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# Citi Bike and the Revolution of Transportation in New York City

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DATASCI 200 Final Project

# Overview



- Popular bike sharing system in New York City.
- Created in response to the significant traffic and air pollution problem.
- Expanded to 12,000 bikes and 750 stations.

# Data Scraping and sampling

- Selenium is a convenient API to extract data from websites
- 200 million rows over 10 Years
  - 120 csv files
  - 5000 rows sampled from each file



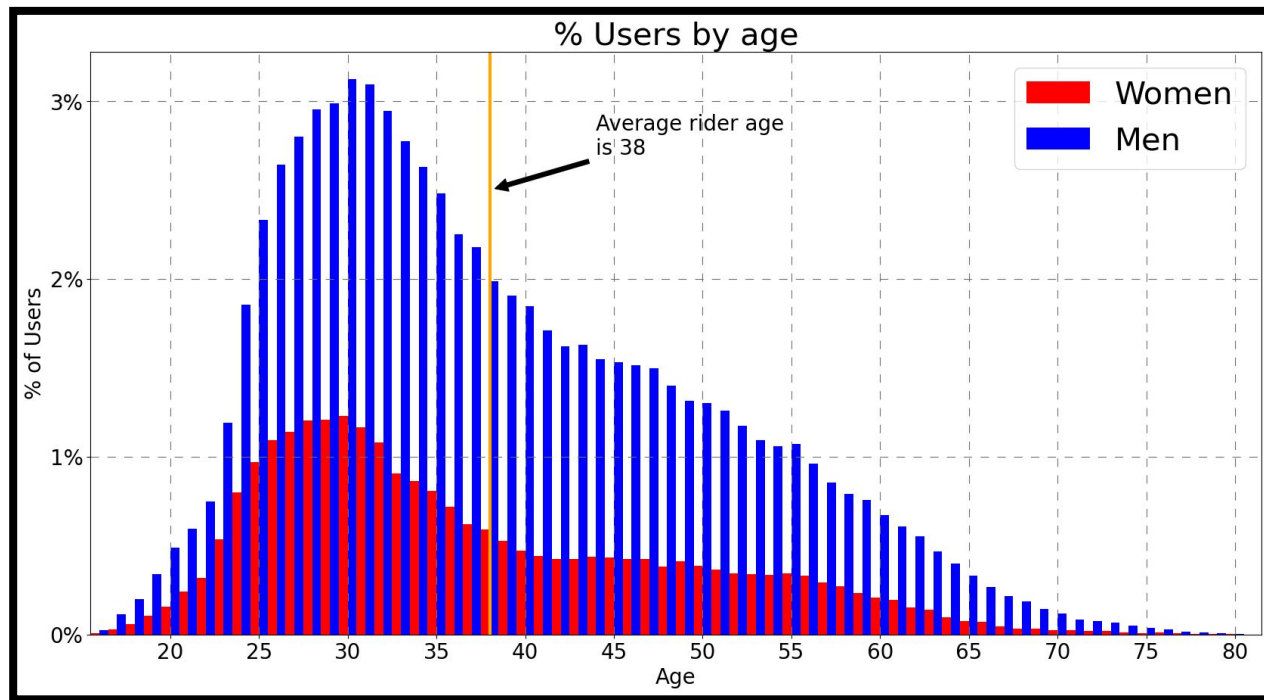
# Data Cleaning



9 years of data

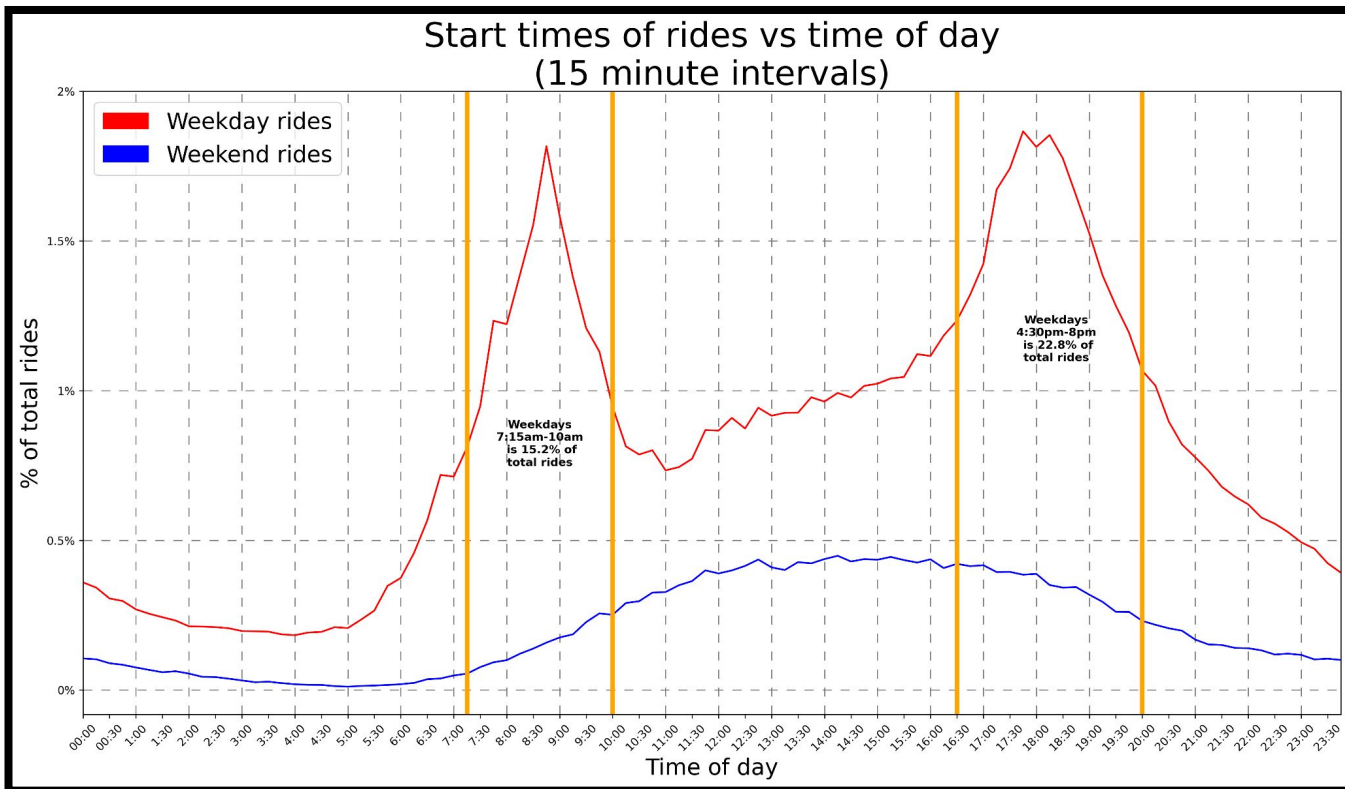
- Added and removed columns
- Changing column names
- Data errors

# Who uses Citi Bike?



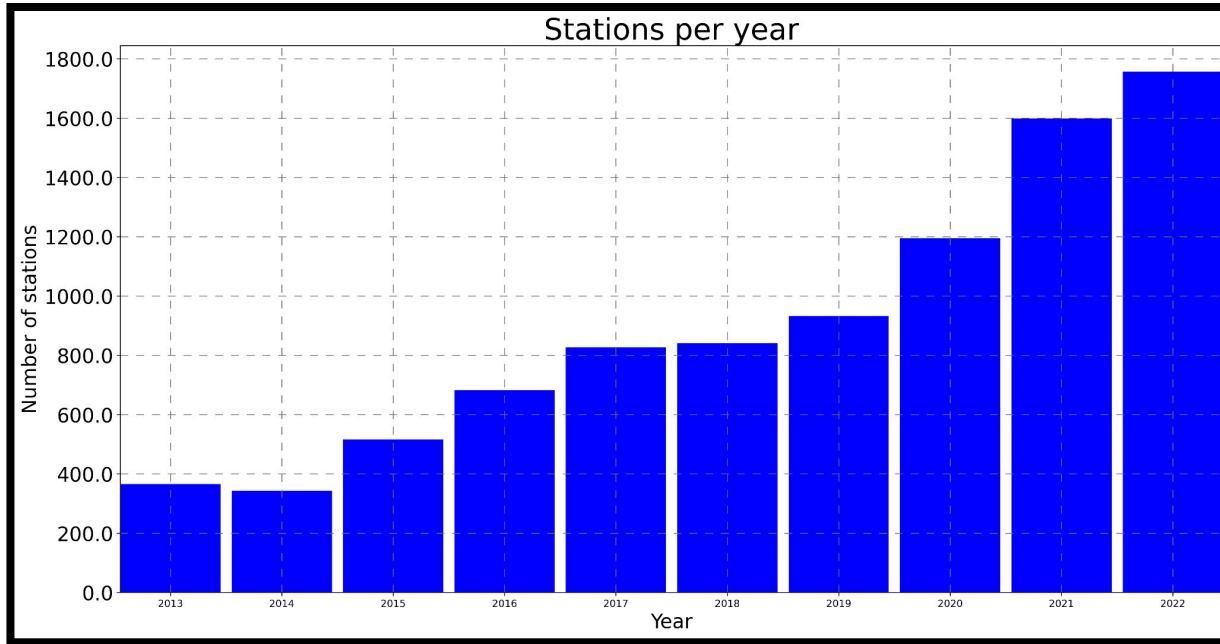
- Average age is 38
- 3x more men than women
- Highest percentage of users is 30 years old

# When and why do people use Citi Bike?



- 40% of total weekly usage is commute hours
- 80% of rides are on weekdays

# Stations

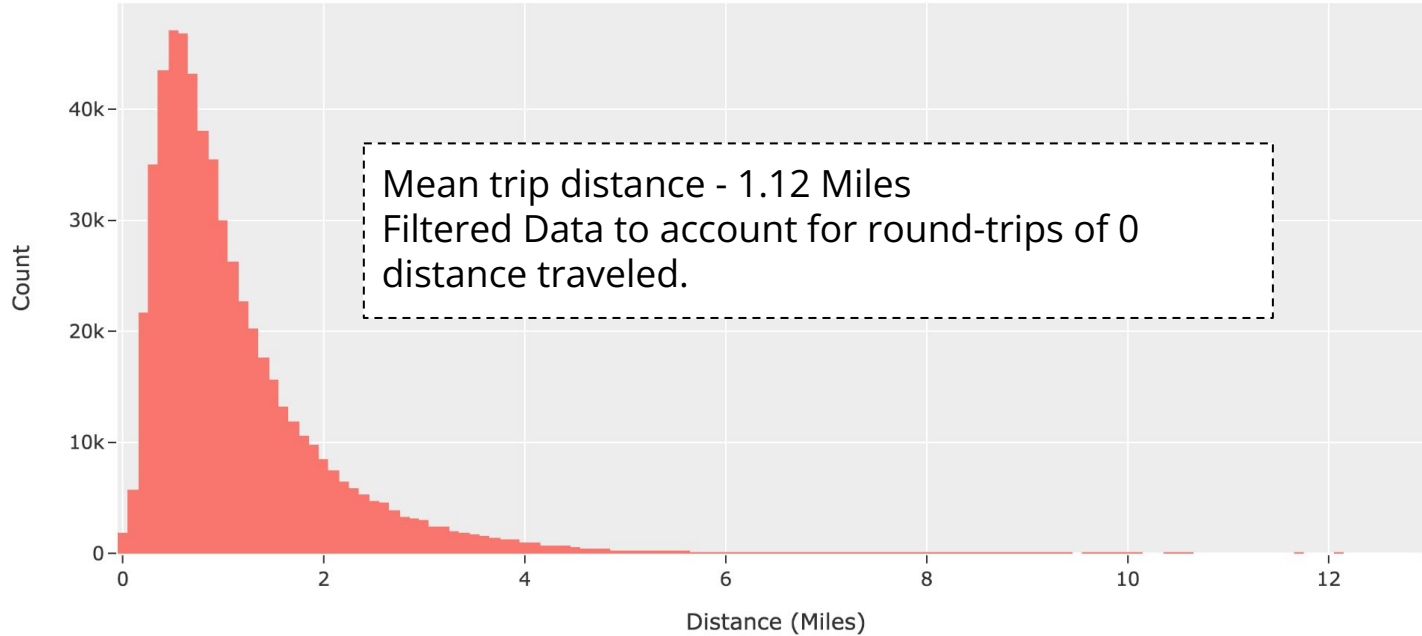
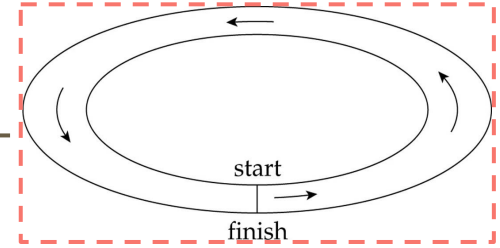


- In 2013 - 400 stations
- In 2022 - 1800 stations
- 20% increase per year



# Distance Map

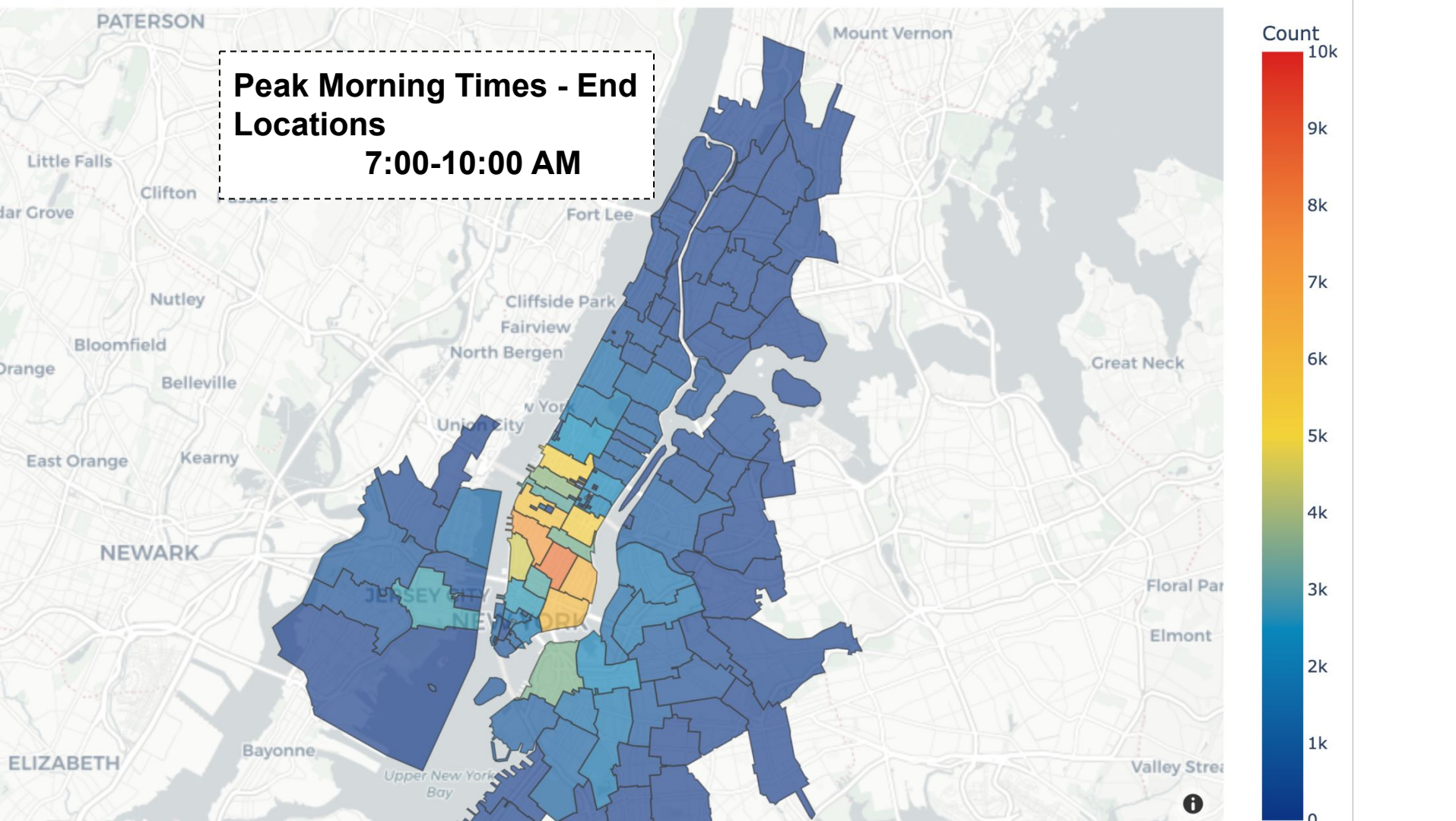
Distribution of Distances Traveled on CitiBike Rentals



distance	
count	578309.000000
mean	1.124834
std	0.884605
min	0.000002
25%	0.527999
50%	0.866197
75%	1.437973
max	13.038909



**Peak Morning Times - End  
Locations  
7:00-10:00 AM**



## Peak Evening Times - End Locations 4:00-8:00 PM

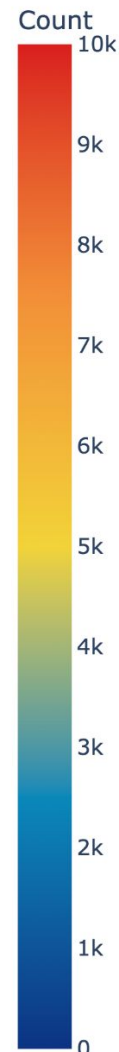
An influx of evening bike trips ending in major metropolitan areas

Hoboken

Historic Downtown  
New Jersey

Manhattan / East Village

Brooklyn



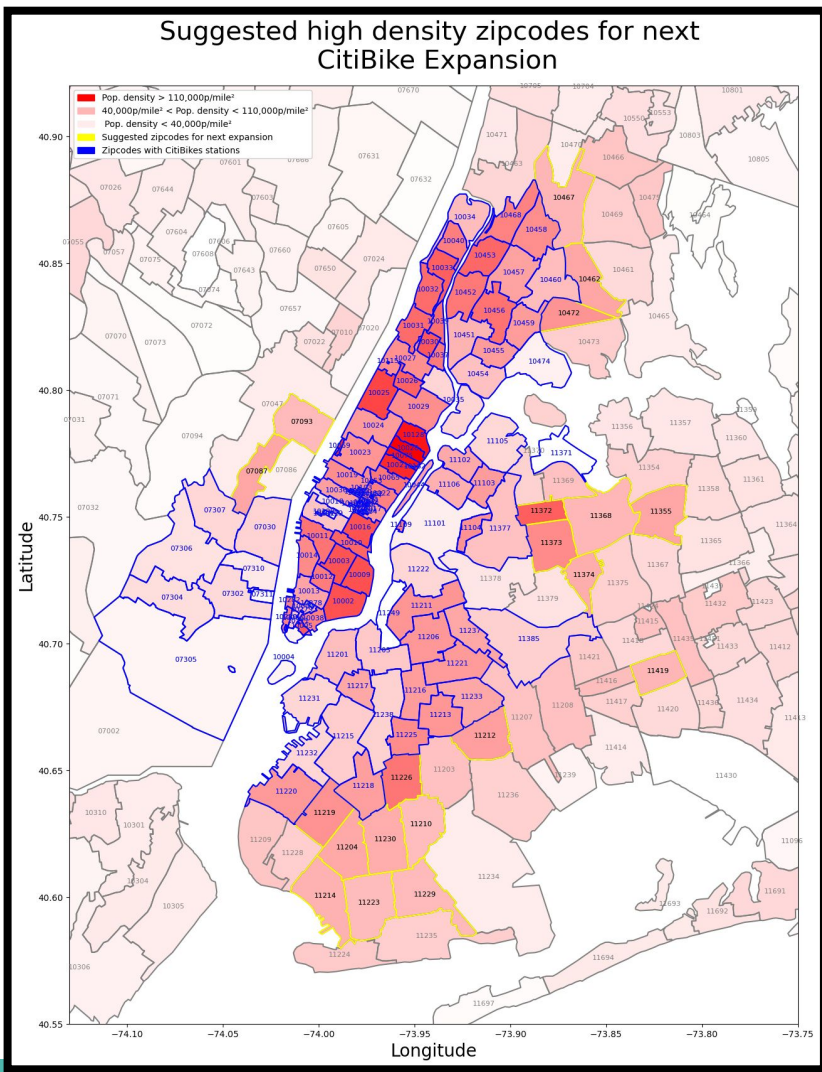
# Where should CitiBike expand next?

Criteria for expansion:

- High population density
- Adjacency to existing CitiBike network zipcodes

Best zipcodes:

1. Queens: 11372
2. Brooklyn: 11226
3. Bronx: 10472
4. Hoboken: 07067



**Questions?**