NYC taxicab Data Analysis

Data: New York City Taxi Trip Data (2013)
Source: NYC Taxi & Commission

Project by: Vinay Kumar Ranganath Babu

Technology used: Python

**Libraries used:** numpy, pandas, matplotlib, statsmodels, pygeocoder

Visualizations: bar plot, histogram, line plot, mosaic plot

INSIGHTS

✔ There are **1000** medallions, the right to run a yellow taxi

✔ A typical taxi travels **54,610 miles** per year

✔ Trips: **35,782** per day | **13** million per year

✔ There are over **16,000** drivers

✔ A typical driver drives **189** hours per **year**

✔ A typical driver shift is **0.5** hours

✔ A typical trip is about **4.1** miles

✔ A typical trip time is about **13.8** minutes

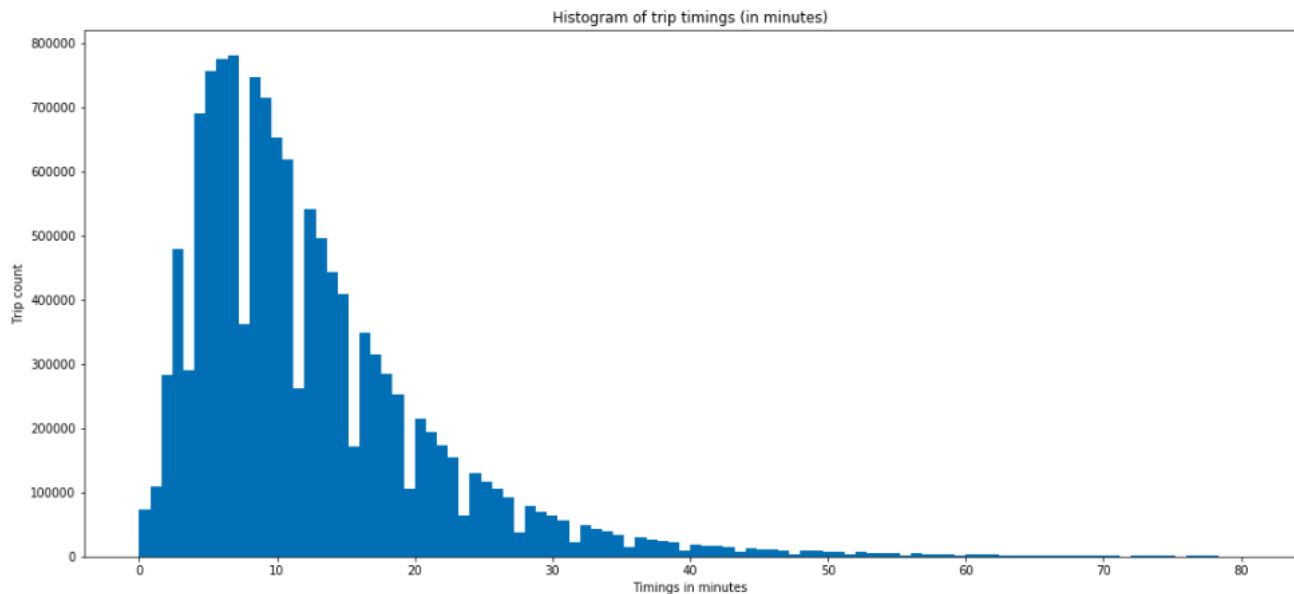✔ Passengers: **60,709** per day | **22 million** per year

TRIPS insights

Trips according to week
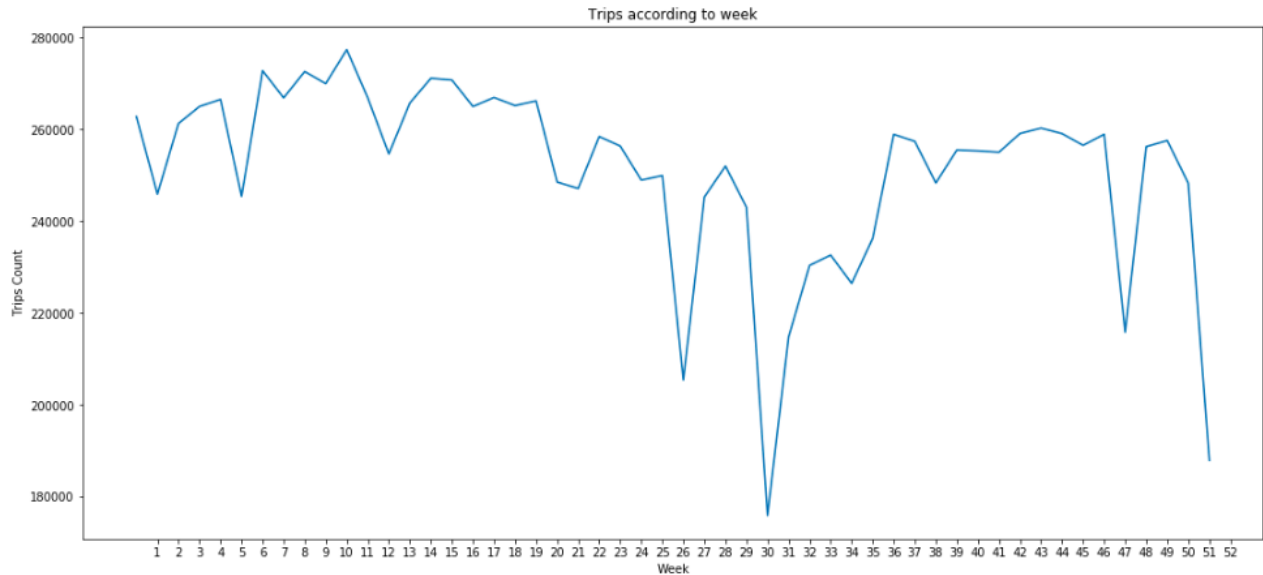
" Yellow Taxi provide an average of **35,782** trips per day "

" The average trip distance is **4.2** miles "
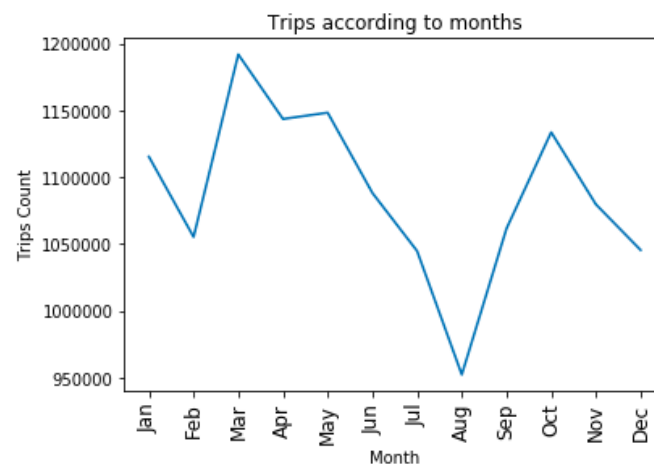

Histogram of trip distances (in miles)
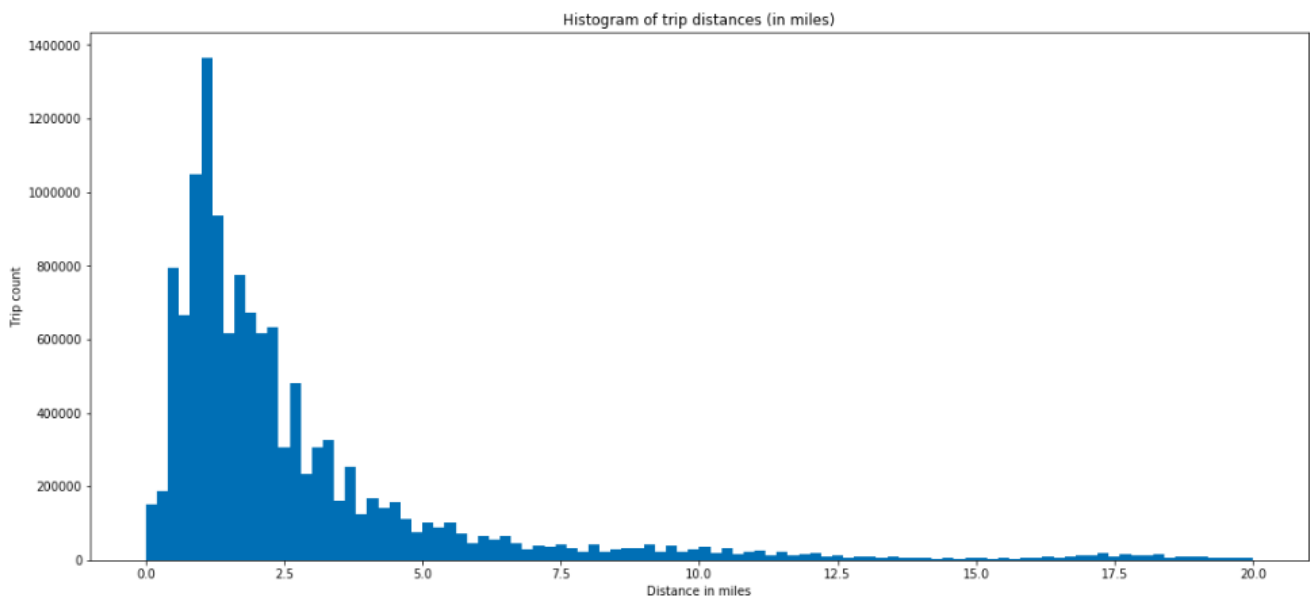
" 99% of all trips are less than **18.1** miles "
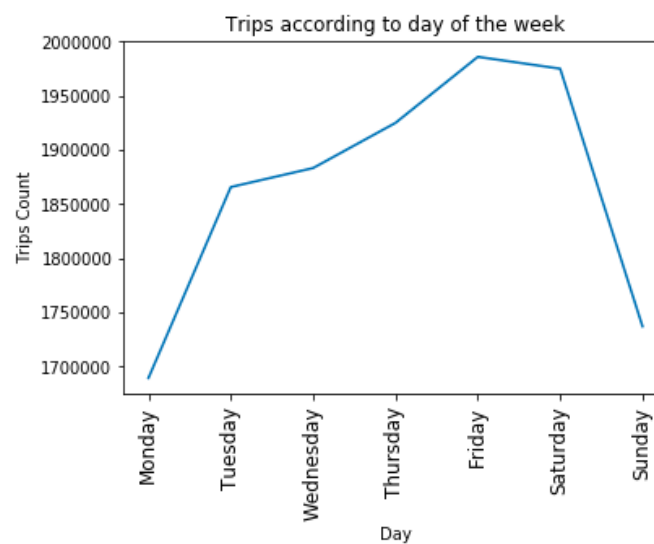
" A typical trip time is about **13.8** minutes "

" 99% of all trips are less than **47** minutes "

" Highest number of trips happened in March and lowest in August "
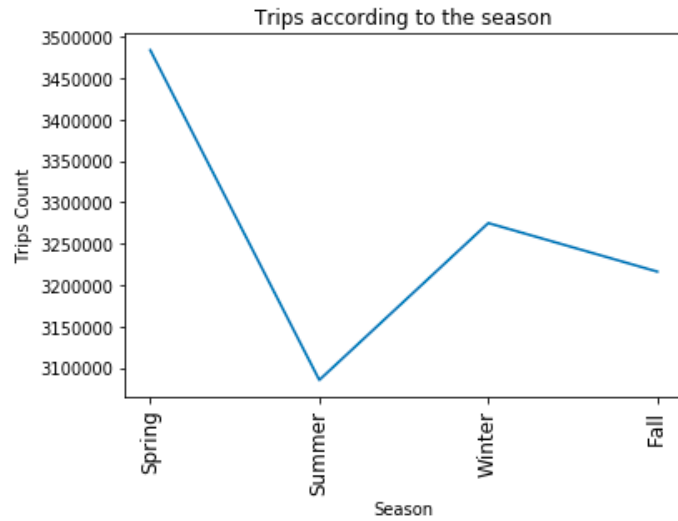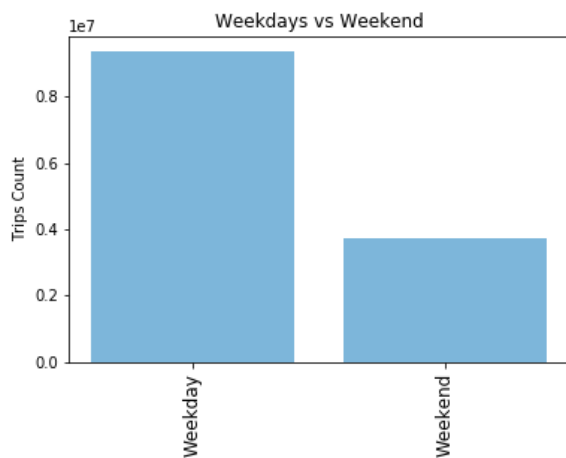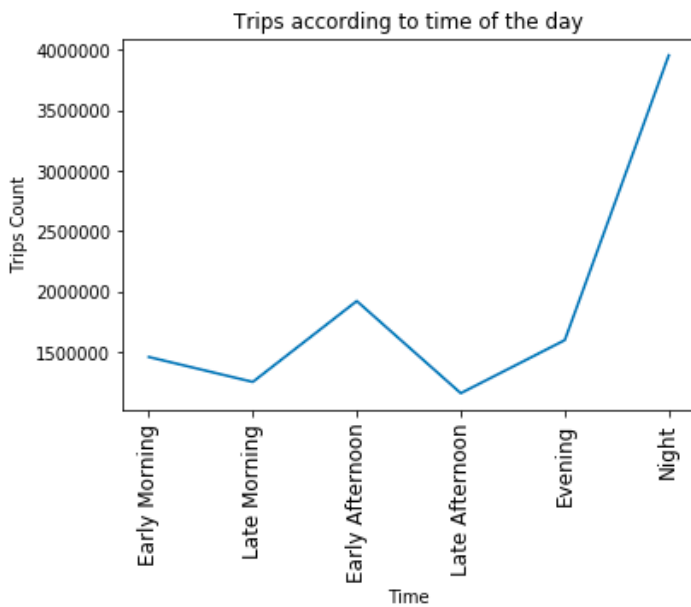
" **52%** of the trips happened in first 6 months "

" Highest number of trips happened on **Fridays** and lowest on **Mondays** "

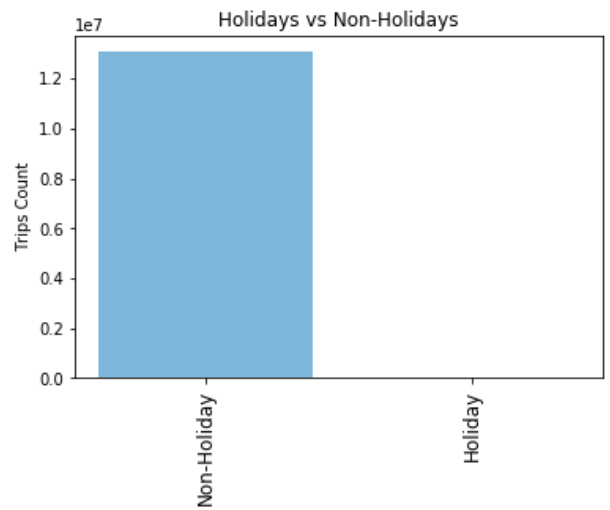**Trips according to the season**

" Majority of the trips were in **Spring** and least was in **Summer** "

Trips according to time of the day

" **30%** of the trips happened during night "

Weekdays vs Weekend

" **71.5%** of the trips happened on Weekdays "

Holidays vs Non-Holidays

" Just **0.0007%** trips were on holidays "

" Majority number of trips in 2013 happened on **02/23/2013** "

" Highest number of trips happened in the **11th week** of the year (Spring) and lowest was during **30th week** (Summer) "

" The top two pick-up locations were: "

- ✔ Copernicus International School, 11-43, 47th Avenue, LIC, Queens County, NYC, New York, 11101, United States of America
- ✔ Lincoln Tunnel access, Lincoln Harbor, Weehawken, Hudson County, New Jersey, 07087, United States of America

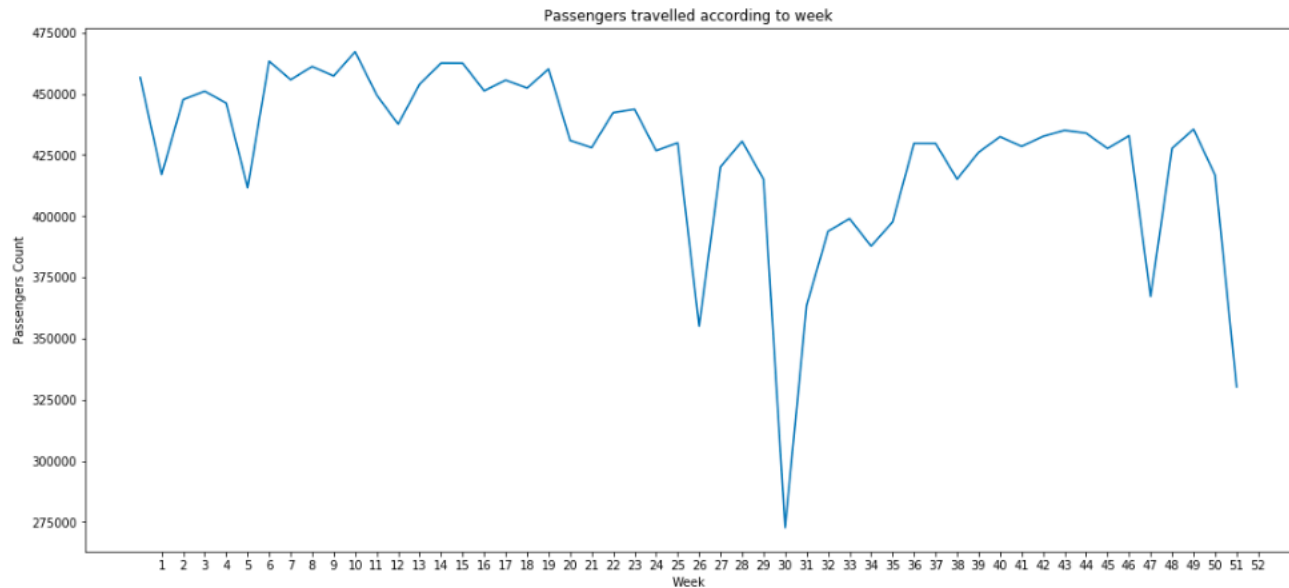" Surprisingly the top two drop-off locations also were the same "

" Queens county had the maximum pickup followed by New York county "

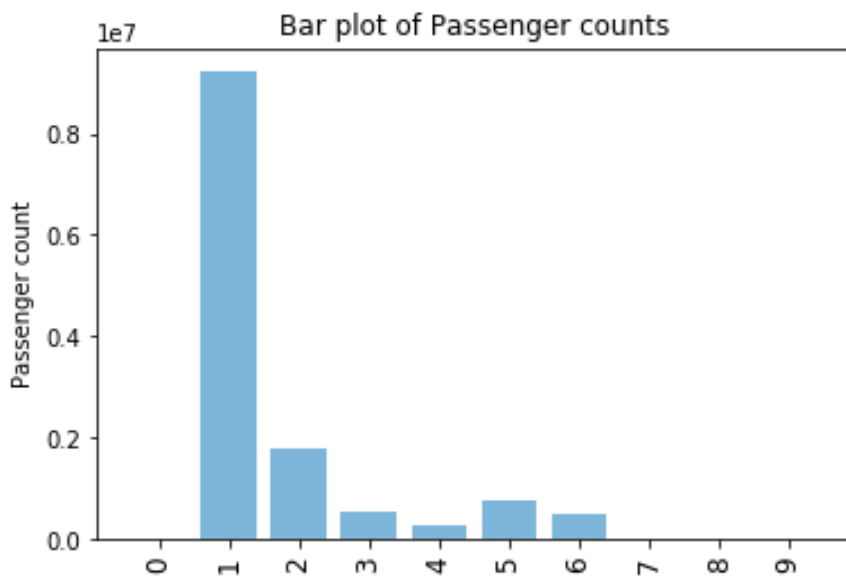" Queens county had the maximum drop-offs followed by Nassau county "

PASSENGERS insights

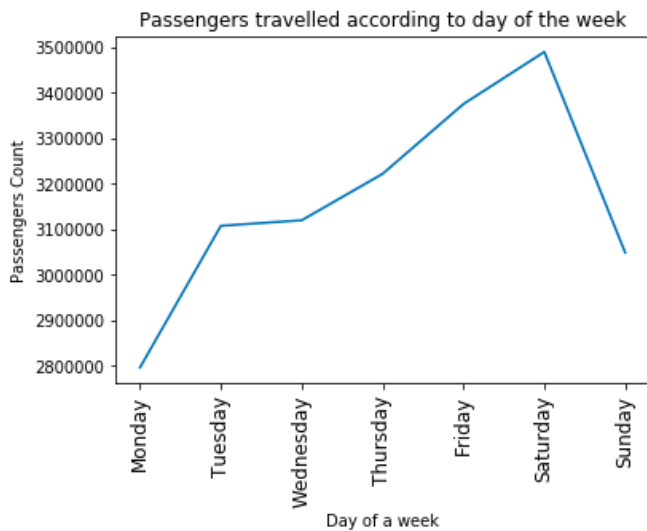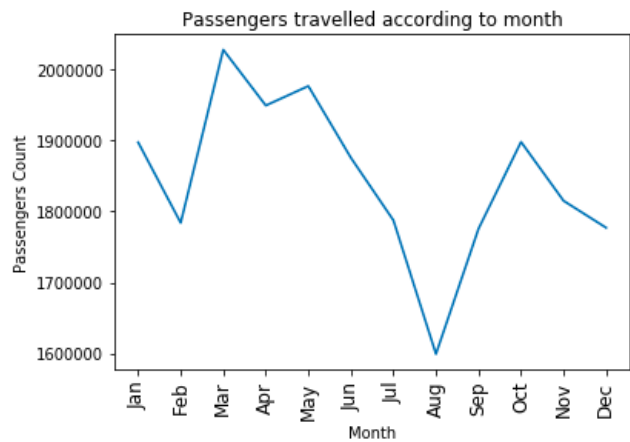" A typical passenger count is **60,709** per day and **22** million per year "

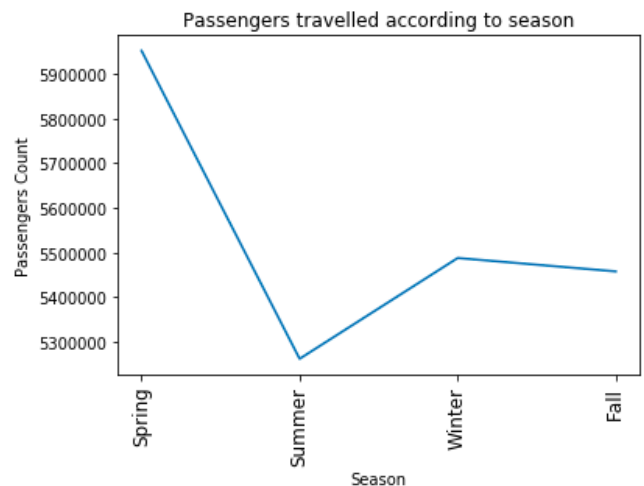" Passenger count according to week directly correlates with trip count "

" **70%** of the trips had only one passenger "

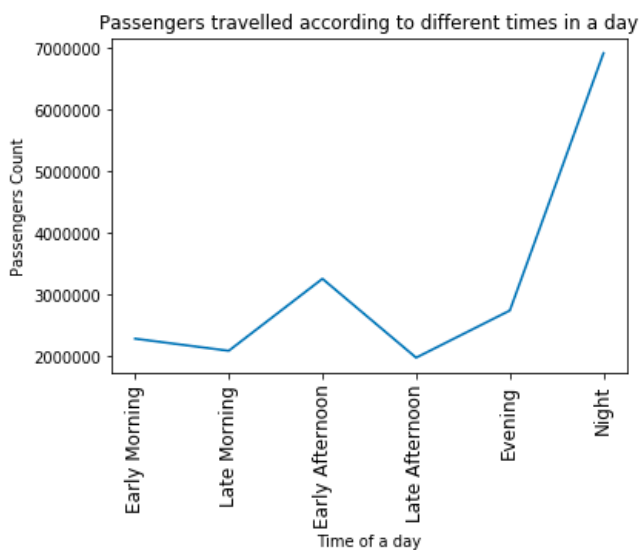" Highest passenger count was in **March** and lowest was in **August** "

" Highest passenger count was on **Saturday** and lowest was on **Monday** "

" Highest passenger count was during **Spring** and lowest was during **Summer** "

" **30%** of the people traveled during night just **9%** during late afternoons "
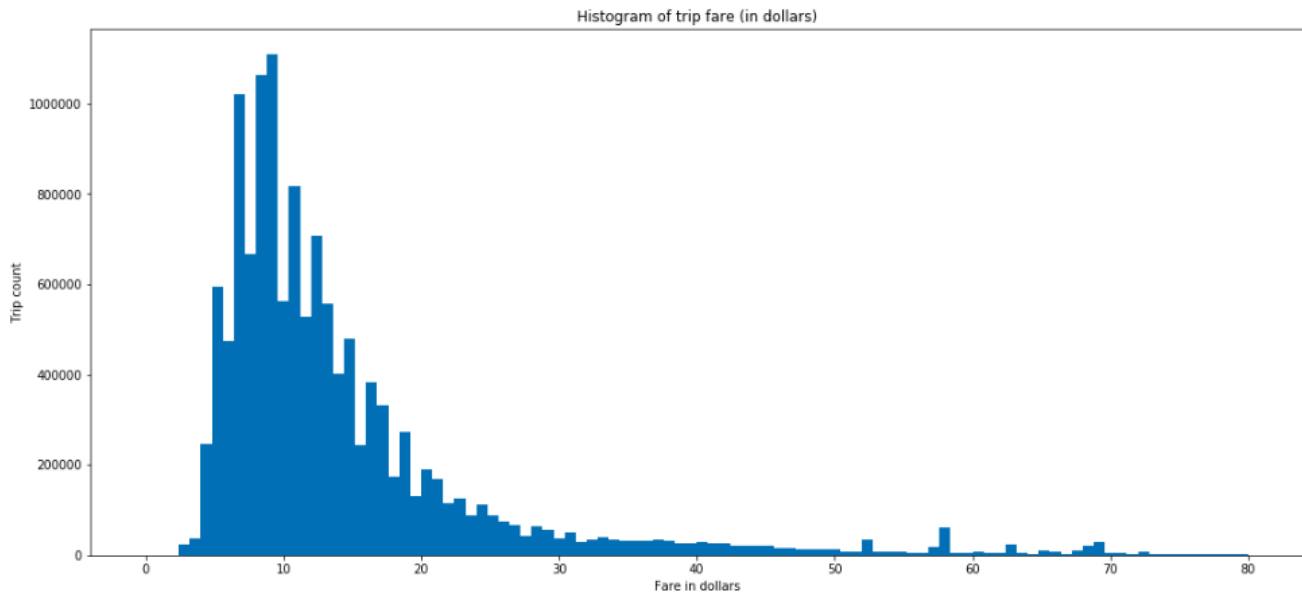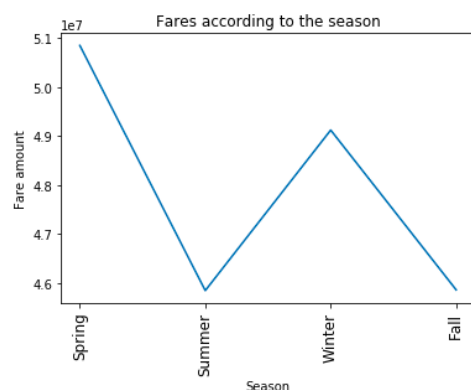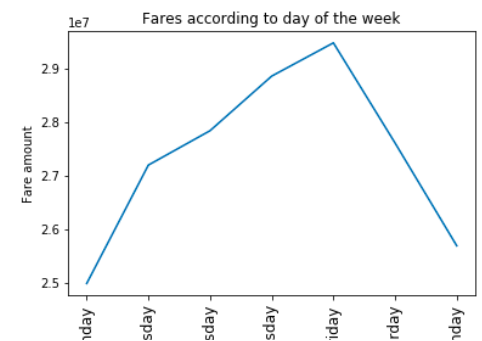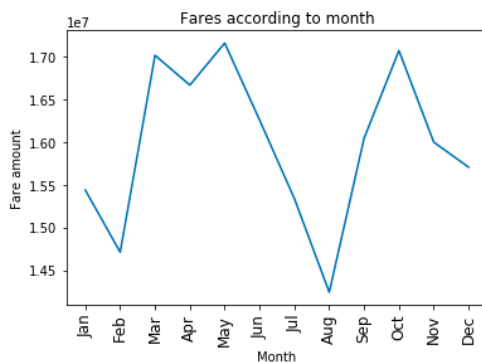
FARES insights

" A typical trip cost is about **13.3** dollars "

" On an average, a driver earns **11,980** dollars per year "

" On an average, a single medallion makes **1,74,000** dollars per year "

Histogram of trip fare (in dollars)

" 99% of all trips are less than **66** dollars "

Fares according to month

Fares according to day of the week

" Fares also directly correlate with trip and passenger count. The highest fares typically will be during **Spring** season, on **Fridays** and during **night** "
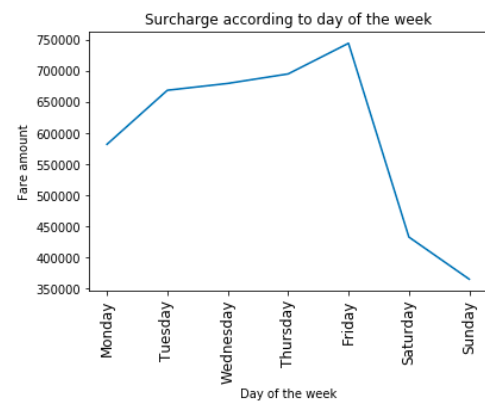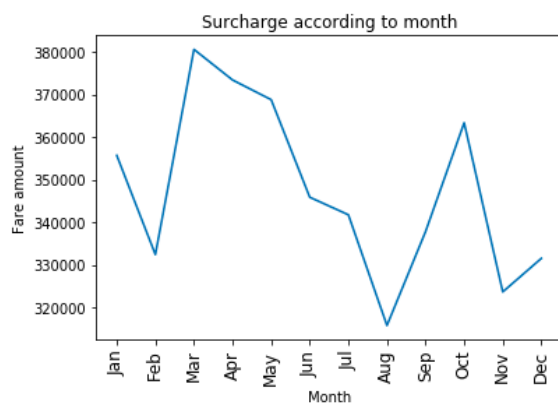

Fares according to the season

Fares according to different times in a day
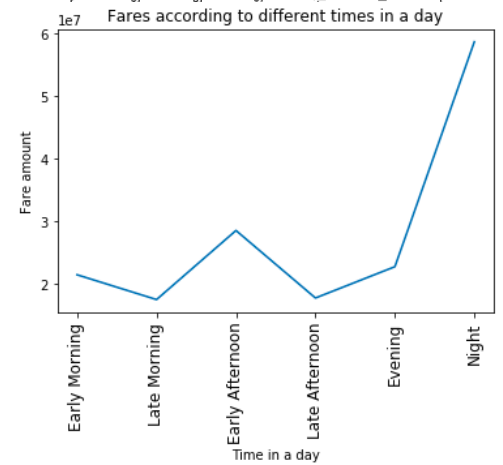
" A typical tip amount offered by a passenger is **1.3** dollars "

" Surprisingly, **100%** of the customers who pay through a card offer a tip amount "

Histogram of tip amount (in dollars)
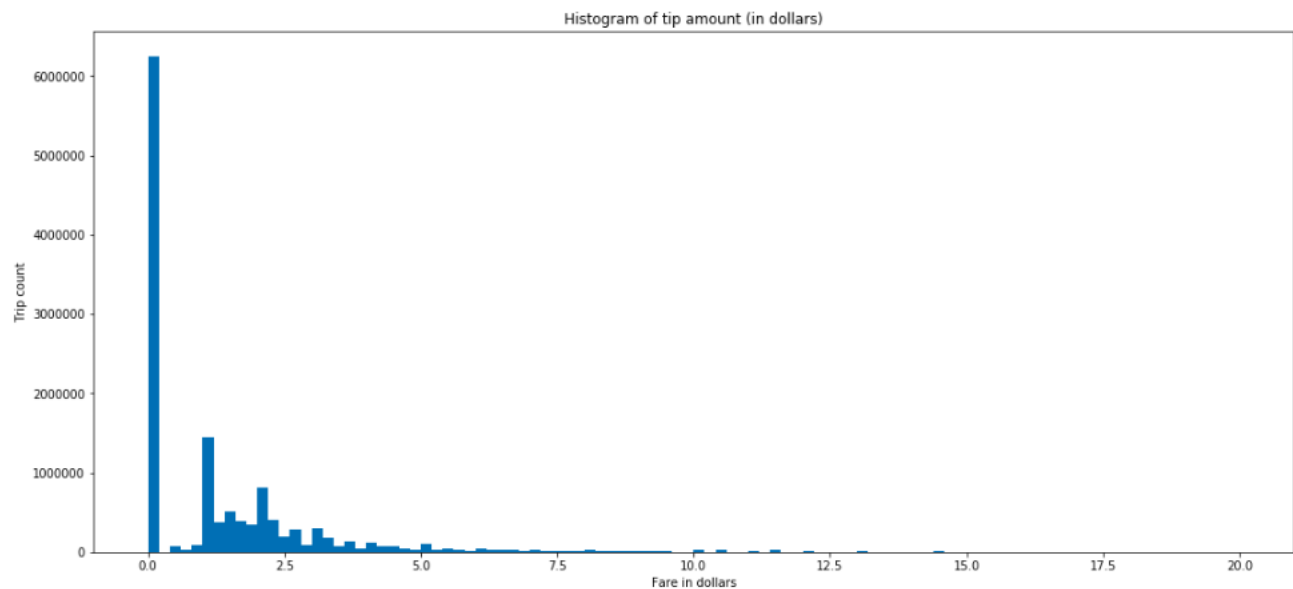
" **95%** of the people using card as the payment type tip the driver up to **5** dollars "

" As we expect, the surcharge rates are high during **cold** seasons, on **Fridays** and during **nights** "