

DivvyProject_Final

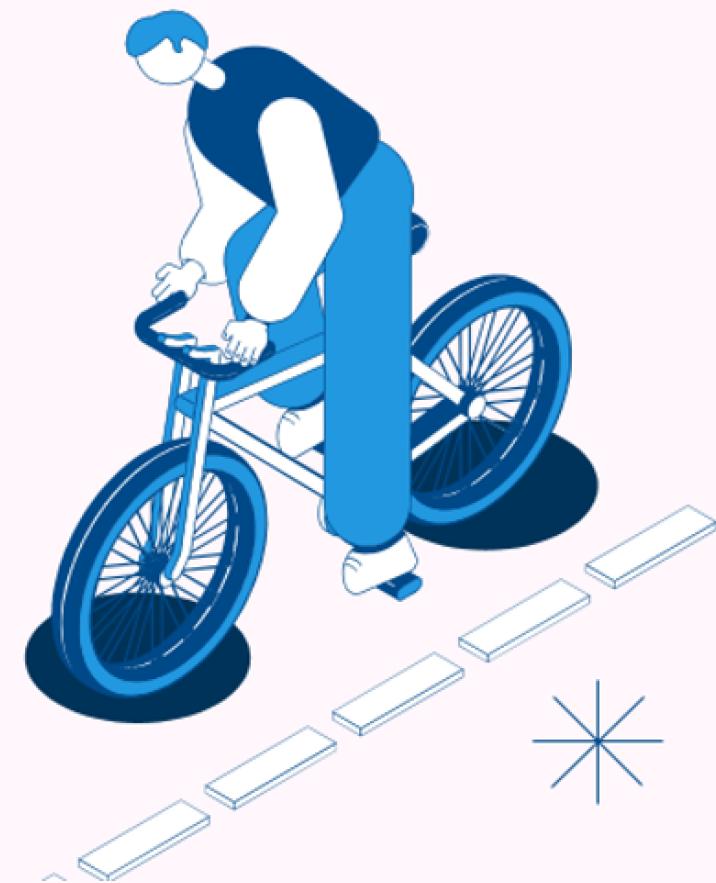
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Heat ma
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Divvy & Public Safety

Chicago, IL

Yamato Kashima





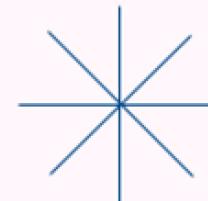
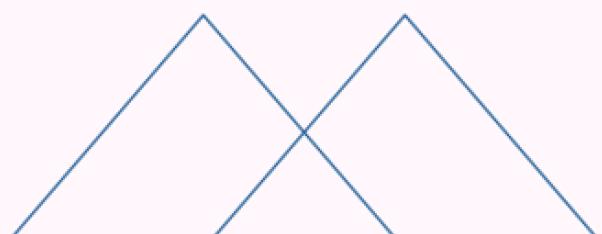
Crime By The Numbers

- **Violent Crime Rate**
164% above national average
- **Average of 350,297 crimes per year***

Defining the Data



- Existing Divvy Bikeshare Data
- Imported Divvy Data
- City of Chicago Crime Reports





The Problem

Product Availability



The Focus

Ridership and Public Safety



The Hypothesis

Relocation/Redistribution

More About the Data



Limitations

Divvy Data:

- Staff Rides Omitted
- Removed rides < 60 seconds
- Missing Station ID's

Crime Data:

- Crime type
- Time of Report

Assumptions

- Trip durations
- Stations needing relocation

Heat maps showing
crime patterns (top)
and ride share patter..

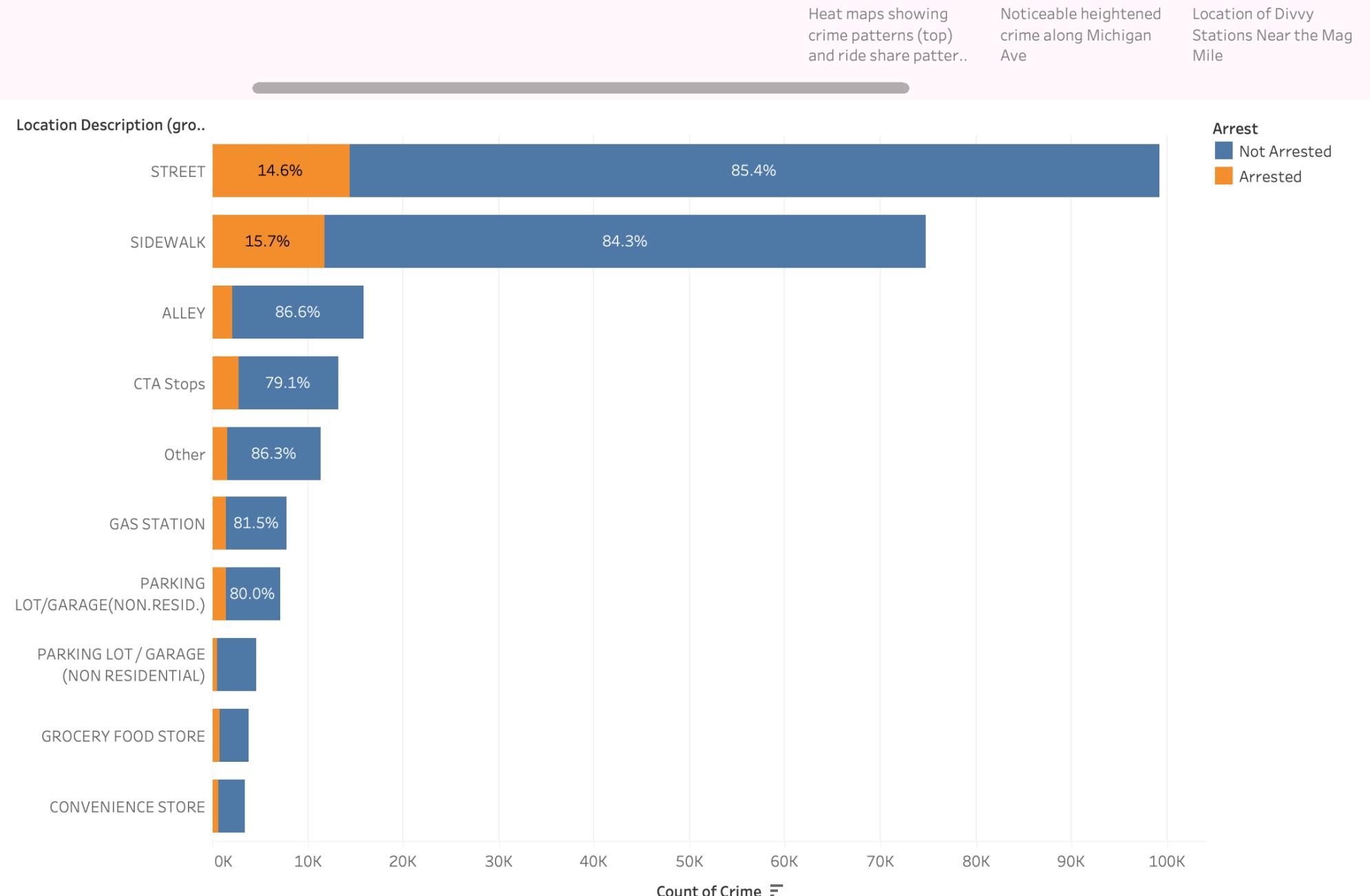
Noticeable heightened
crime along Michigan
Ave

Loca
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Questions to Answer

- Route and station popularity?
- Changes in crime?
- Seasonality of bikes and crime?
- Relocation?

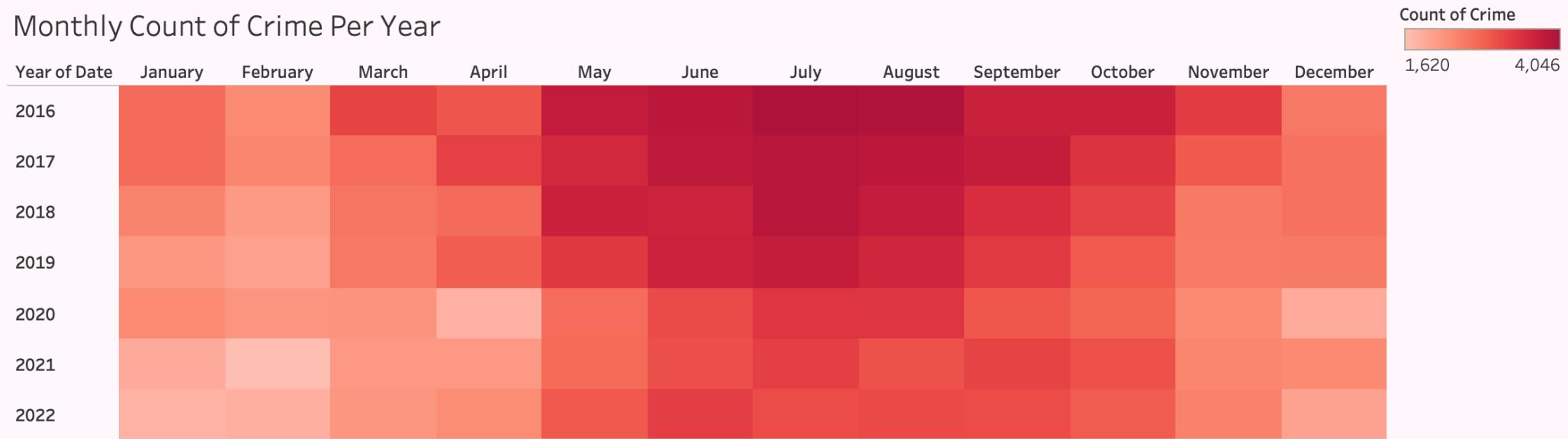




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Location of Divvy Stations Near the Mag Mile



A heatmap visualizing monthly Divvy ride counts from January 2016 to December 2022. The x-axis represents the months, and the y-axis represents the years. The color scale indicates the count of rides, ranging from light green (49,622) to dark blue (823,488). The highest ride volumes are consistently seen in July and August each year.

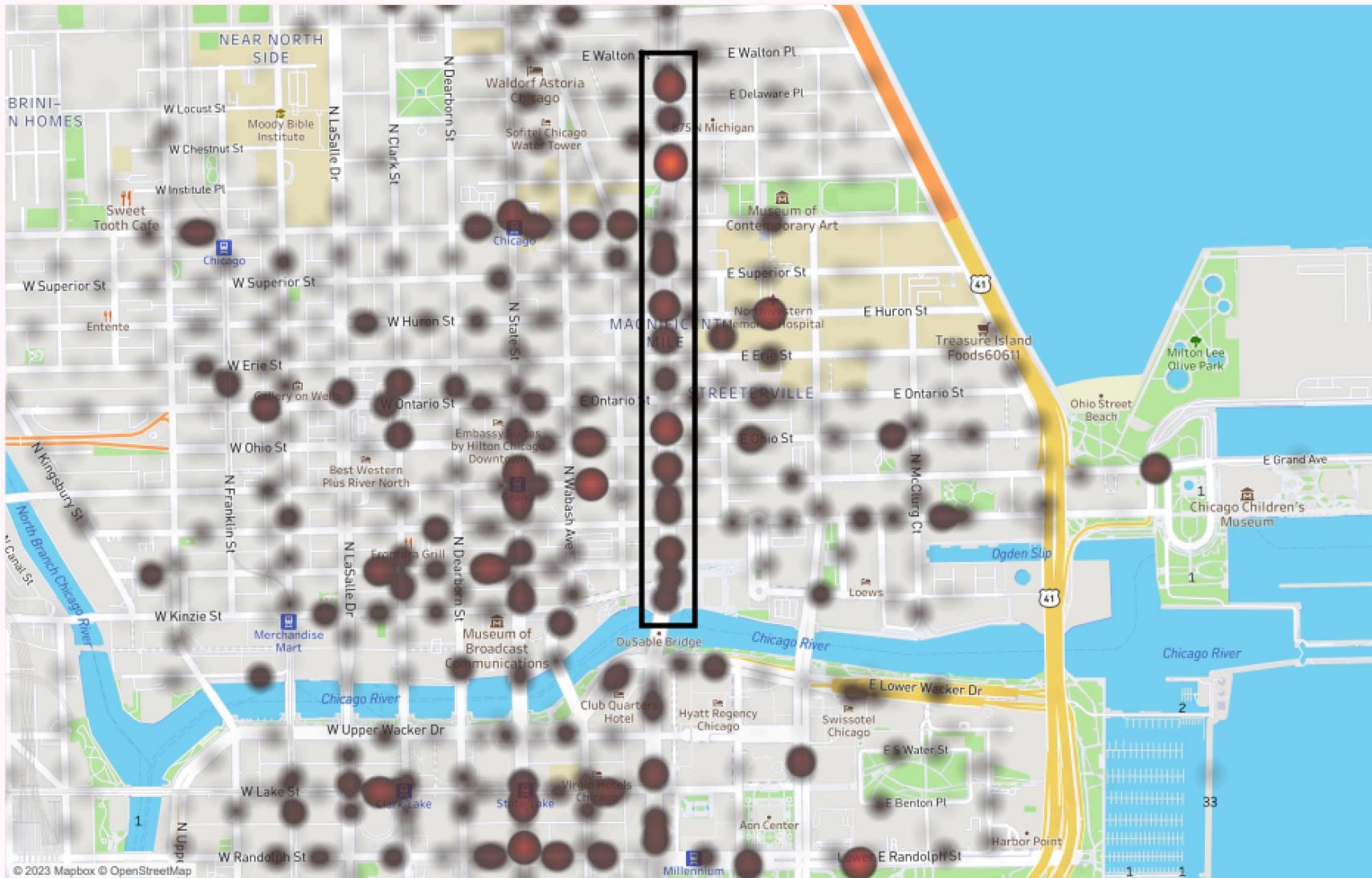
Year of Start..	January	February	March	April	May	June	July	August	September	October	November	December
2016	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622
2017	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622
2018	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622
2019	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622
2020	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622	49,622
2021	49,622	49,622	49,622	49,622	49,622	49,622	823,488	823,488	823,488	823,488	49,622	49,622
2022	49,622	49,622	49,622	49,622	49,622	49,622	823,488	823,488	823,488	823,488	49,622	49,622

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Crime Locations

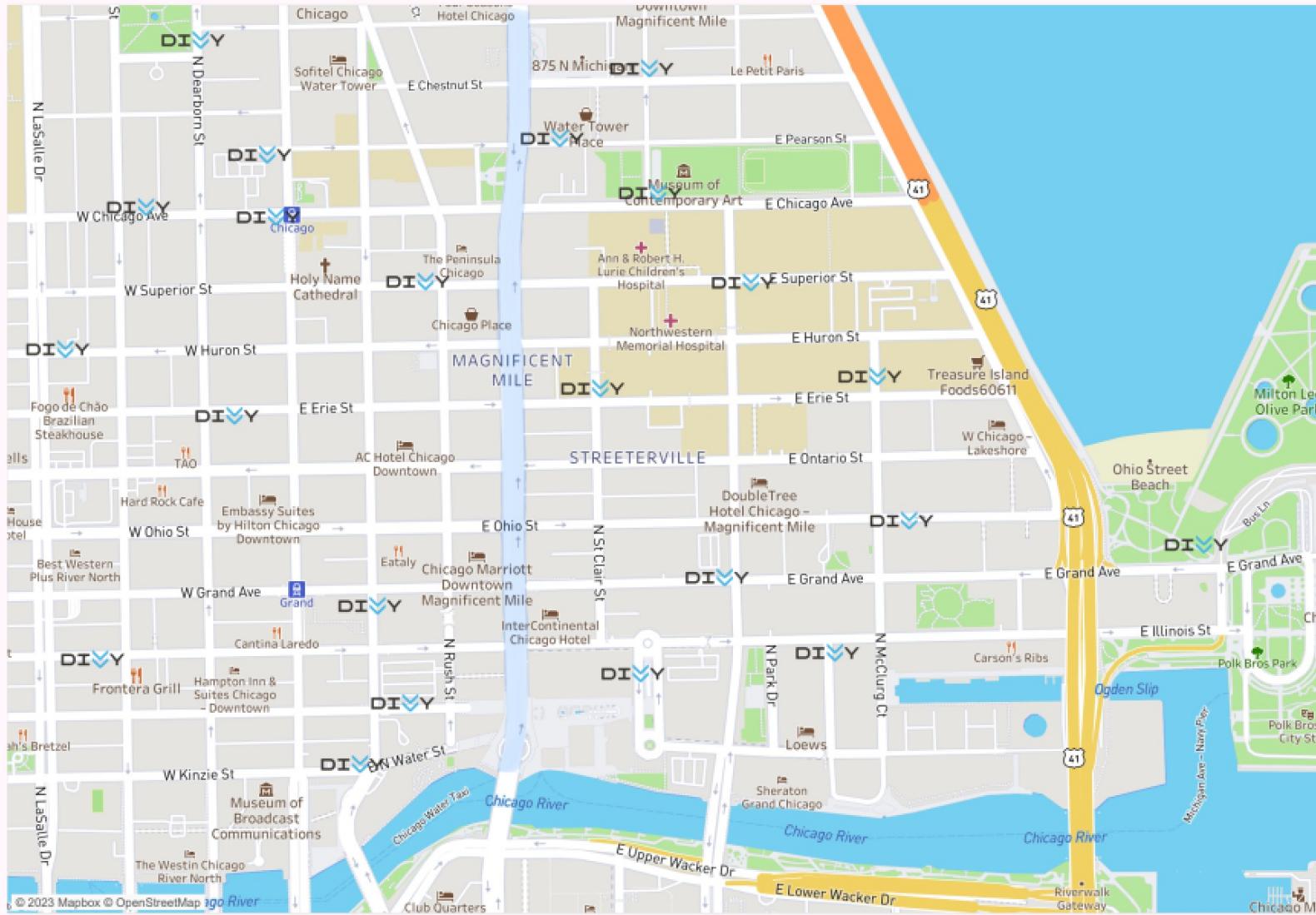


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Divvy Stations

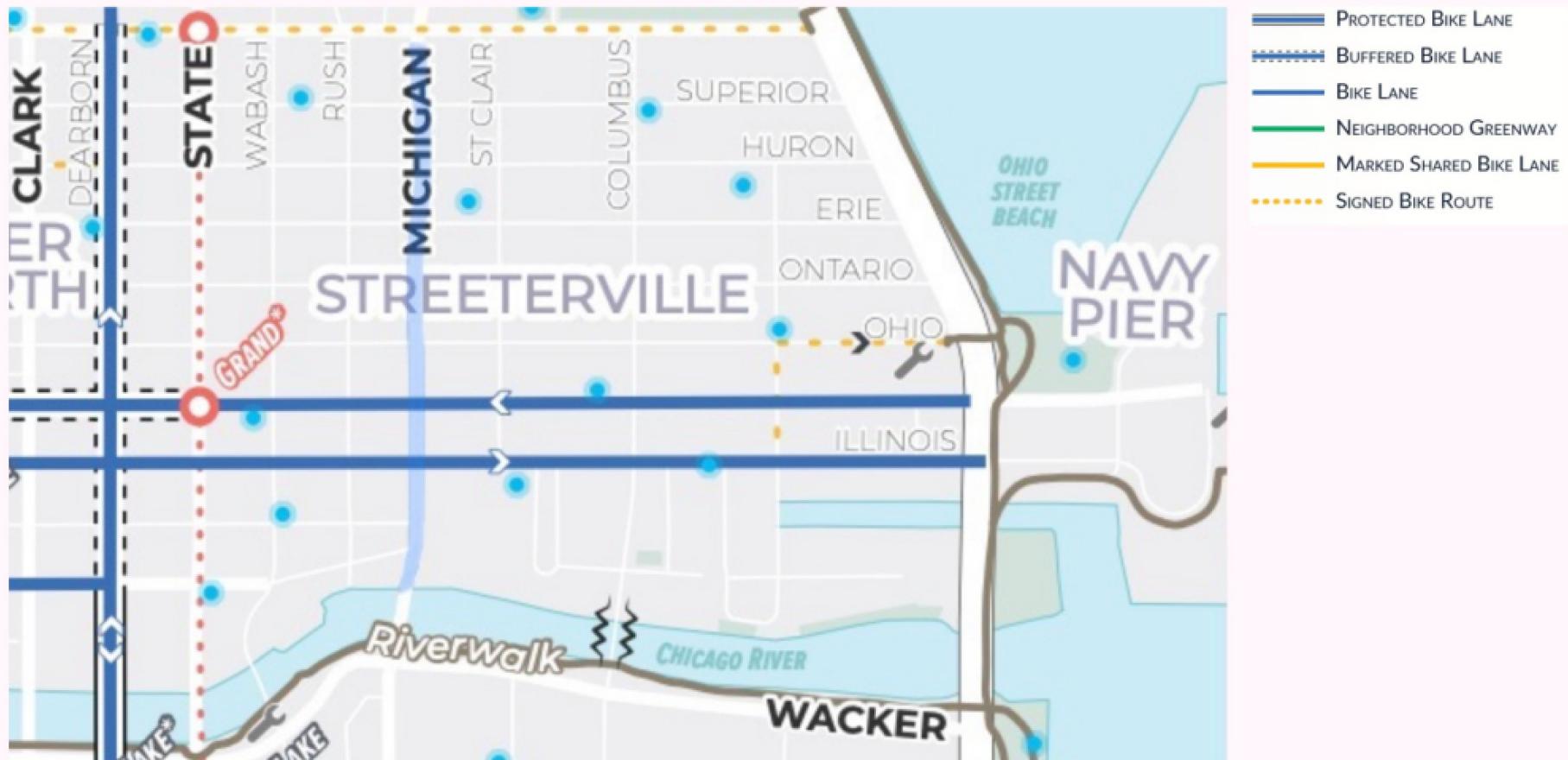


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Location of Divvy
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Bike Map Showing Location of Bike Routes and Bike Lanes

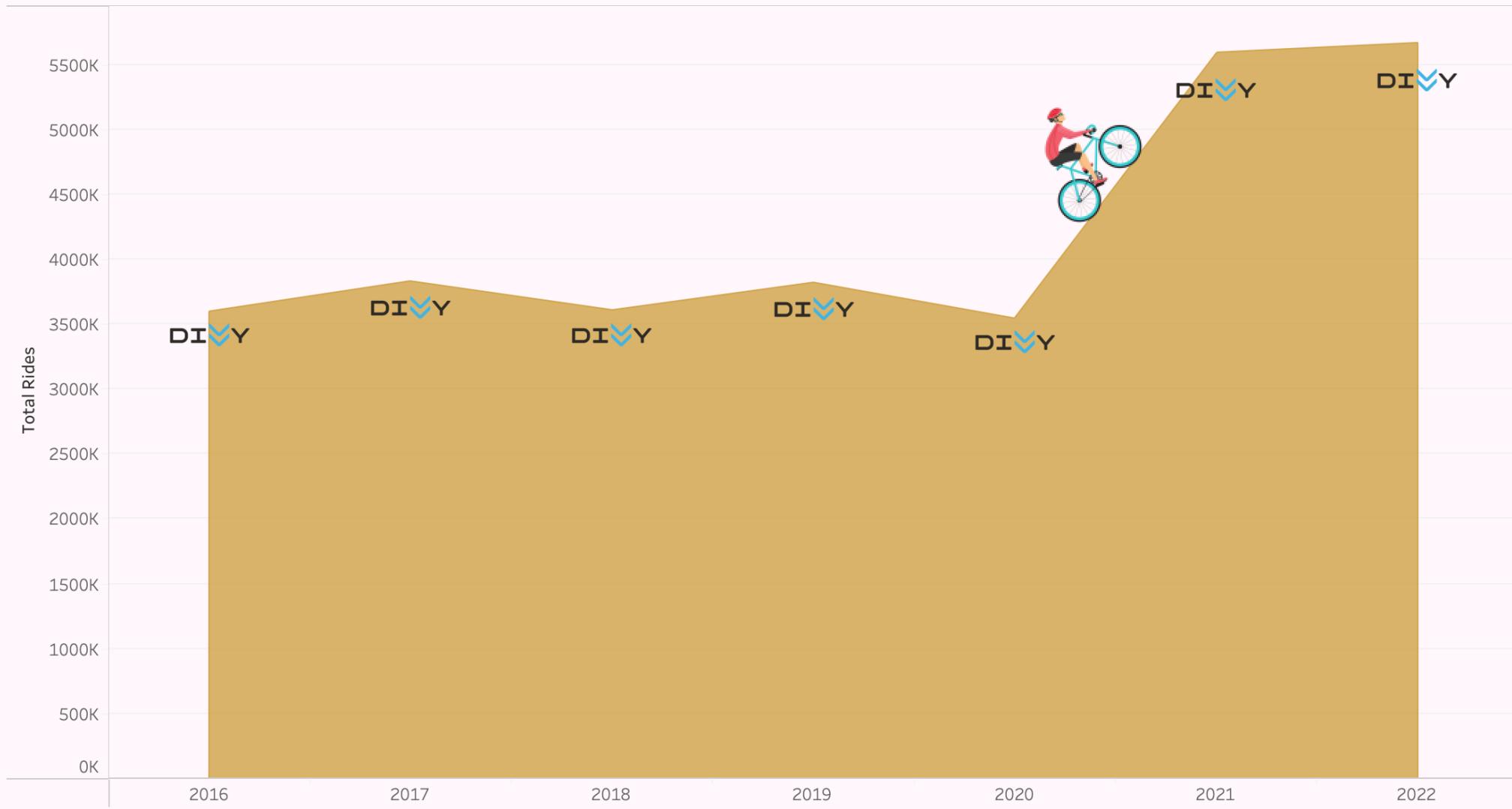


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Location of Divvy
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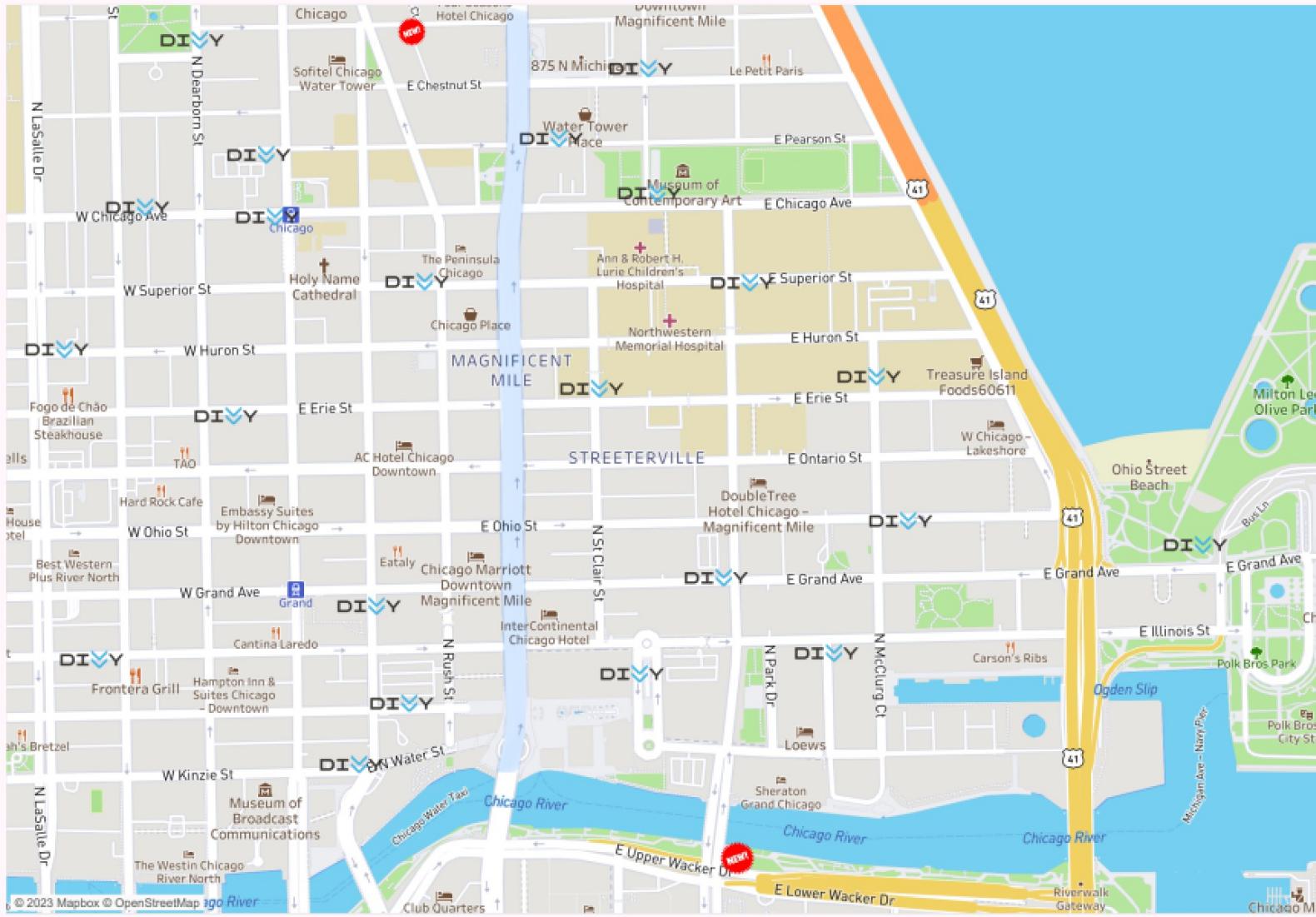


Rides per Year



Noticeable heightened..
ble heightened..
Stations Near the Mag Mile

Divvy Stations



NEW! - Recommendati..



SUGGESTIONS FOR FURTHER ANALYSIS



Recommend Safer Routes



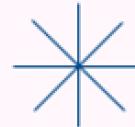
Reporting Directly Through The App



Re-Routing If Necessary



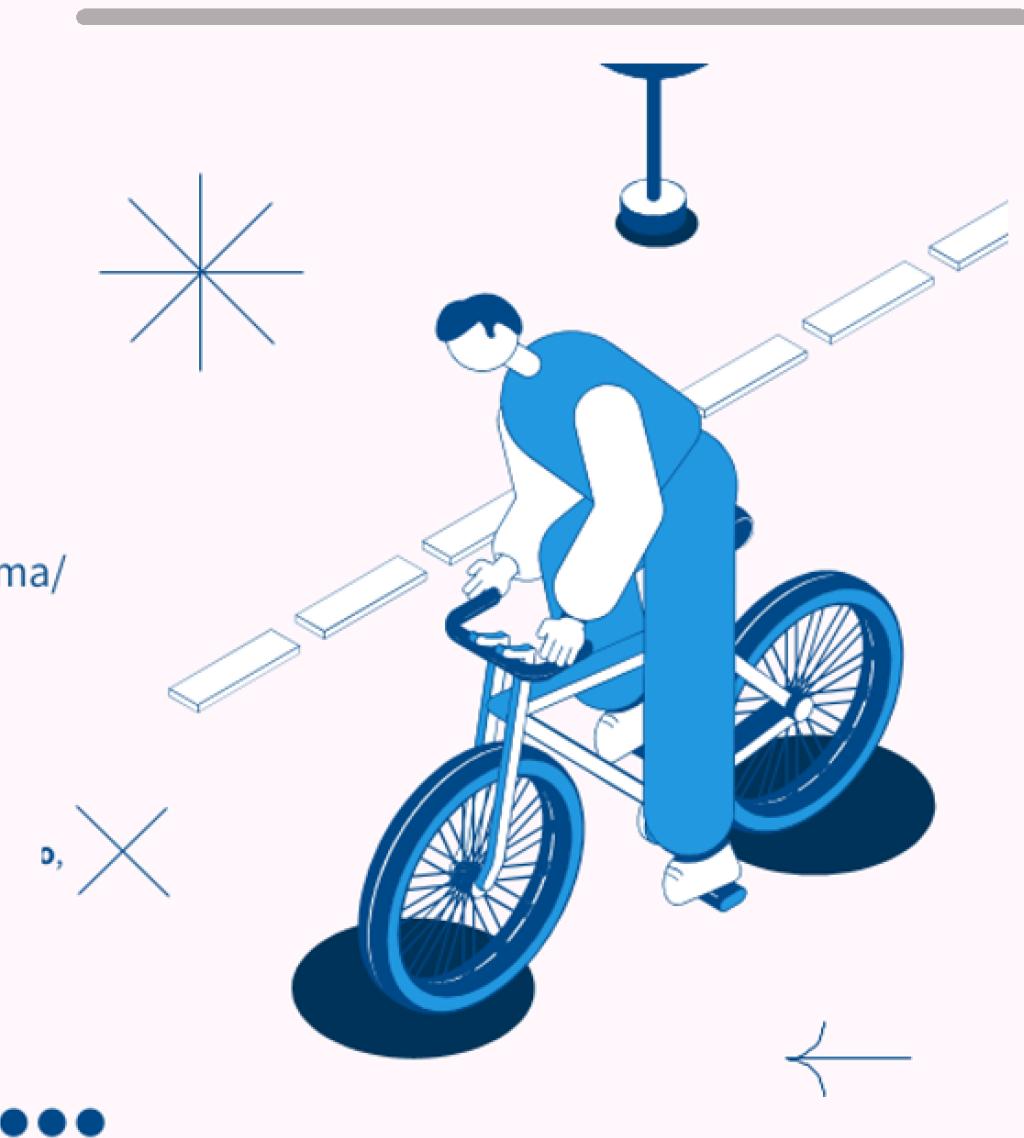
Adding Lock Boxes



THANKS!

Does anyone have any questions?

yamatokashima@gmail.com |
<https://www.linkedin.com/in/yamatokashima/>





RESOURCES



- Divvy Data: [Divvy Bikes Website](#) and [City of Chicago](#)
- Chicago Bike Routes and Lanes: [City of Chicago](#)
- Crime Data and Reports: [City of Chicago](#) and [the FBI UCR \(Uniform Crime Reporting\) Program](#)
- [SQL Queries](#): Connor Fryar, Evan Meyer, and myself