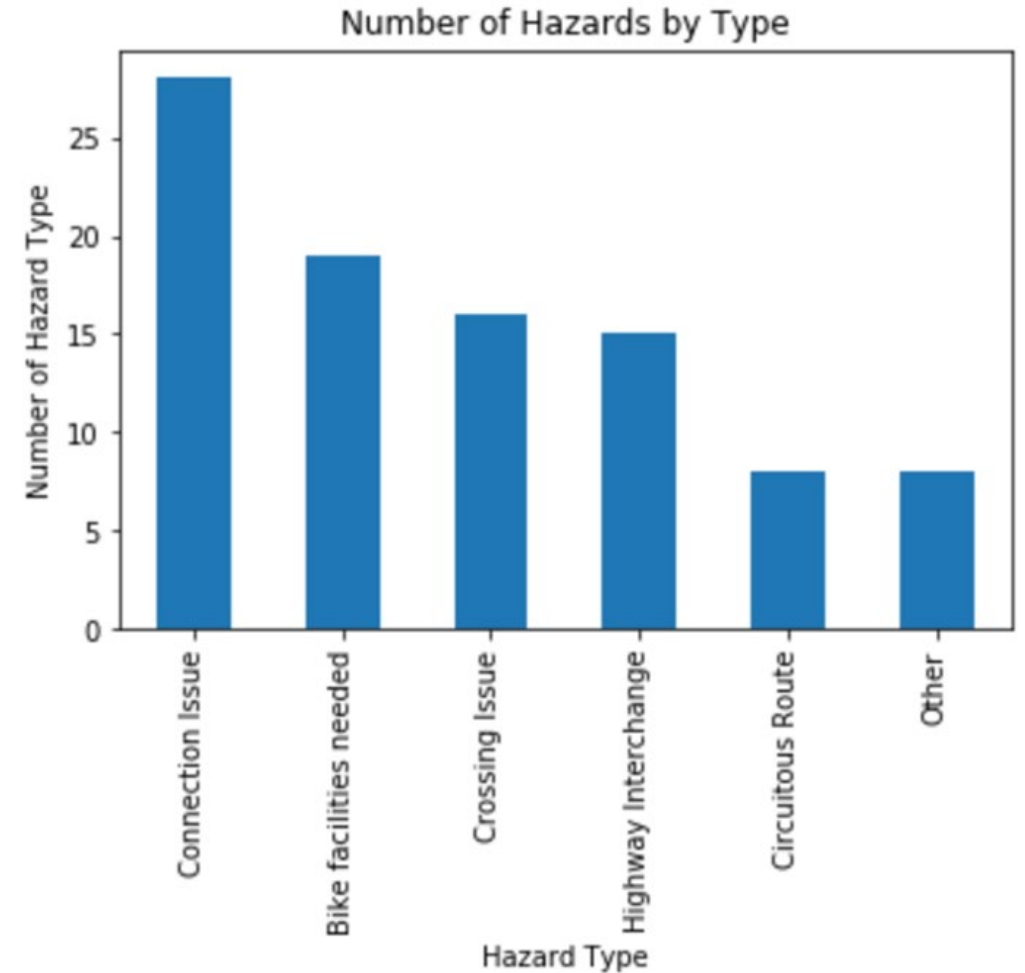
RESULTS

- Hazards not close to most accidents
- More accidents on campus with no hazards nearby

HISTOGRAM OF THE DISTANCE TO THE NEAREST BIKE HAZARD FROM AN ACCIDENT (N=113)

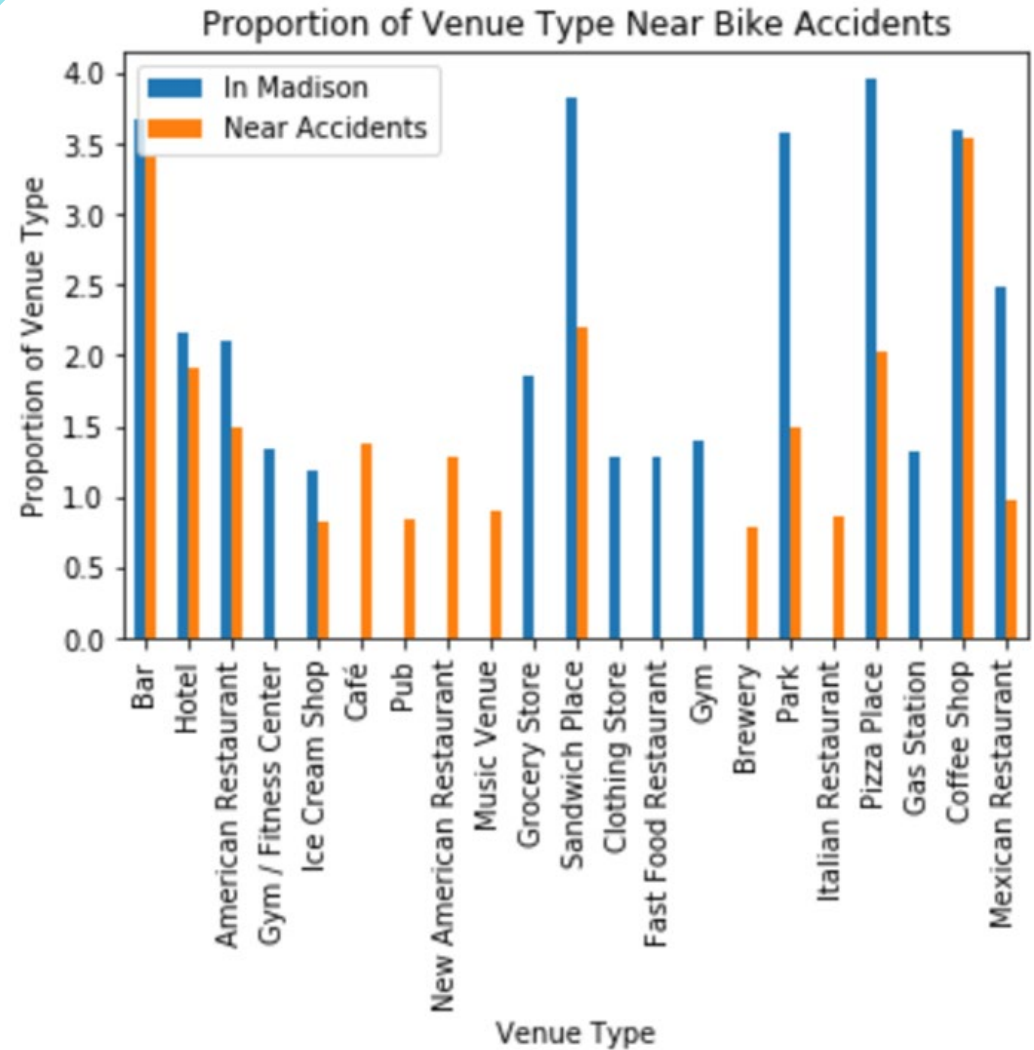


BAR CHART OF THE TYPES OF BIKE HAZARDS (N=94)



PROPORTION OF VENUE TYPE IN THE CITY OF MADISON AND THE PROPORTION NEAR BIKE ACCIDENTS

- Number one type of venue near bike accidents was coffee shops (3.5%)
- Second type of venue near bike accidents was bars (3.4%)
- Type of venue is more likely a factor in being near an accident than the density of the venue type



CONCLUSIONS

- Preliminary study offers several paths for future analysis
 - Breaking up analysis by neighborhood
 - Downtown particularly different than other areas of the city
- Venue density does not seem to be related to the odds of the venue being near an accident
- Connection issues between bike paths is a problem in the city and could be a starting spot for local policymakers to begin improvements for bicycle safety