Data Visualization: Toronto Cyclist Data

The Process

ACQUIRE DATA

Acquire data from Toronto Open Data Program

PRE-PROCESS DATA

Join ride data with bike station data and remove outliers

VISUALIZE DATA

Use different visualizations to gain insights on data

CONCLUSIONS AND DECISION MAKING

Understand the data and make business decisions

The Data

DATA FEATURES

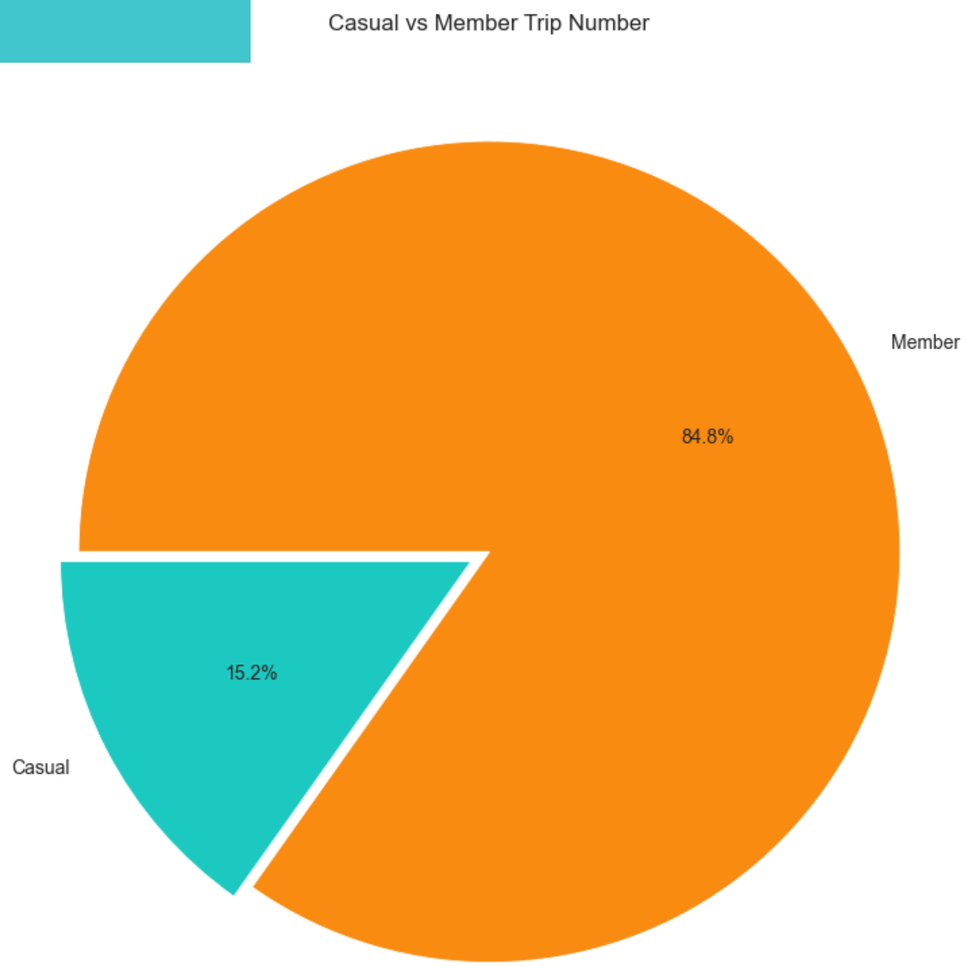
- Trip start day and time
- Trip end day and time
- Trip duration
- Trip start station
- Trip end station
- User type.

Tools Used

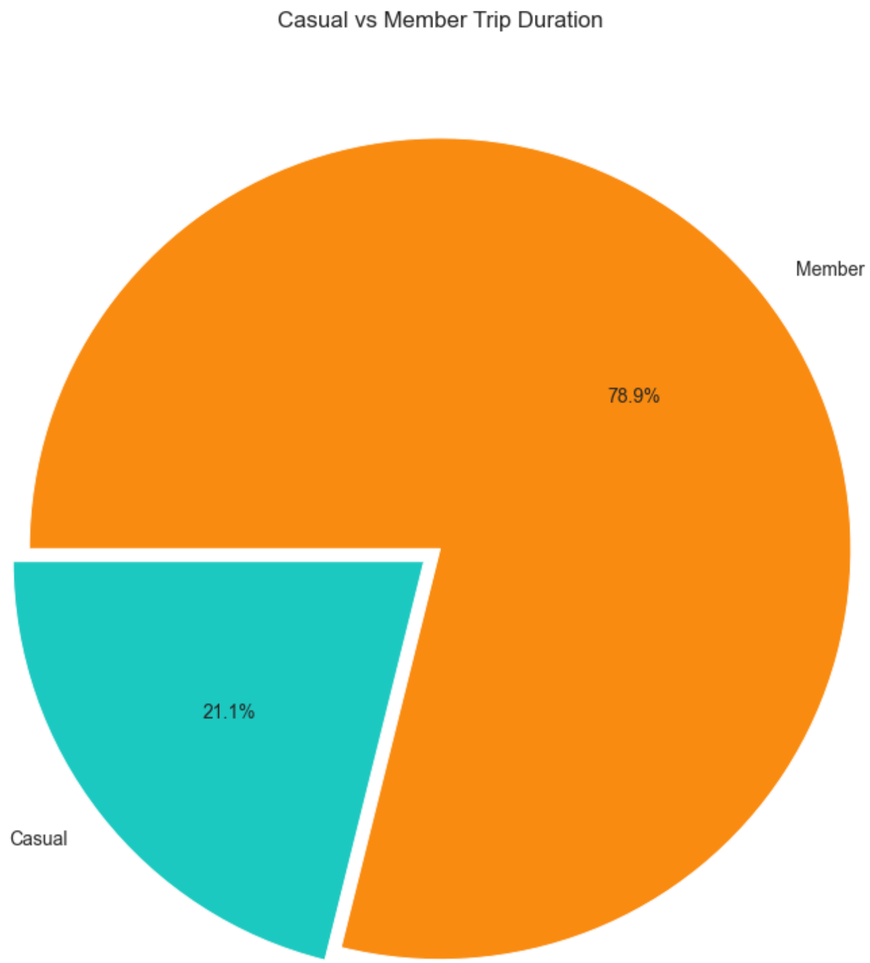
LIBRARIES USED

- Matplotlib
- Seaborn
- Geopy

USER TYPES

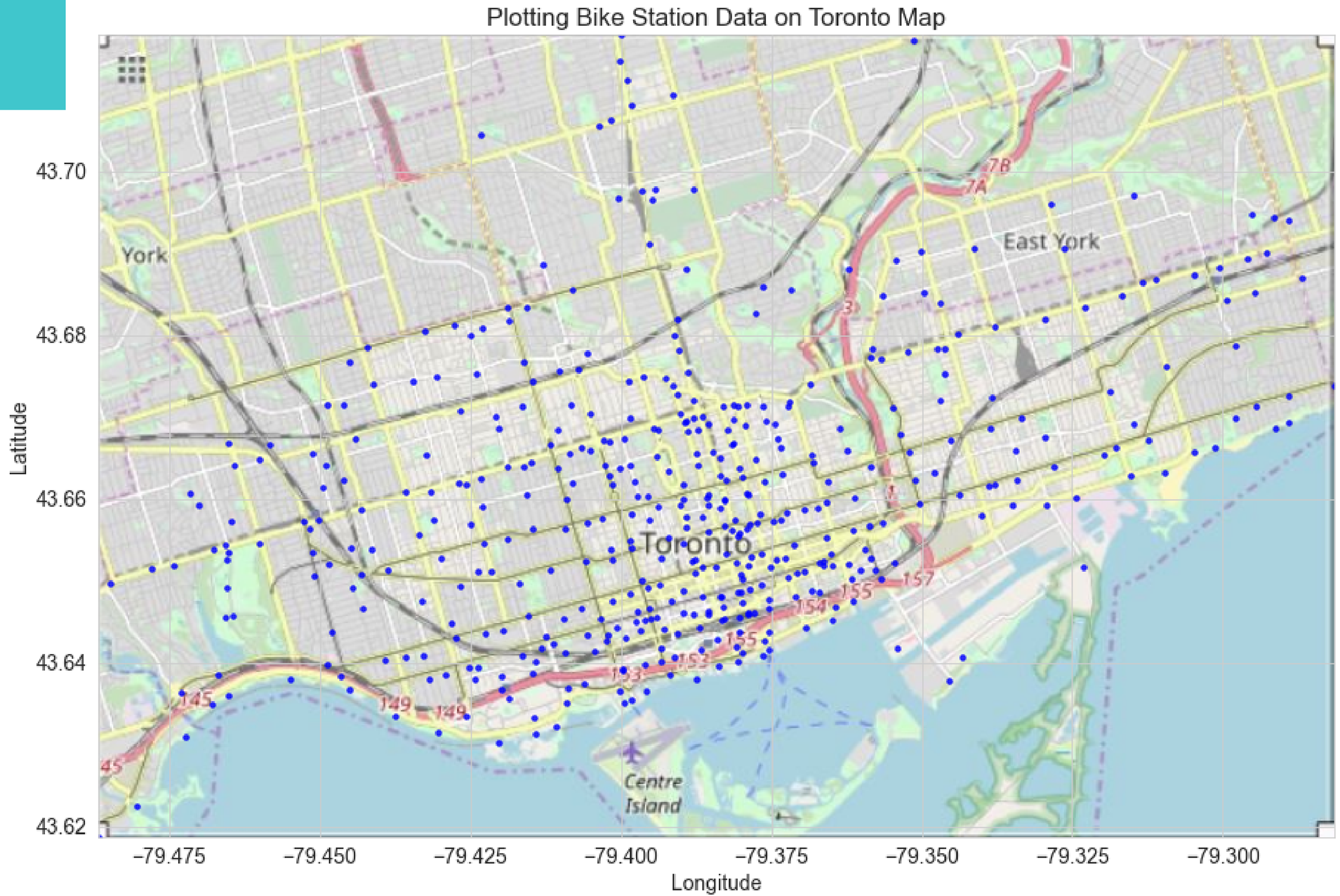


Number of Trips by User Type



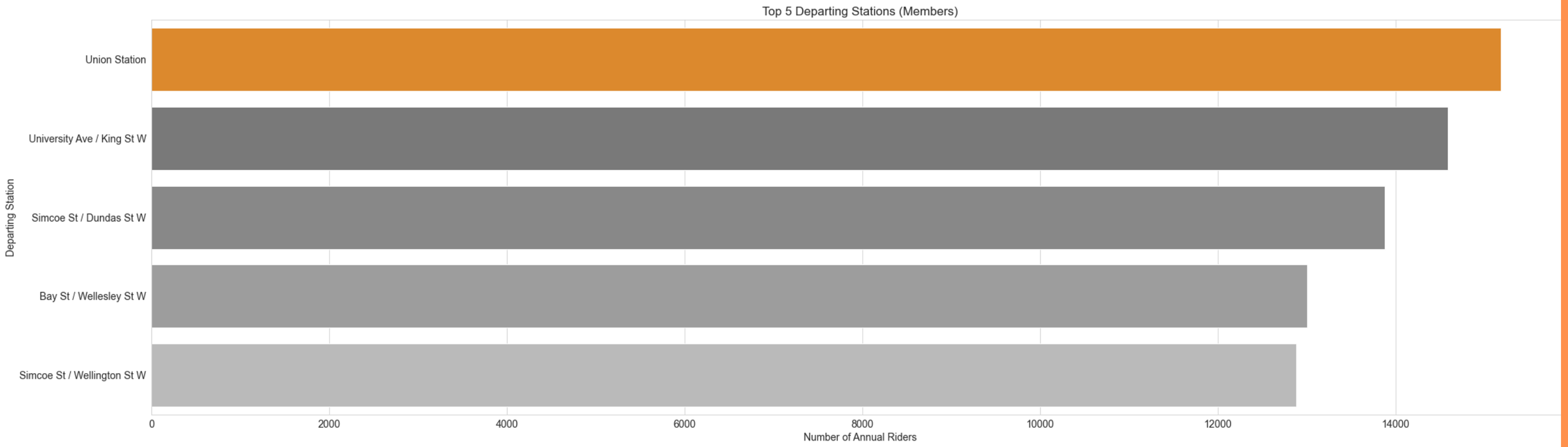
Total Ridership by User Type

BIKE STATIONS TORONTO



BUSIEST BIKE STATIONS

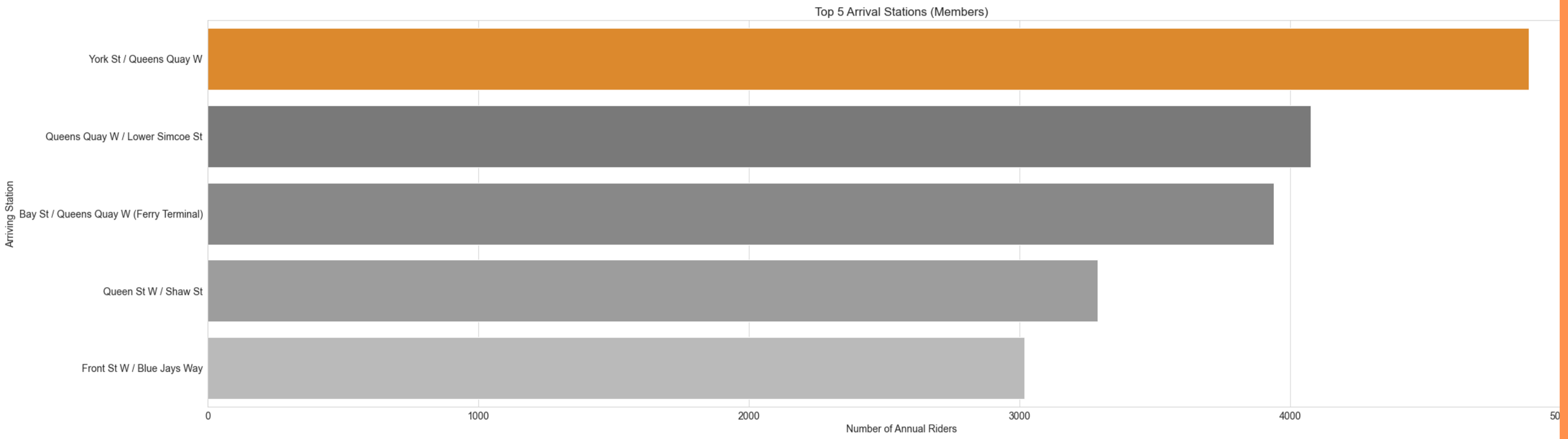
Departing



Union Station is the busiest departing bike station for members

BUSIEST BIKE STATIONS

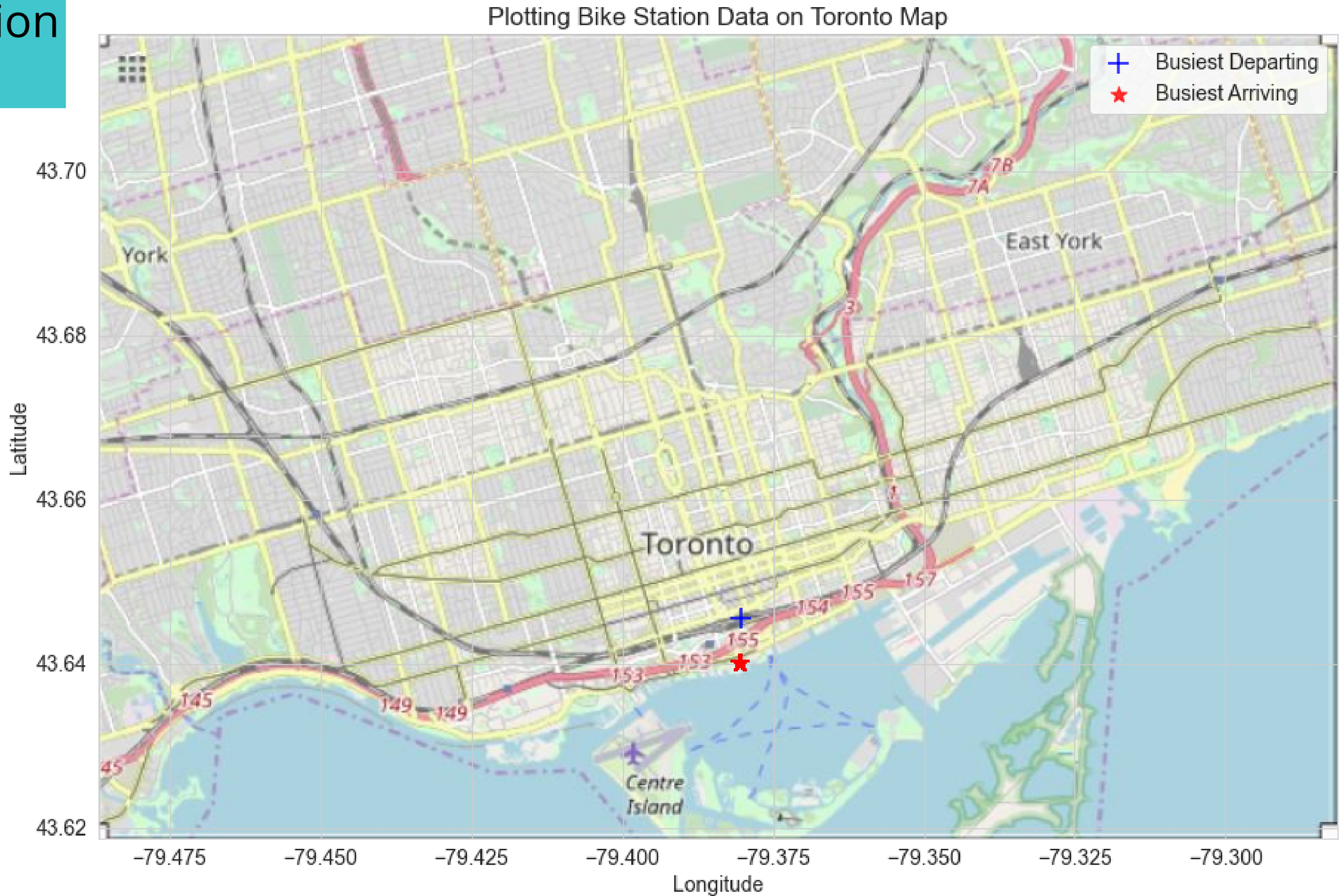
Arriving



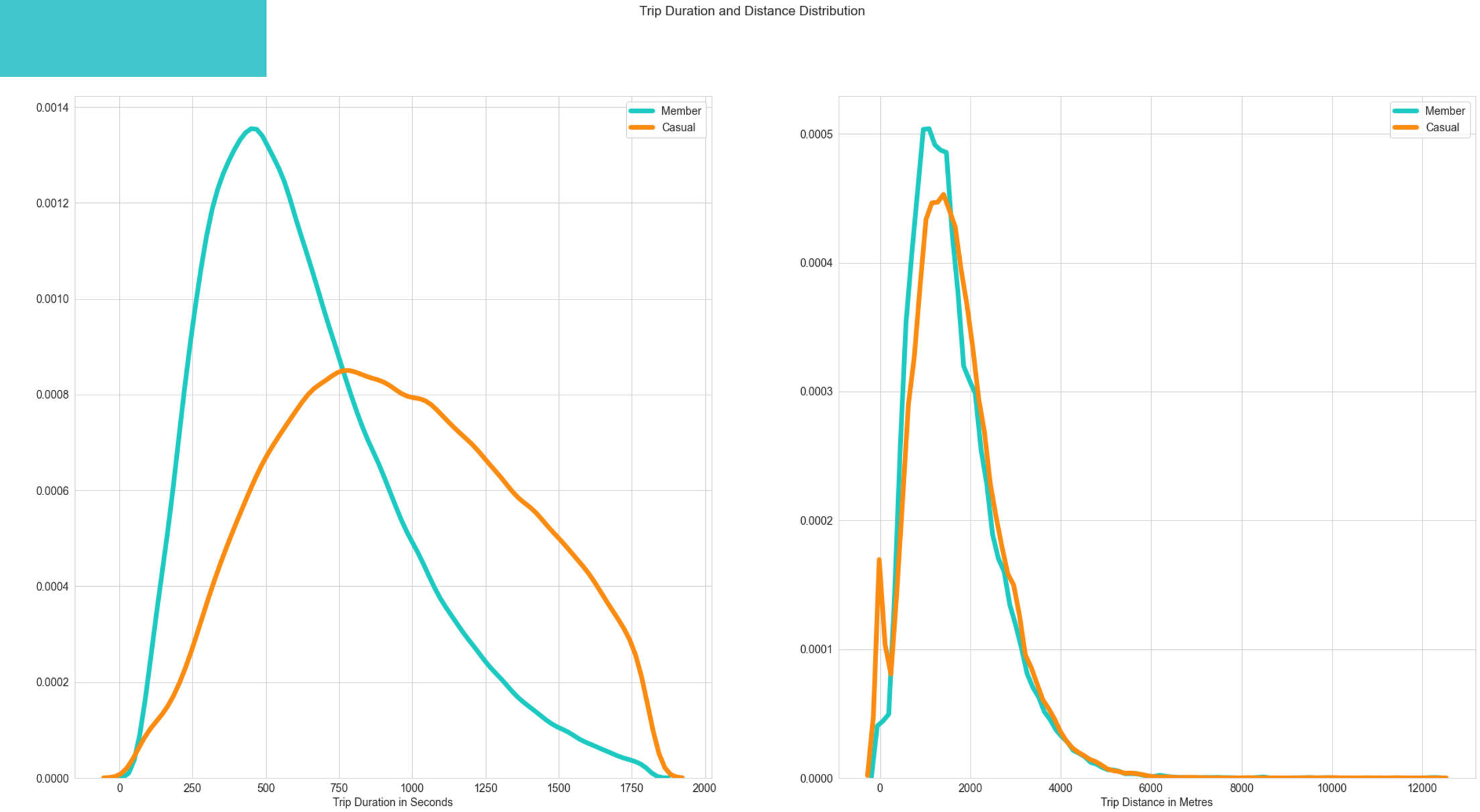
York St at Queens Quay W is the busiest arriving bike station for members

BUSIEST BIKE STATIONS

Visualization

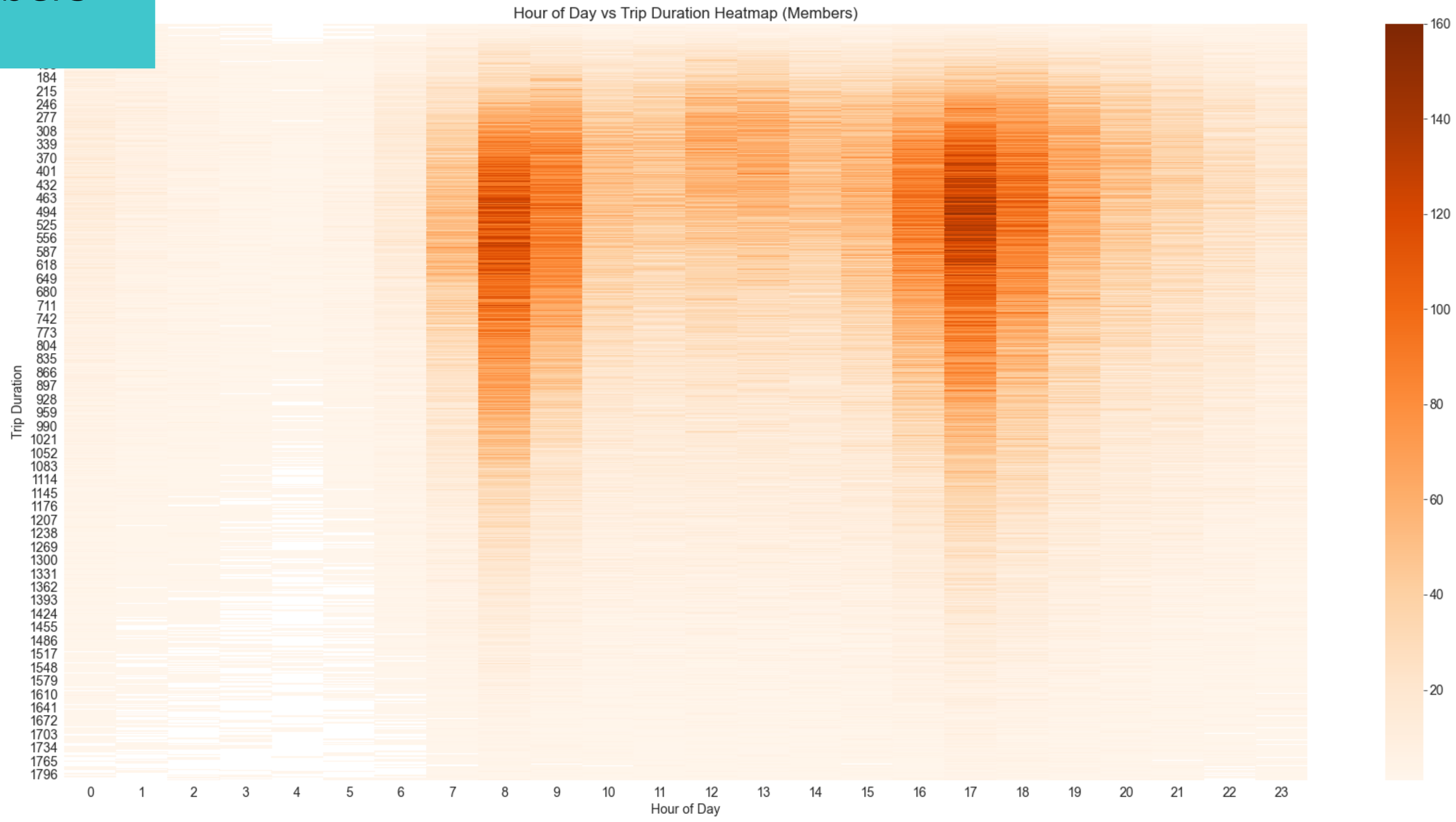


DURATION & DISTANCE DISTRIBUTION



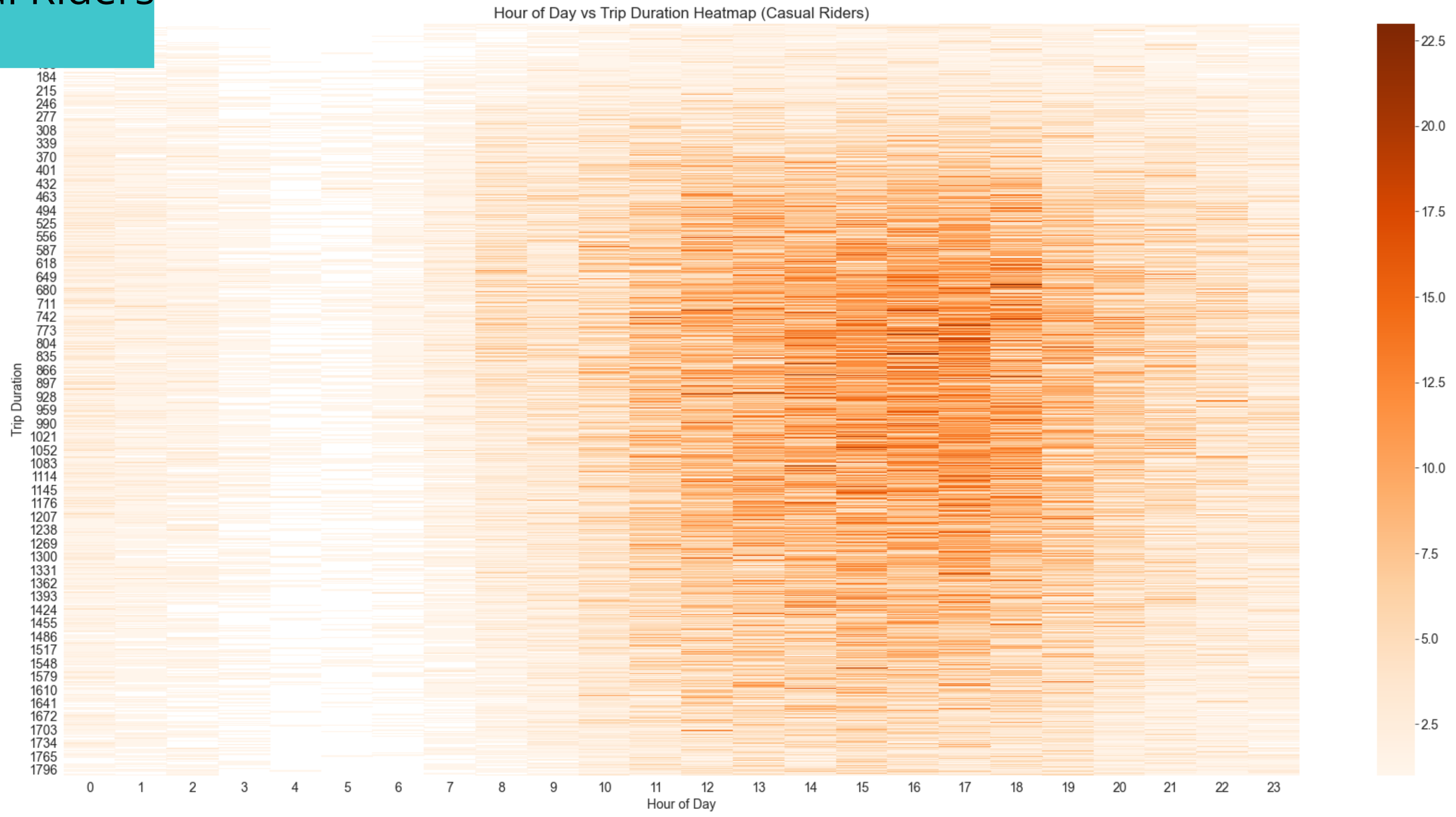
TIME OF DAY vs TRIP DURATION

Members

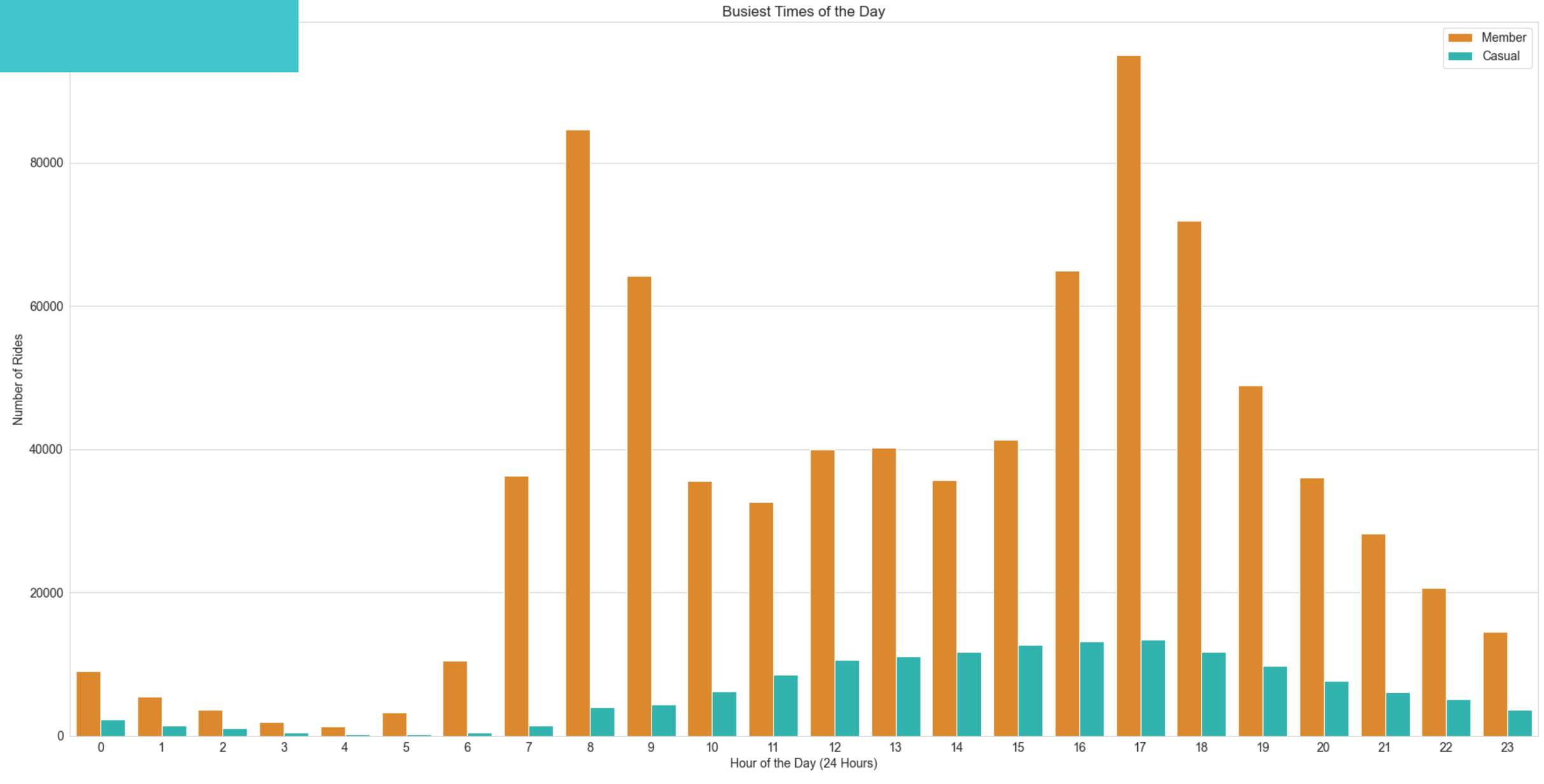


TIME OF DAY vs TRIP DURATION

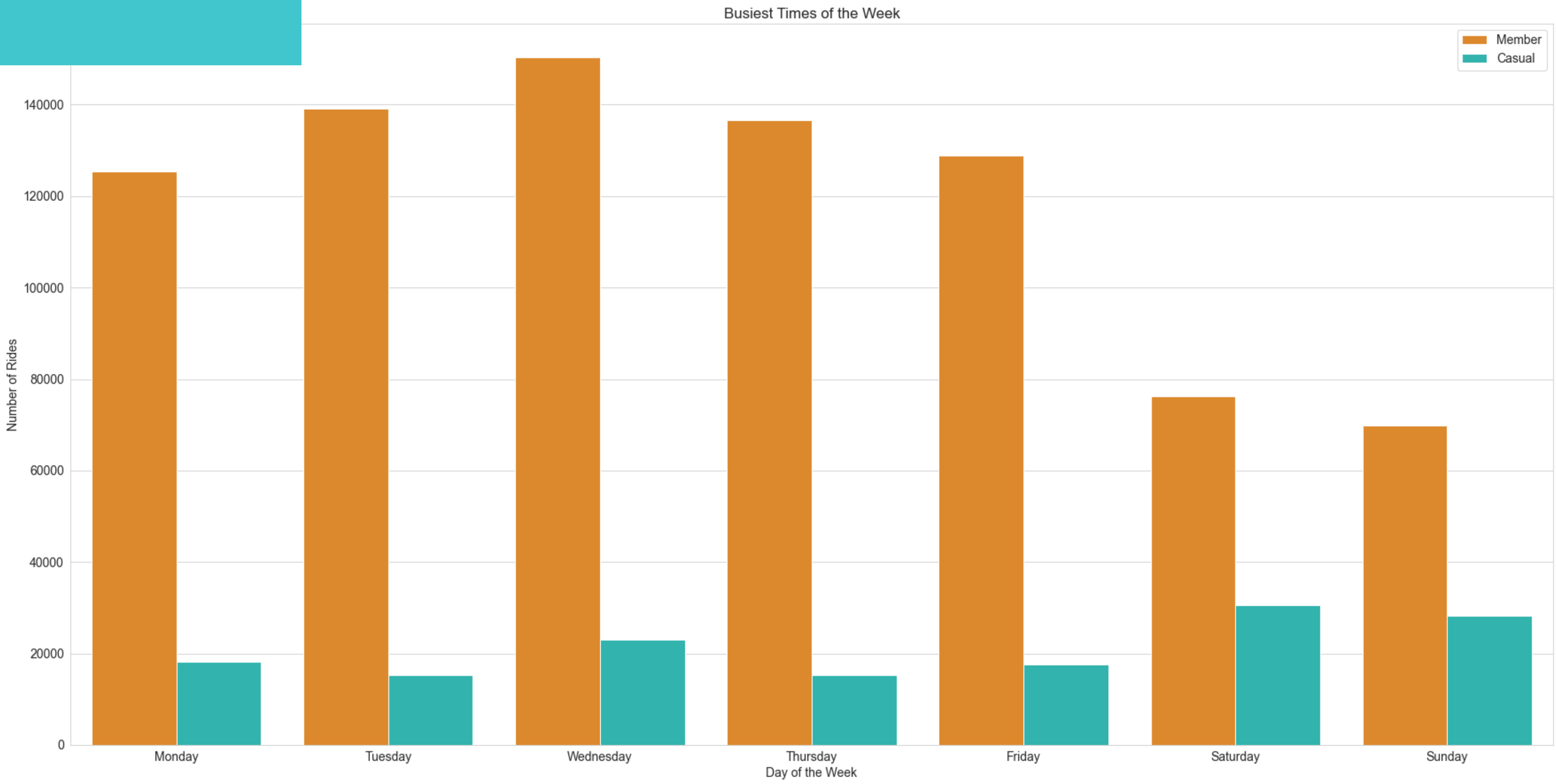
Casual Riders



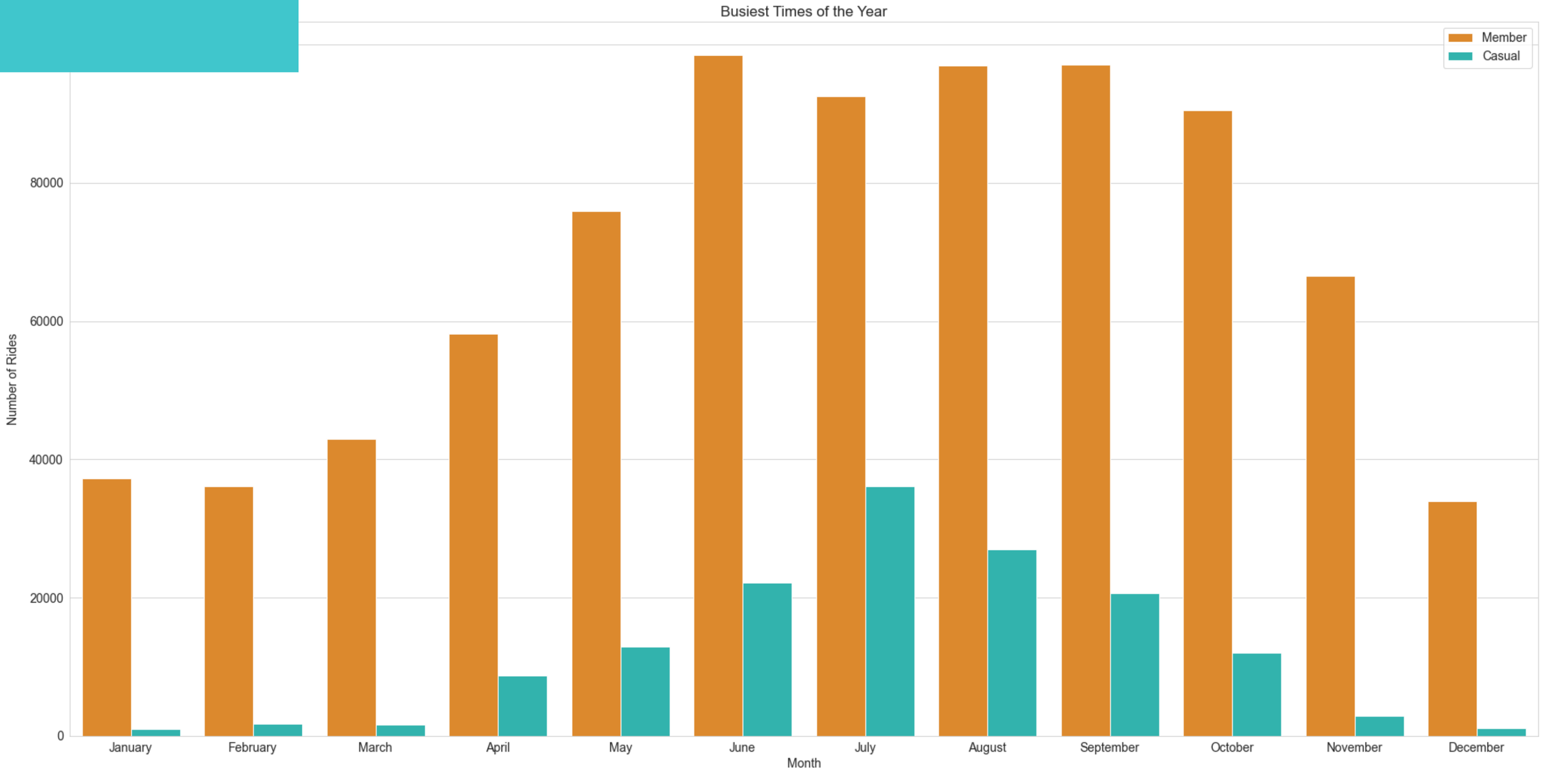
BUSIEST TIMES OF THE DAY



BUSIEST TIMES OF THE WEEK



BUSIEST TIMES OF THE YEAR



Further Scope

ADD WEATHER DATA

Analyze any correlation between daily trips and weather conditions

DEMAND MODELLING

Forecast weekly demand using usage patters and data mining techniques

USE GAINED INSIGHTS

Insights can be used to optimize costs and increase revenue

IMPROVE CUSTOMER EXPERIENCE

Use analysis to understand customer issues and work on new customer acquisition

Thank You!

Questions?