

Project Report Draft 1

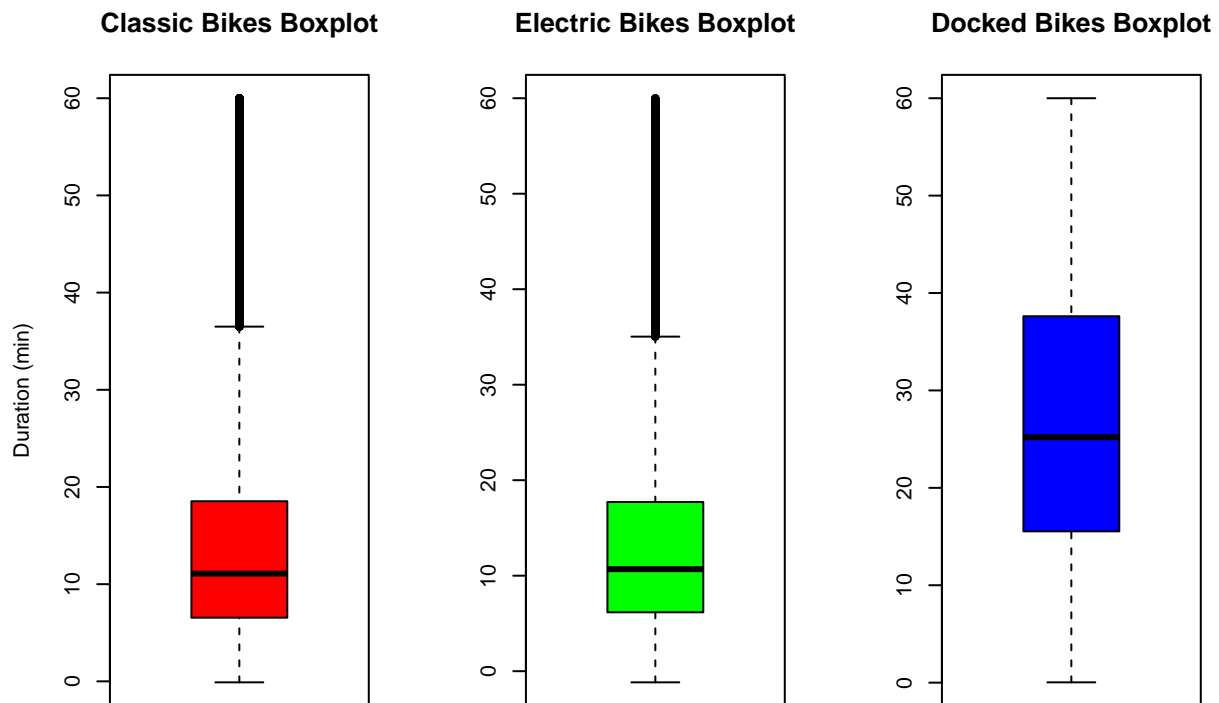
Vivian Zheng, Tyler Braito, Calvin Aberg, Mattia Saladini, and Ndidi Nwosu

2022-09-29

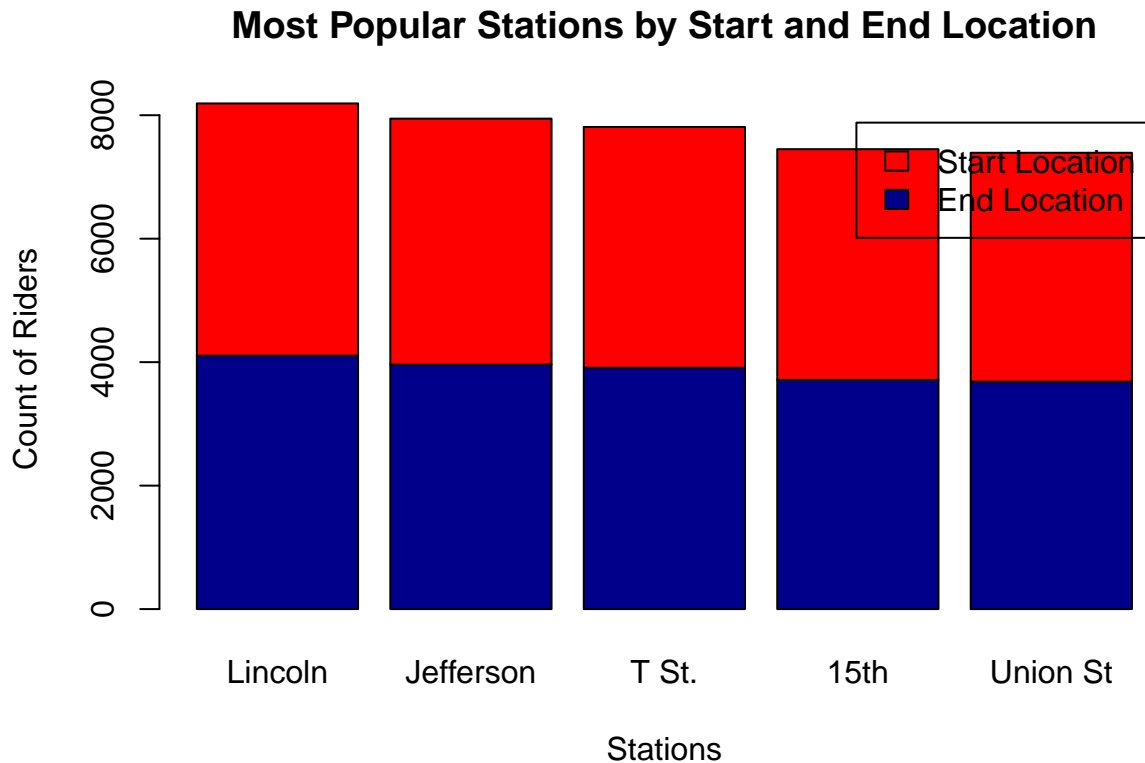
Plots on City Bike Data in Washington DC

Data Our data measures all city bike rentals in the city of Washington DC throughout the month of August 2022. Every bike rental is tracked along with information such as bike type, rental start and stop time, start and stop station names, and member type.

1. Boxplots of Bike Types and Rental Durations

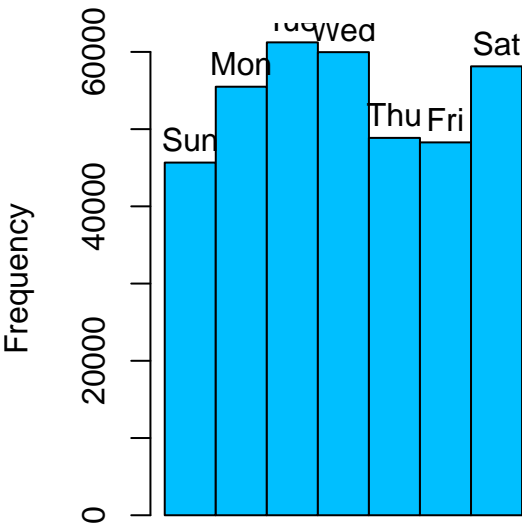


2. Most Popular Stations by Start and End Location This plot describes the most popular starting stations and ending stations for Capital Bike riders in August. The total height of the bar is the sum of trips started and ended at a given station, with the blue being the number of trips ended and red being the number of trips started. These five stations were the most commonly visited stations in the Washington D.C. area. We can see that there isn't a majority station within the data, and, within the top five stations, there is a fairly balanced flow in and out of each station.



3. Histogram of Usage Frequency by Days of the Week and Date The plot on the right, “Ride Frequency Per Day of Week” zooms in on the trend observed in the “Rides by Day in August” plot by giving an account of which days of the week exhibit a peak in bike usage activity. Based on the plot, there seems to be both a midweek peak and a weekend peak on Saturday. The plot on the right, “Rides By Day in August”, shows the frequency of bike rides using the Capital Bike bikes throughout the month of August by day. Every value on the x-axis represents a day of August (1st to the 31st) and the height of each bar represents the number of bike rides that day. The minimum number of rides occurs on August 10th, with 7,771 rides, and the maximum number of rides occurs on August 13th, with 14,860 rides. There is no drastic peak or valley, and the amount of bike rides is relatively uniformly distributed besides minor peaks around August 13th and August 27th. On average, there were 12,182.48 rides per day.

Ride Frequency Per Day of Week



Rides By Day in August

