Bike Safety Visualization

Team 8 - Jillian Arkin-Burns, Ken Umemoto, Jared Kahn

Our Presentation

- Problem Statement
- Design Process
- Obtaining Data
- Visualization Demo
- Conclusion
- Future Improvements
- Questions

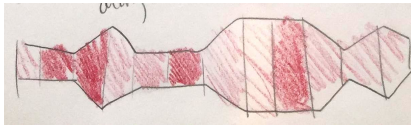
Problem Statement

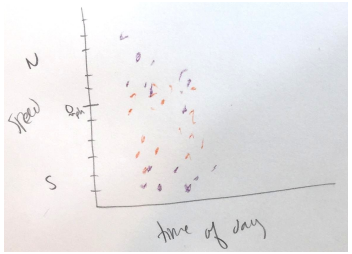
Bike infrastructure impacts bikers' safety on the road. By examining how existing facilities throughout the city correlate with crashes, we hope to identify improvements that could help bikers in the Chester Square neighborhood and beyond.

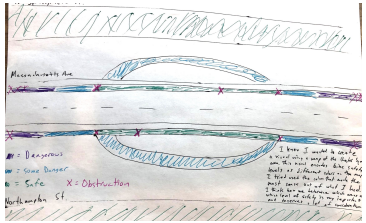
Design Process

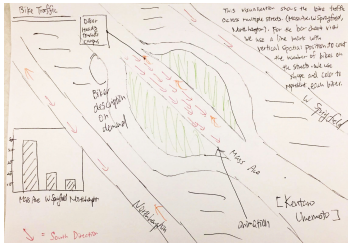
Initial sketches

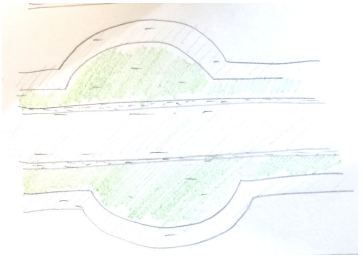
- Maps
- Lot of concept overlap

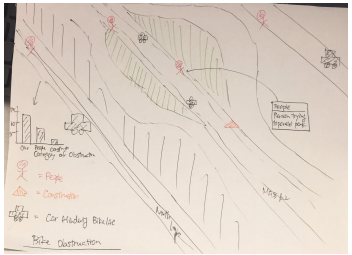


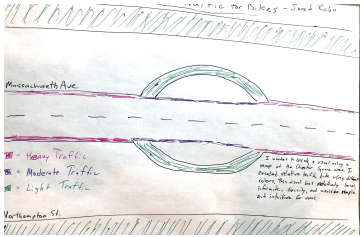


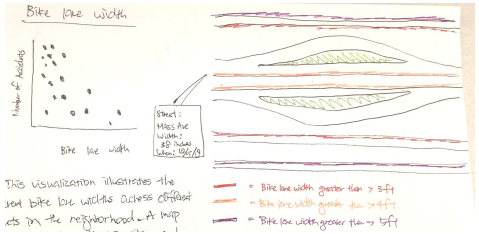






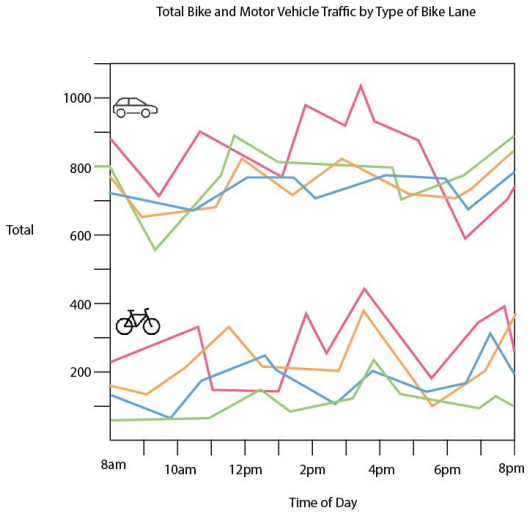


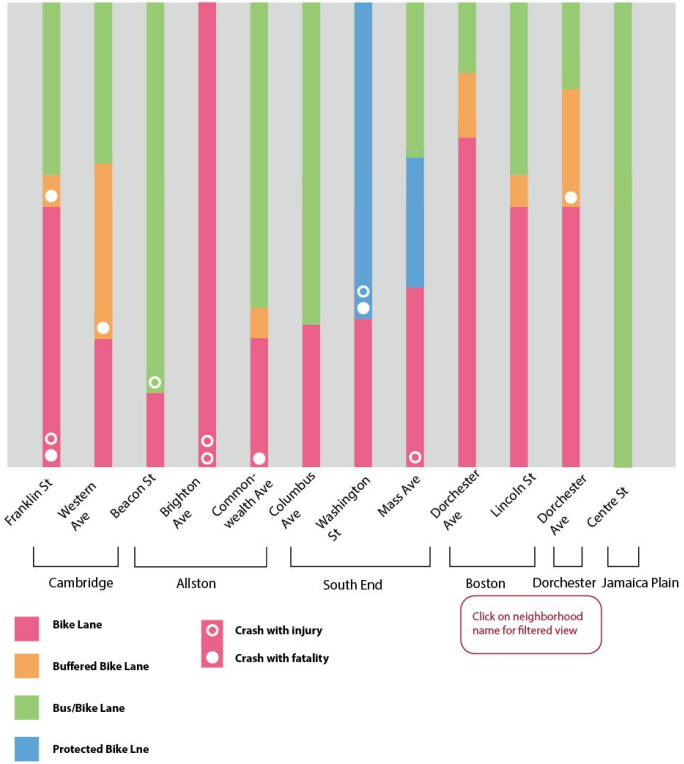




Design Process

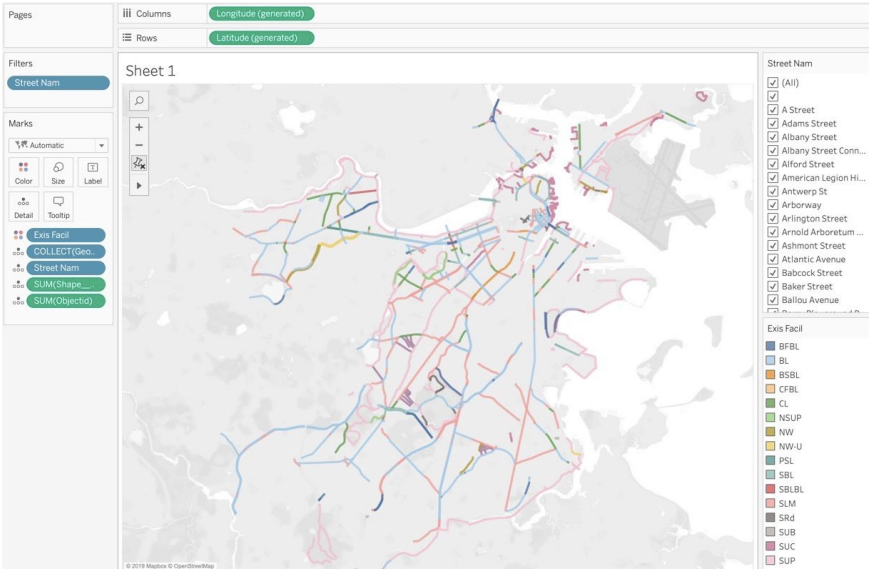
Final sketch





Obtaining Data

- Observation data didn’t suit out needs
- Used data from external sources
  - Past 1 year crash data from the City of Boston website
  - Bike and Car traffic
  - Bike lane facilities geojson
- Used Tableau to match bike lanes to accidents



Visualization Demo (Video)

Conclusion

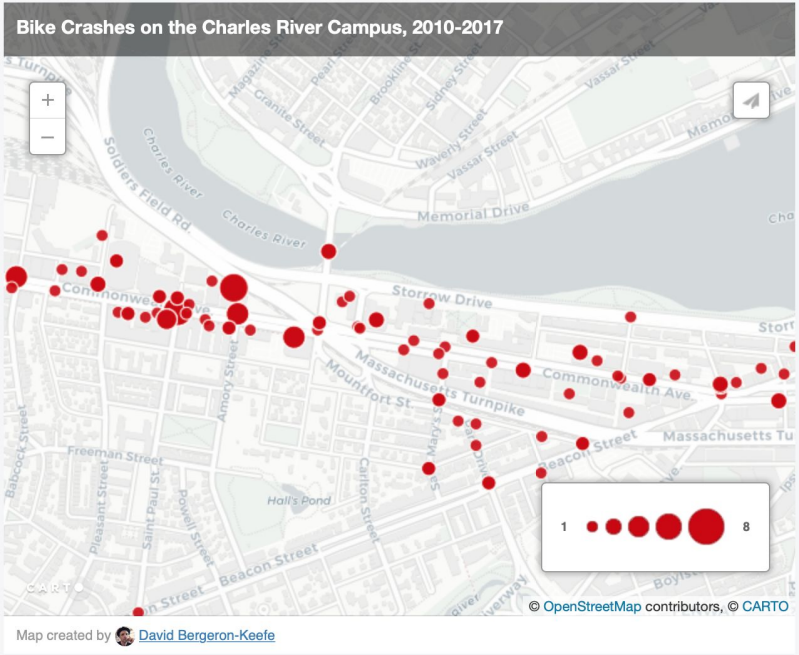
- Mass Ave has the highest amount of bike accidents compared to other streets
  - 24 in the past year
- 33% of accidents coming Mass Ave
- Identify where additional infrastructure is necessary

Bike Lane Type	Portion	Accident Count(%)
Shared Bike Lane	11%	3 (12%)
Bus Bike Lane	2%	1 (4%)
Shared Lane	9%	5 (20.8%)
Separated Bike Lane	11%	7 (29%)
Bus Bike Lane	67%	8 (33.3%)

Future Improvements

- More and better data
  - Challenges with finding data
- Add Map to visualization
  - Help visualize geographical location
- Survey bikers
  - Determine which bike lane types are preferred
- Study additional bike lane options
  - Concrete barriers and bike traffic signals
- Compare to other cities
  - Seattle, WA and San Francisco, CA

➔ Make changes to existing bike lanes



Questions?

Jillian: burns.j@husky.neu.edu
Ken: umemoto.k@husky.neu.edu
Jared: kahn.j@husky.neu.edu