Maintenance Schedule for Turnstiles

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Introduction

Backstory

- In October 2019, maintenance will be made on NYC subway turnstiles.
- Working when the station has minimum traffic.
- More convenient for the workers.
- Avoid people injuries.

BUT

What is the best time to do the maintenance ?

Data Sets and Tools

Data sets

Oct 2016
Oct 2017
Oct 2018
18 weeks
3,464,706 rows
11 columns

Tools

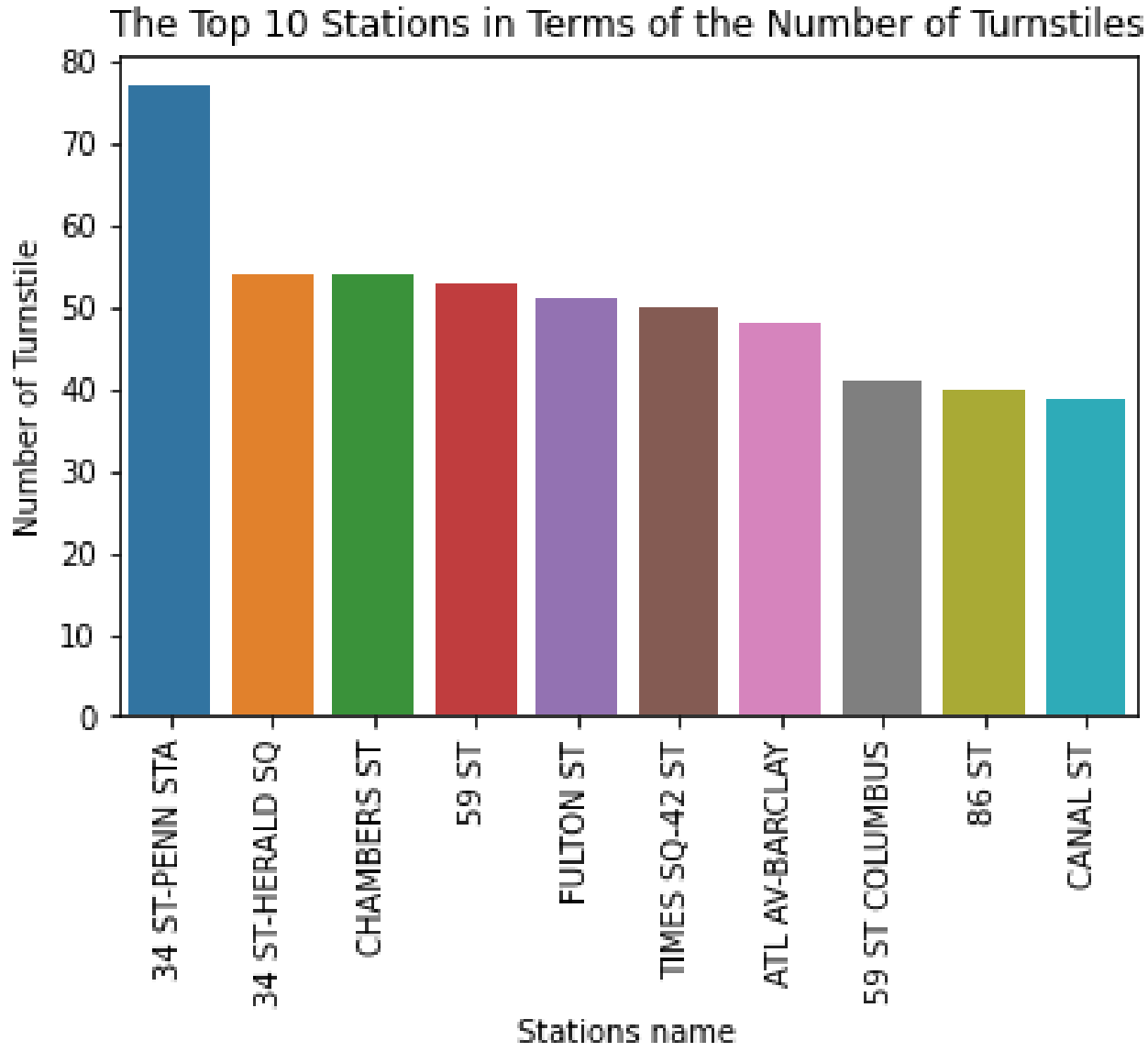
SQL
Pandas
Matplotlib
Seaborn
NumPy

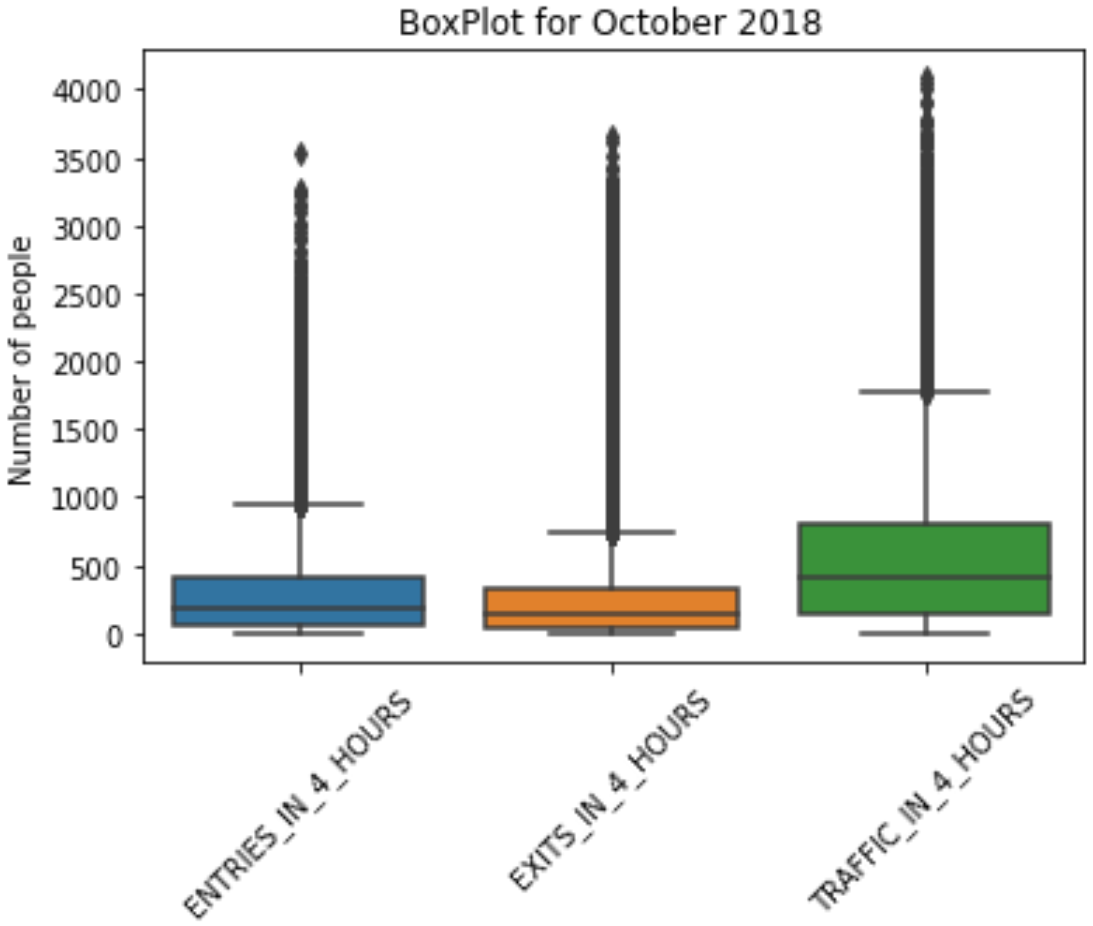
Data cleaning

Check	Check for NaN.
Drop	Drop duplicates.
Exclude	Exclude unwanted rows and columns. (LINENAME, DIVISION, DESC).
Adjust	Adjust the time to be exactly every 4 hours.
Drop	Drop duplicates.
Find	Find the entries and the exits every 4 hours.
Check	Check outliers.

Station with highest number of turnstiles

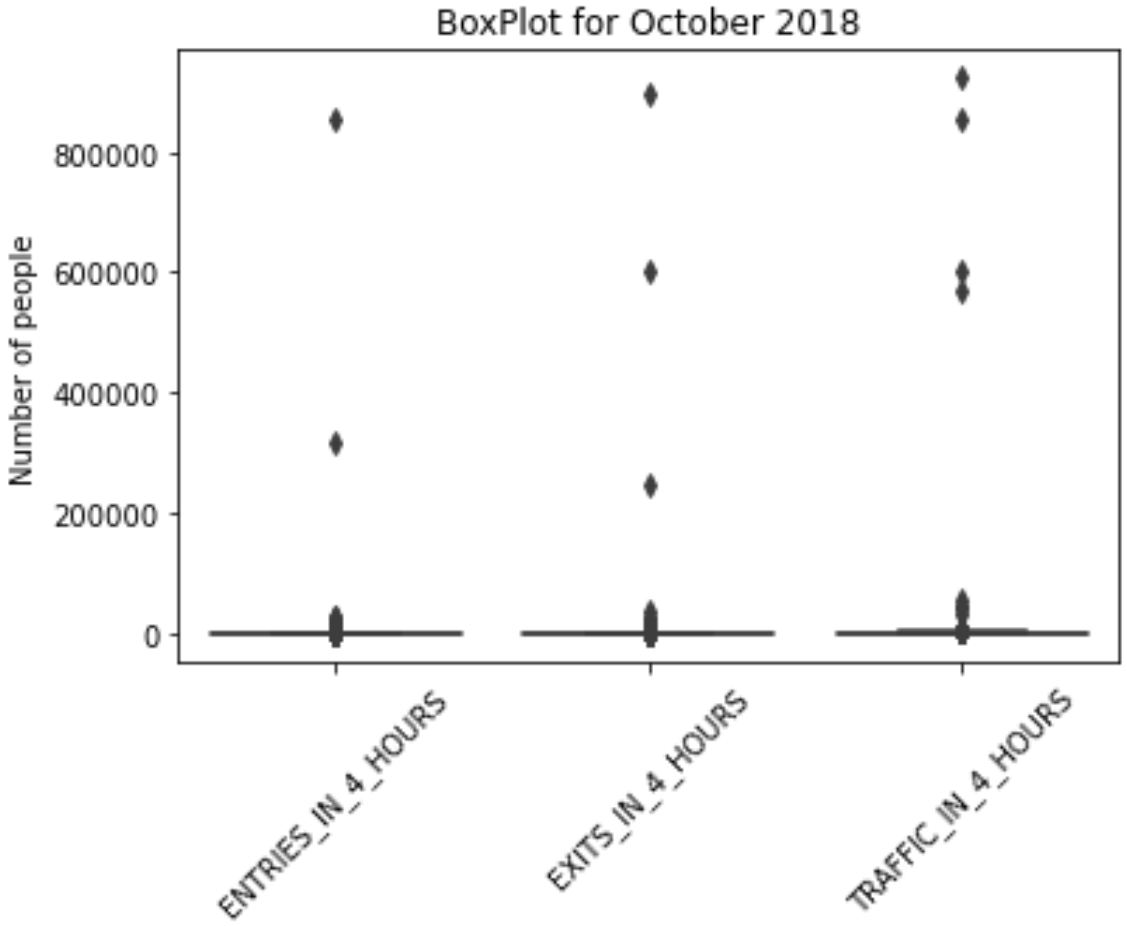
Data Analysis





After

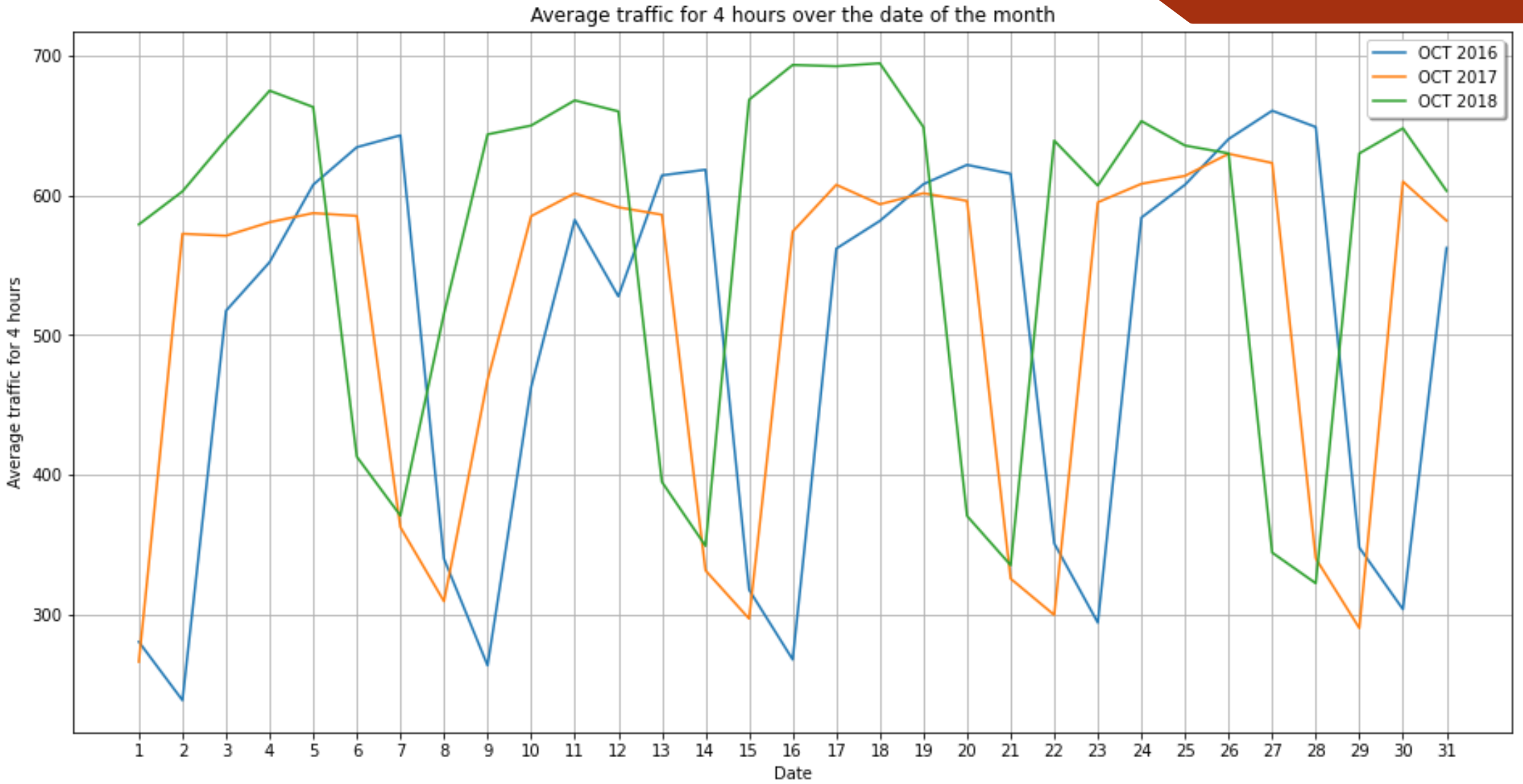
Data cleaning

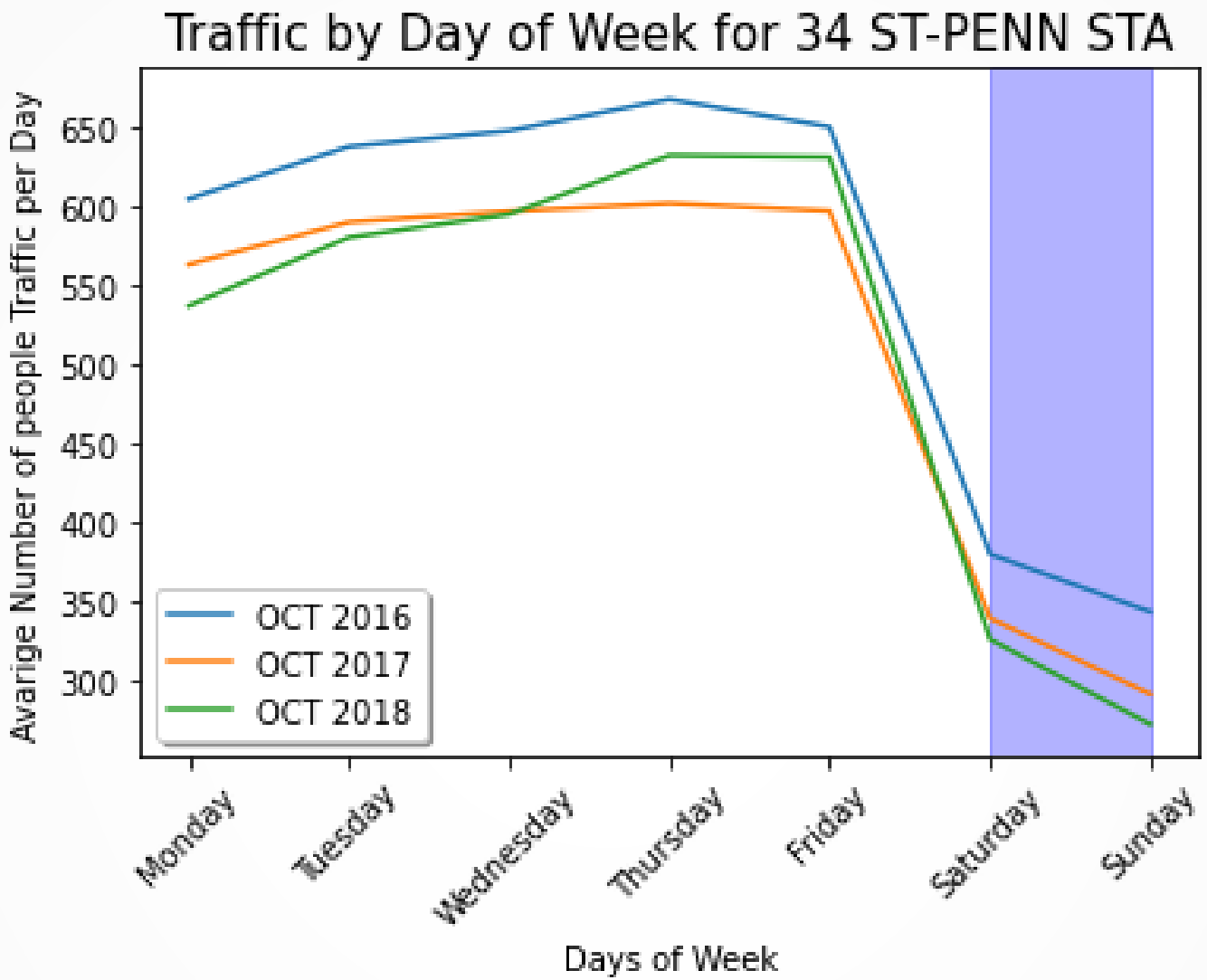


Before

Data cleaning

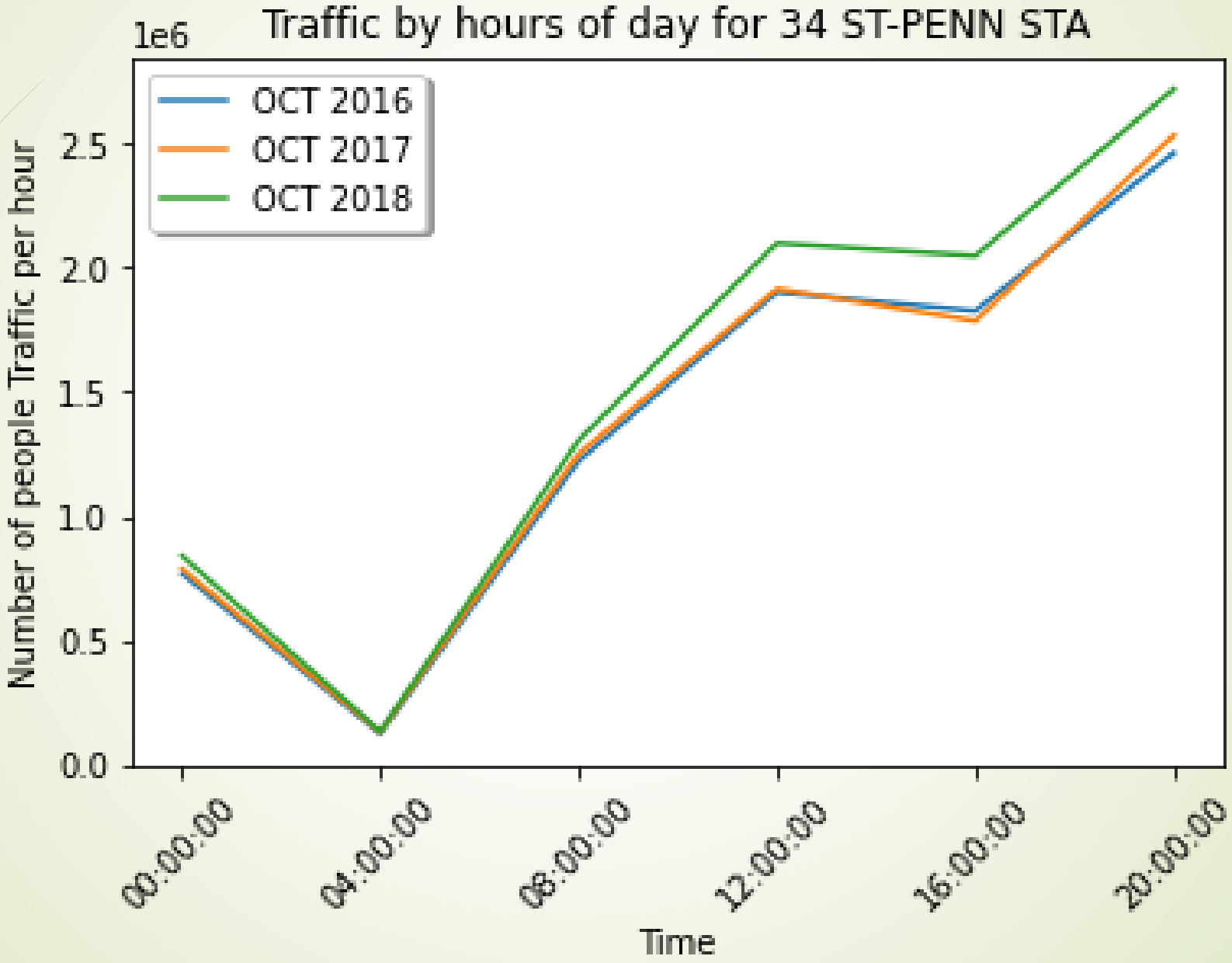
Data Analysis





Traffic by day of week

Traffic over hour of day



Future work

01

Do the analysis for the 13 control areas of 34 ST-PENN STA station to find the exact time where the traffic is at its minimum.

02

Plot the heatmap for each control area over the time of the day.

03

Try to link this data with another data

Conclusion

Thank you for listing