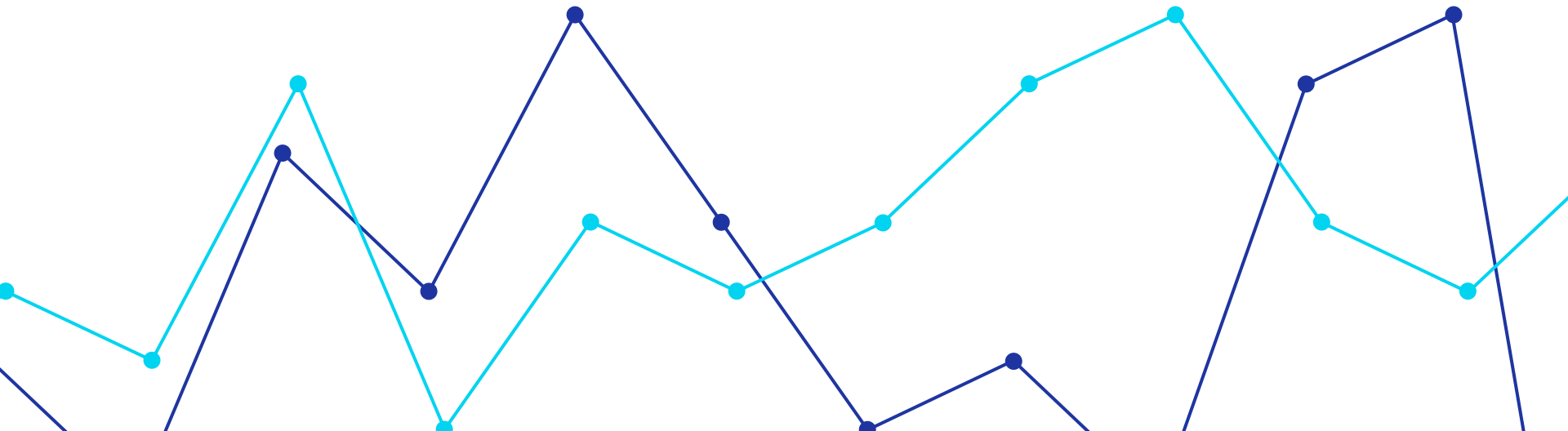


Helsinki City Bikes

Mid Bootcamp Project

Heloisa Bal



Helsinki City Bikes

What?


Helsinki City Bikes is a public bicycle system in Helsinki.

Why?

High interest in biking and micro mobility in general.

Data sets

 Kaggle Dataset
2018 - 2020 (3 years)

 Meteorological data
2018 - 2020 (3years)

City bikes



The new city bike season has started. Registration and season passes are now available!

Buy a pass

The city bike season starts on 1 April and ends on 31 October.

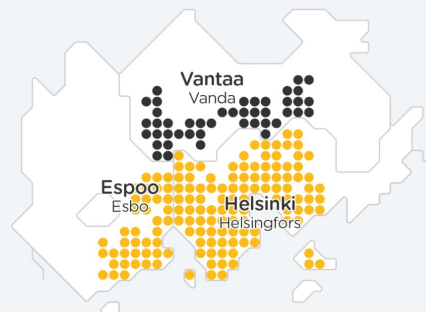
Please note that the bike system in place in Helsinki and Espoo is different from the system used in Vantaa and you cannot mix bikes from the two systems.

The pass for the whole season for Helsinki and Espoo costs EUR 35, for Vantaa EUR 30.

Start by selecting area

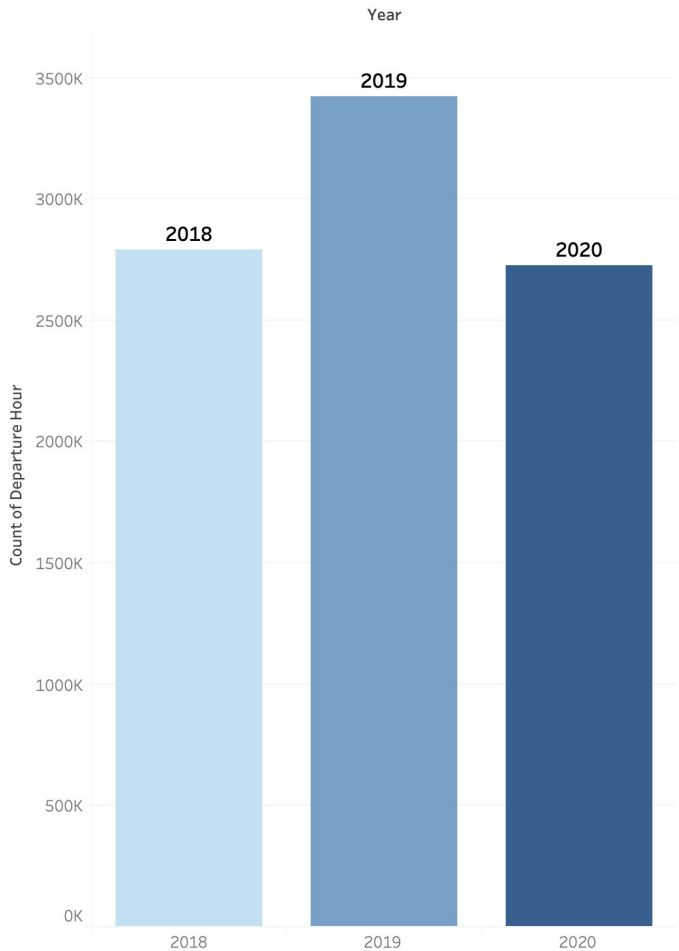
Helsinki and Espoo

Vantaa

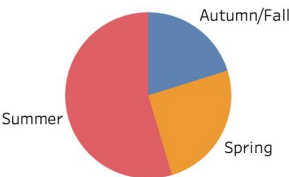


General Overview

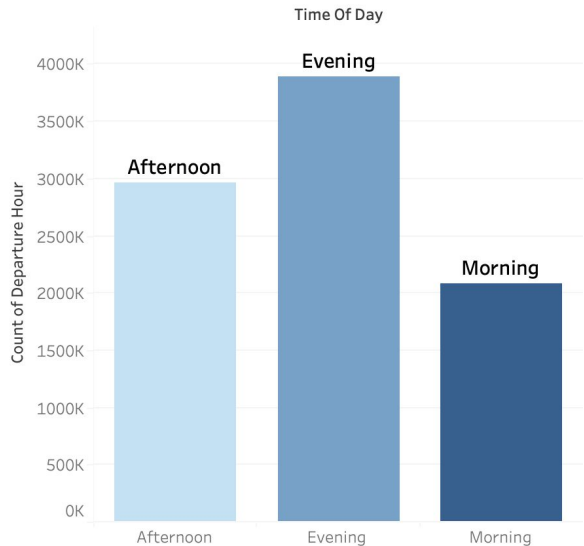
Bike Trips per Year



Trips by Season

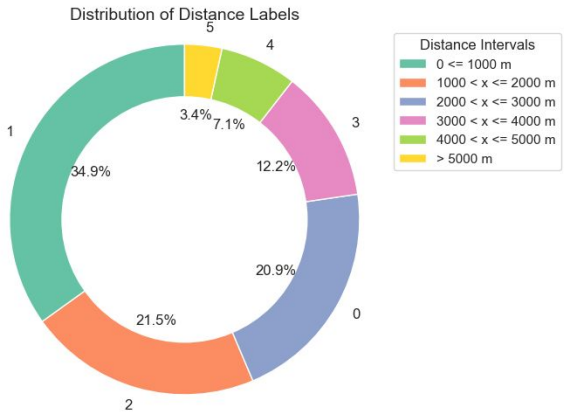
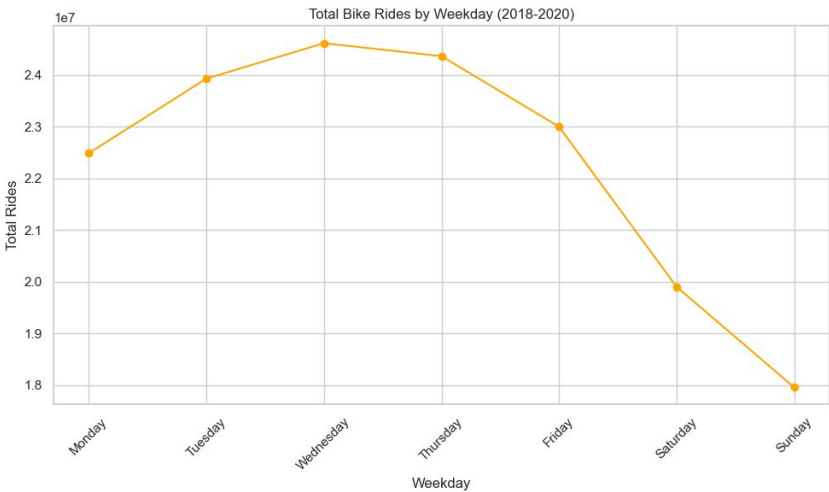
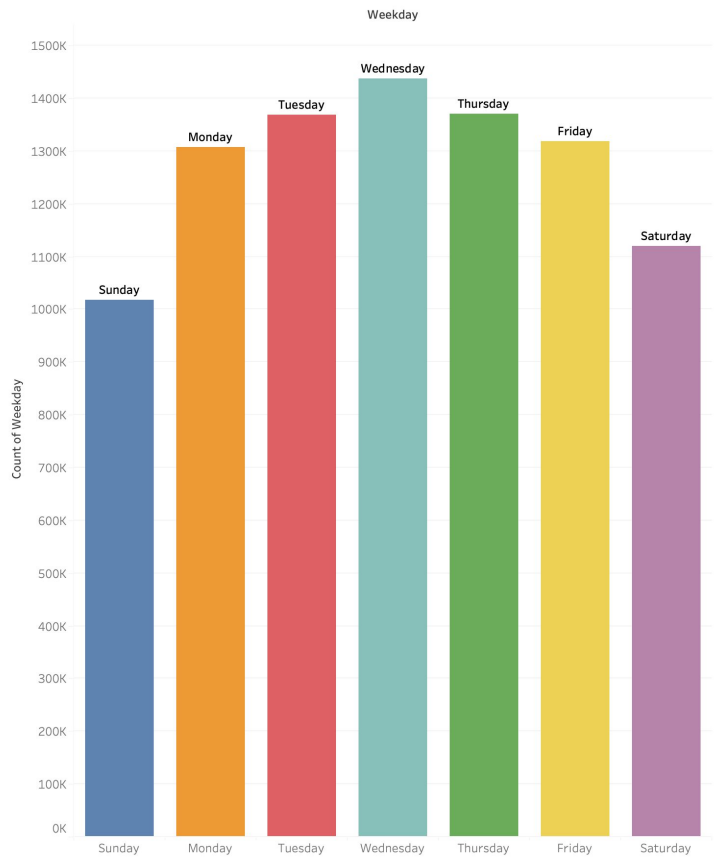


Trip Counts by Time of Day

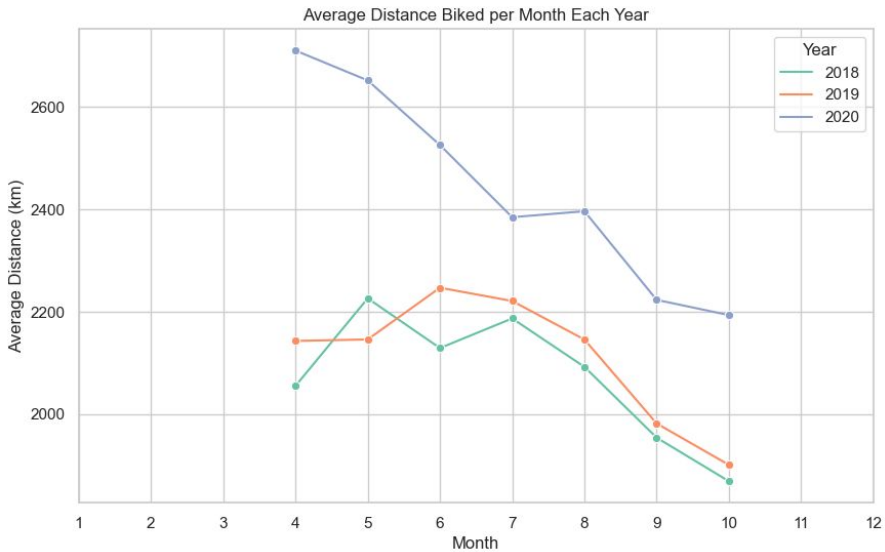
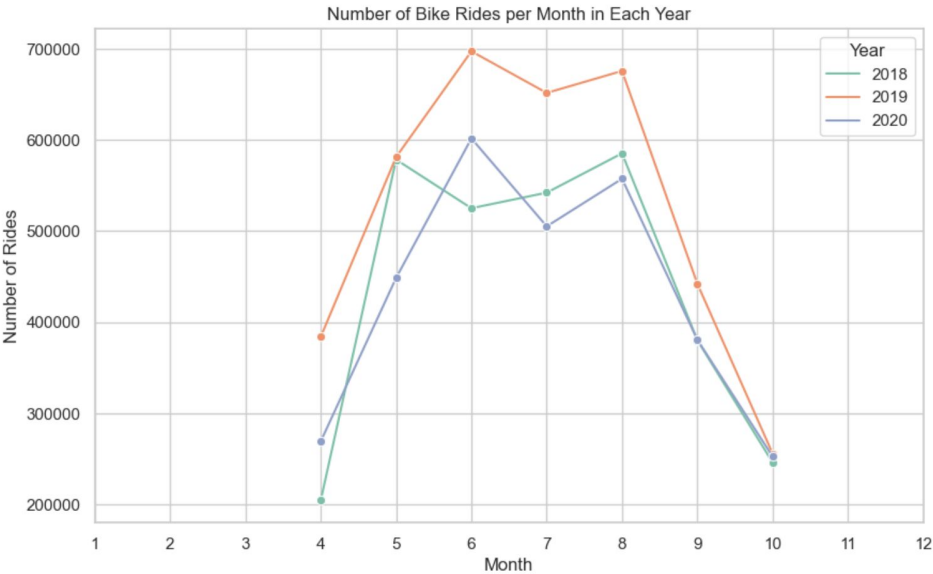


General Overview

Rides per Weekday

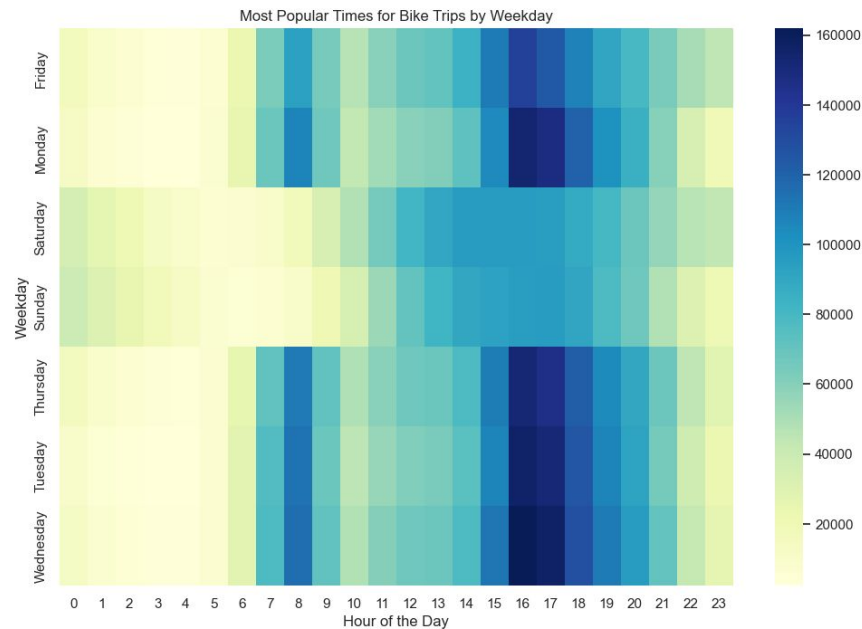
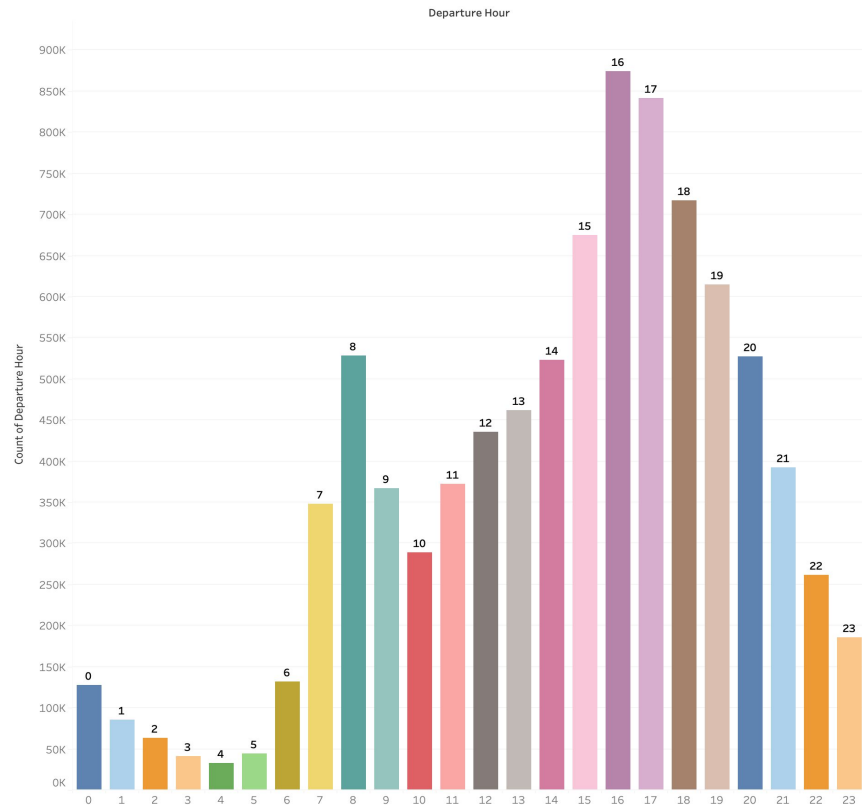


Monthly bike rides & Monthly average bike distance



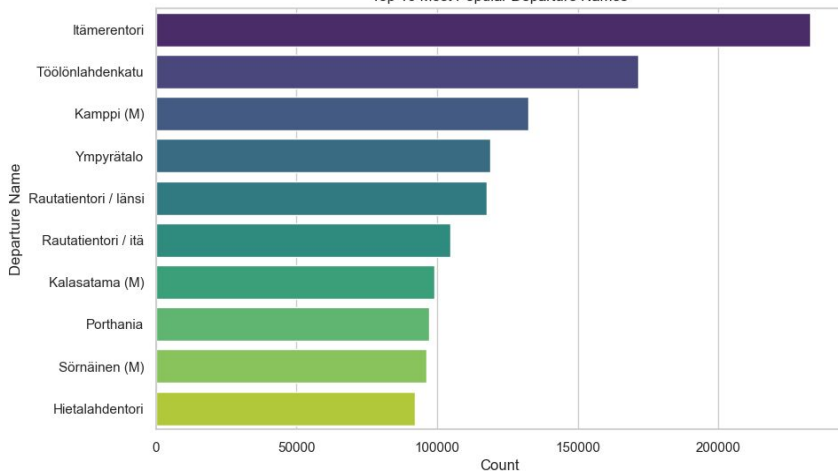
Most popular biking hours

Most Popular Biking Hours

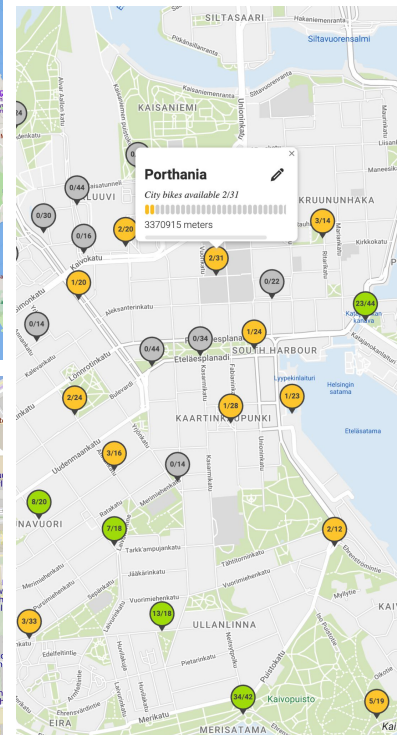
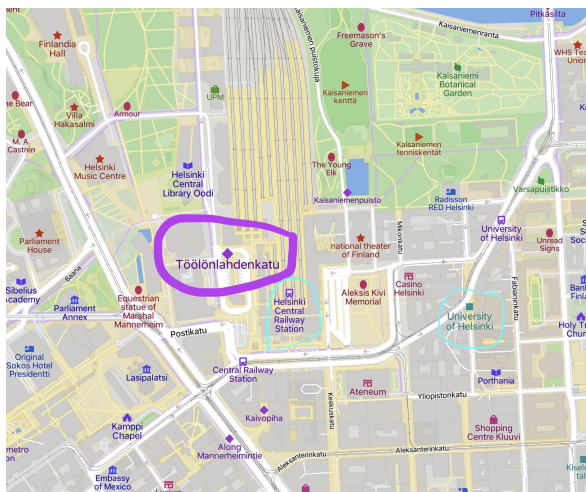
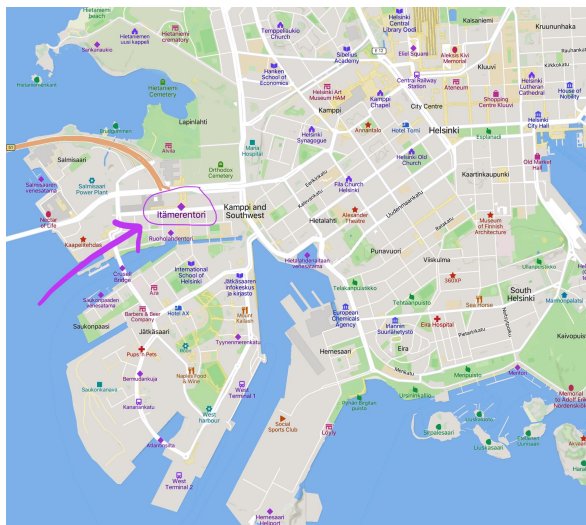
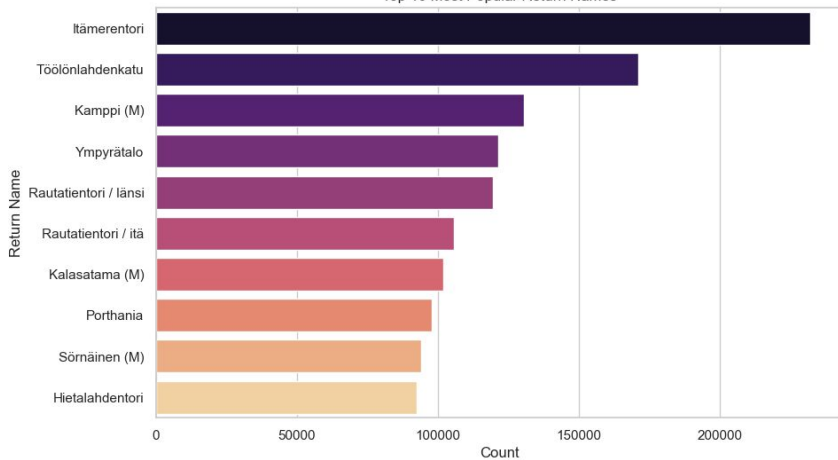


Popular Docks

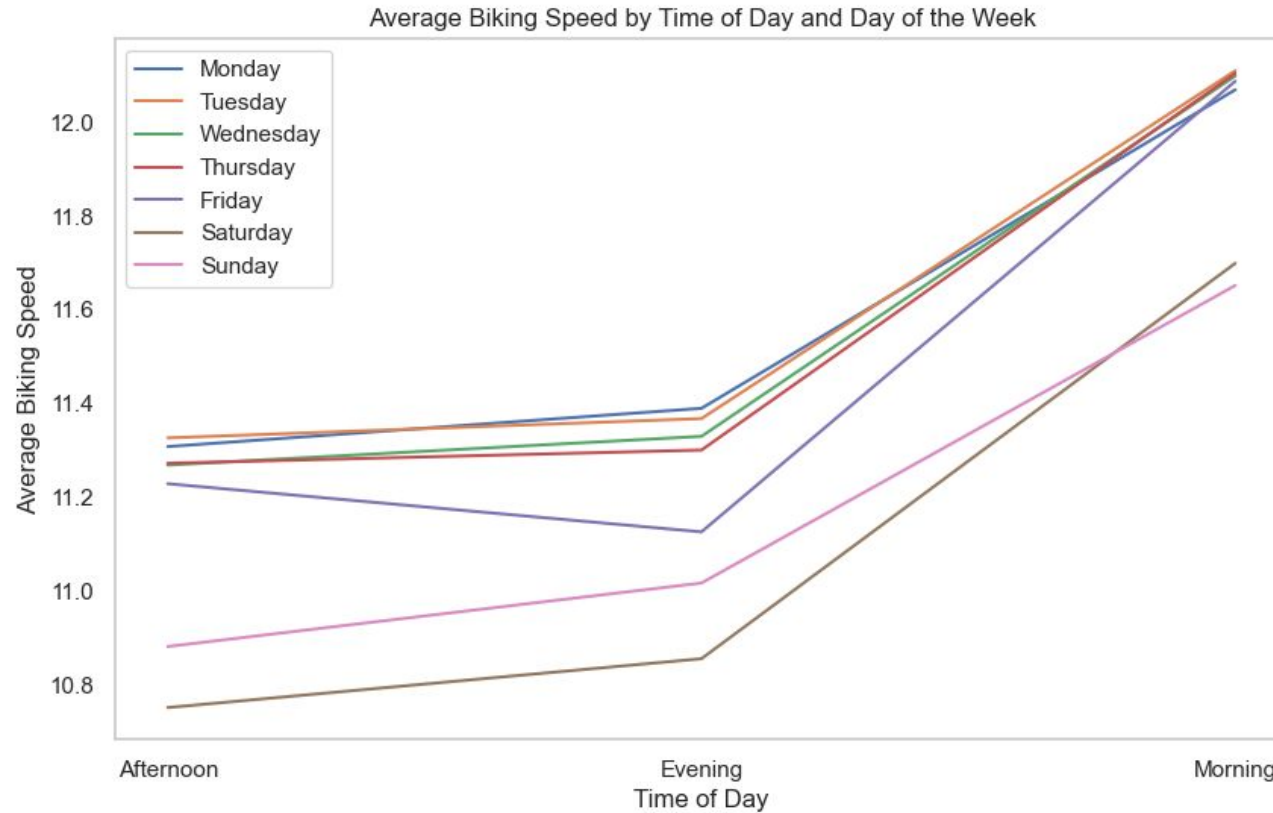
Top 10 Most Popular Departure Names



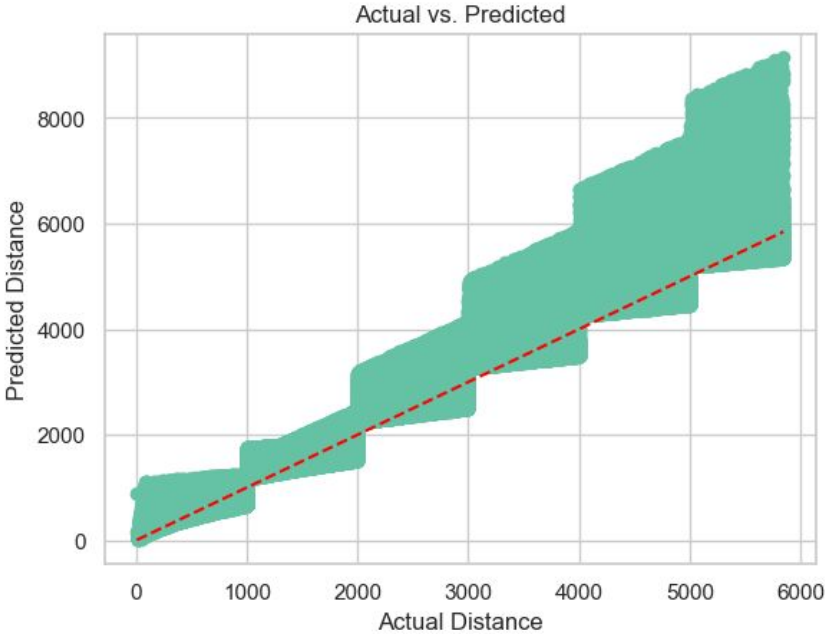
Top 10 Most Popular Return Names



Most interesting insight!



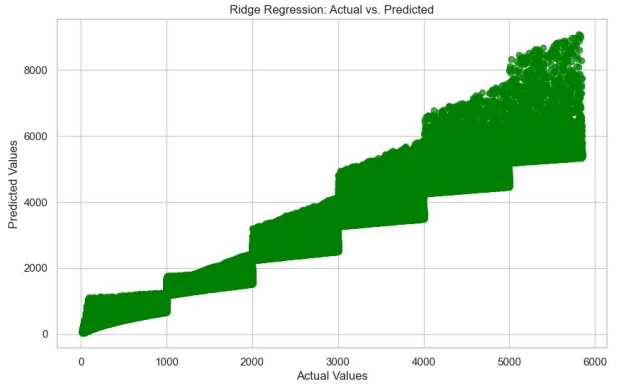
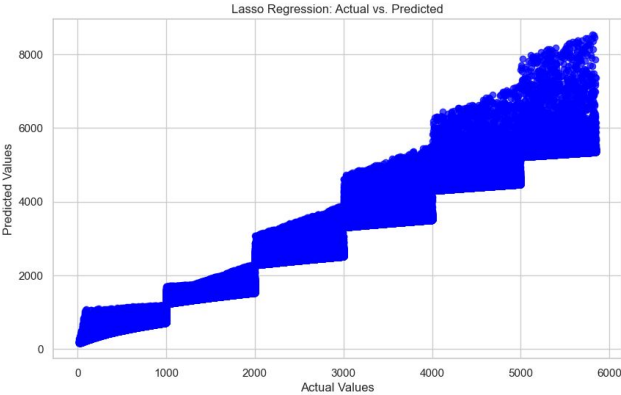
Model Building



R-squared: 0.9687
Mean Squared Error: 51149.9066
Root Mean Squared Error: 226.1635

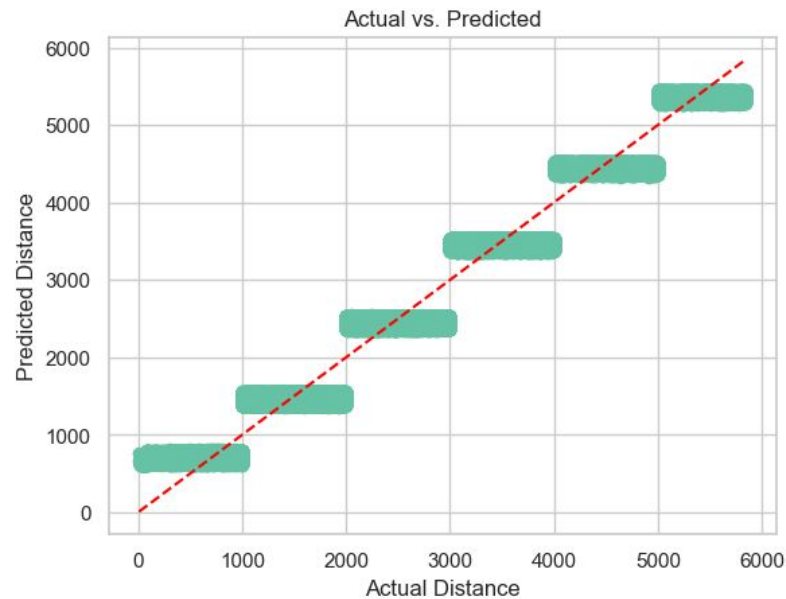
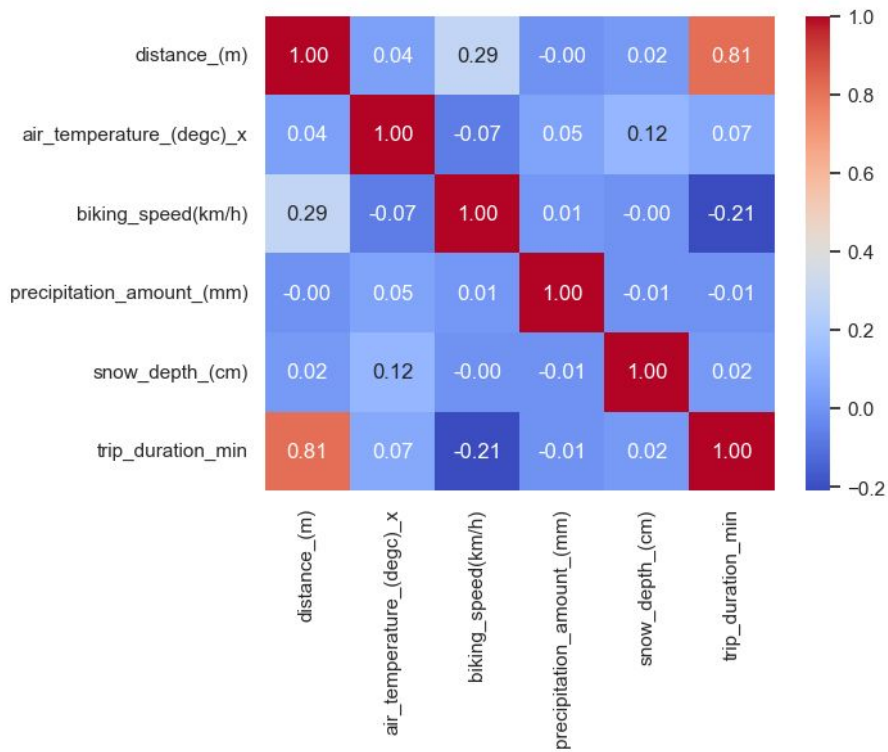
```
1 y_test[:5]
4590461 871.0
9638049 679.0
1277544 1823.0
3821326 1917.0
2089904 2664.0
Name: distance_m, dtype: float64

1 predictions_test[:5]
array([ 876.6875,  640.30371094, 1512.50244141, 1679.890625,
        2528.74658203])
```



Model: lasso, train R2: 0.9682949228117823 -- test R2: 0.9682393998914398
Model: ridge, train R2: 0.9686873425868942 -- test R2: 0.9686433169378844
Model: elastic, train R2: 0.21608410810857315 -- test R2: 0.21614102981897487

Removing variable based on colinearity



R-squared: 0.9563
Mean Squared Error: 71338.1096
Root Mean Squared Error: 267.0919

Thank you!

Questions?

