EDA OF MTA TURNSTILE DATA

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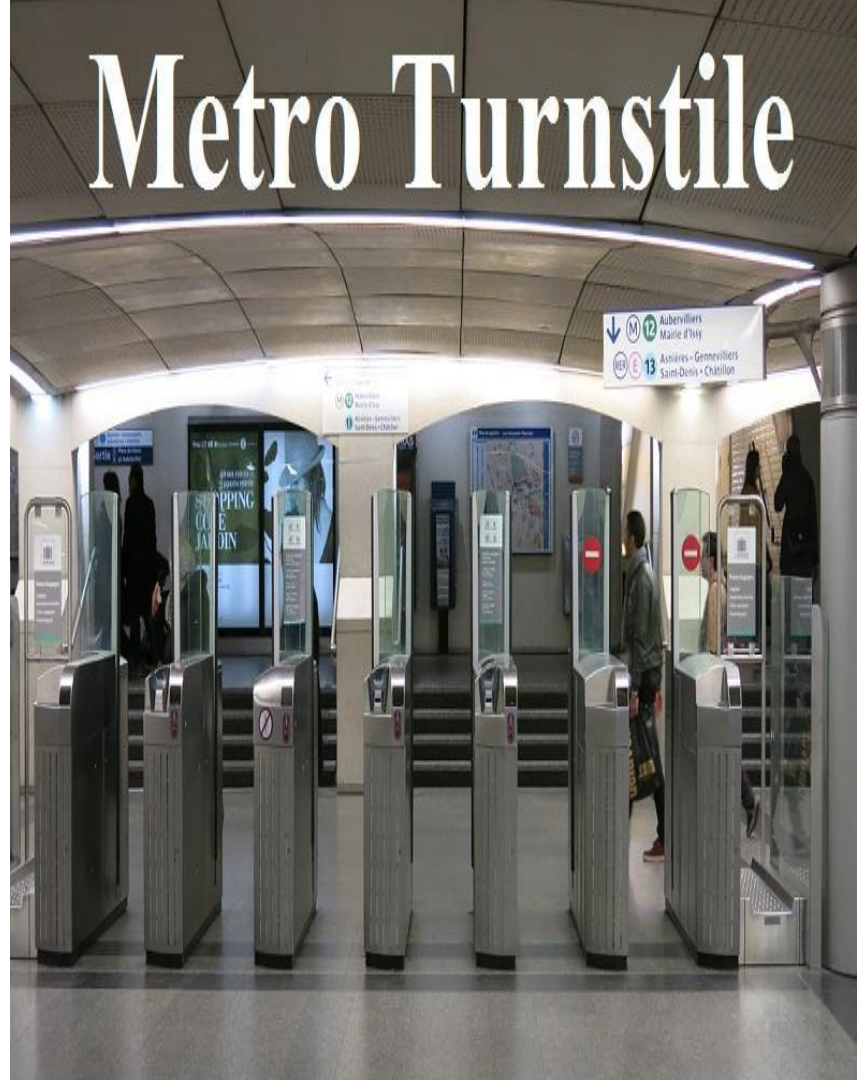# PROBLEM

Café chain wants to open a new branches in New York

Analyze the MTA turnstile data to see which stations have a lot of people

MTA TURNSTILE DATA

- 3 months from 2021: June, July, August

- Contains 2,753,240 entries with 11 features.

- The main features: Station, Date, Time, Entries, Exits

PROCESSING STEPS

1

STORING DATA
IN A DATABASE

2

CLEANING AND
PREPROCESSING

3

ANALYZING AND
VISUALIZATION

I- STORING DATA IN A DATABASE

SQLite database
- Created database using SQLAlchemy in Python
- Read files and stored them to database

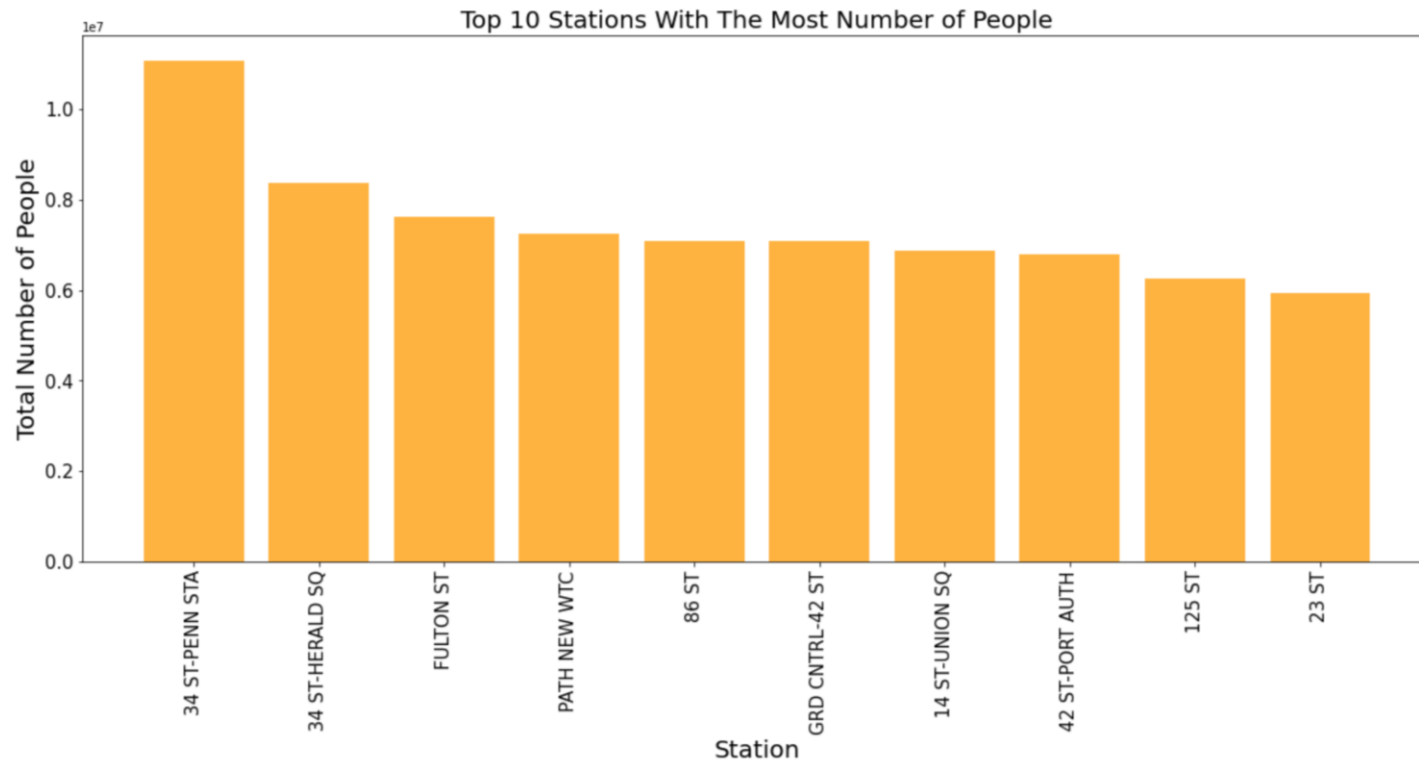# 2- CLEANING AND PREPROCESSING

FEATURE ENGINEERING
date-time, daily entries, daily exits, sum of daily entries and exits
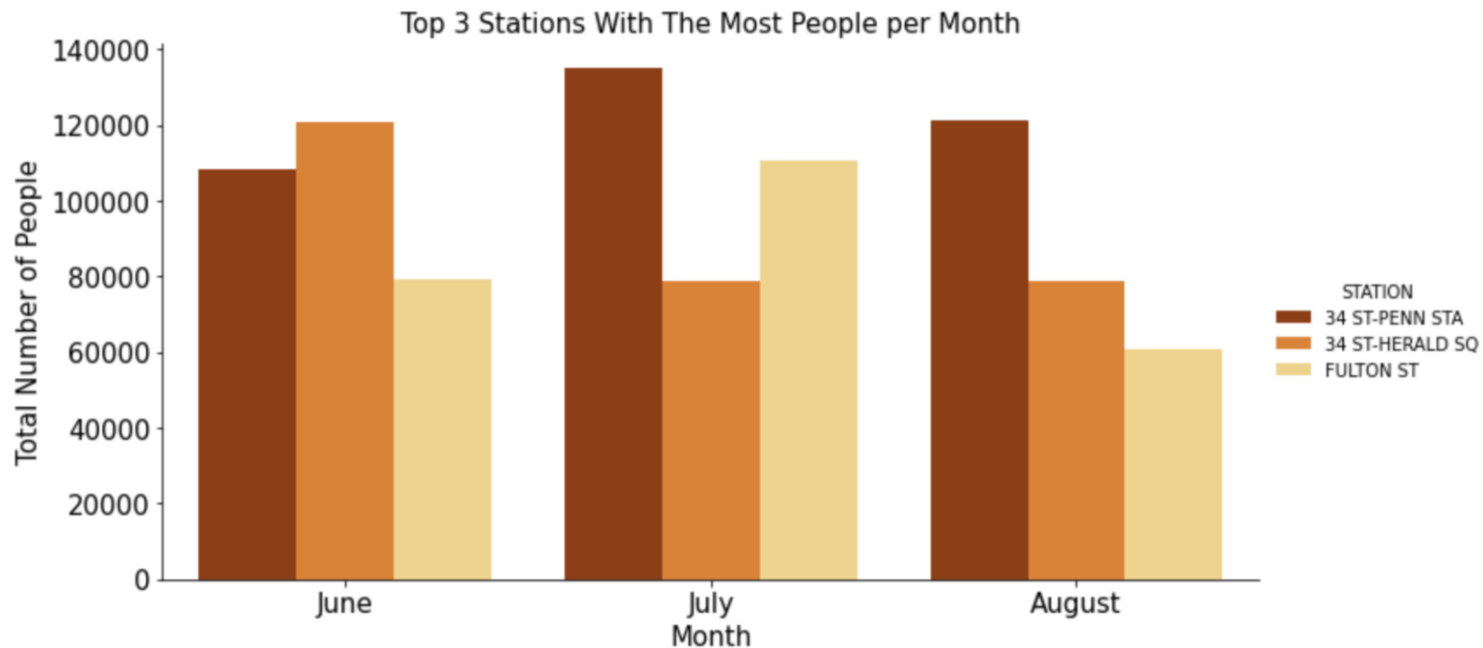
REMOVE NULL VALUES

REMOVE DUPLICATE ROWS

3- ANALYZING AND VISUALIZATION

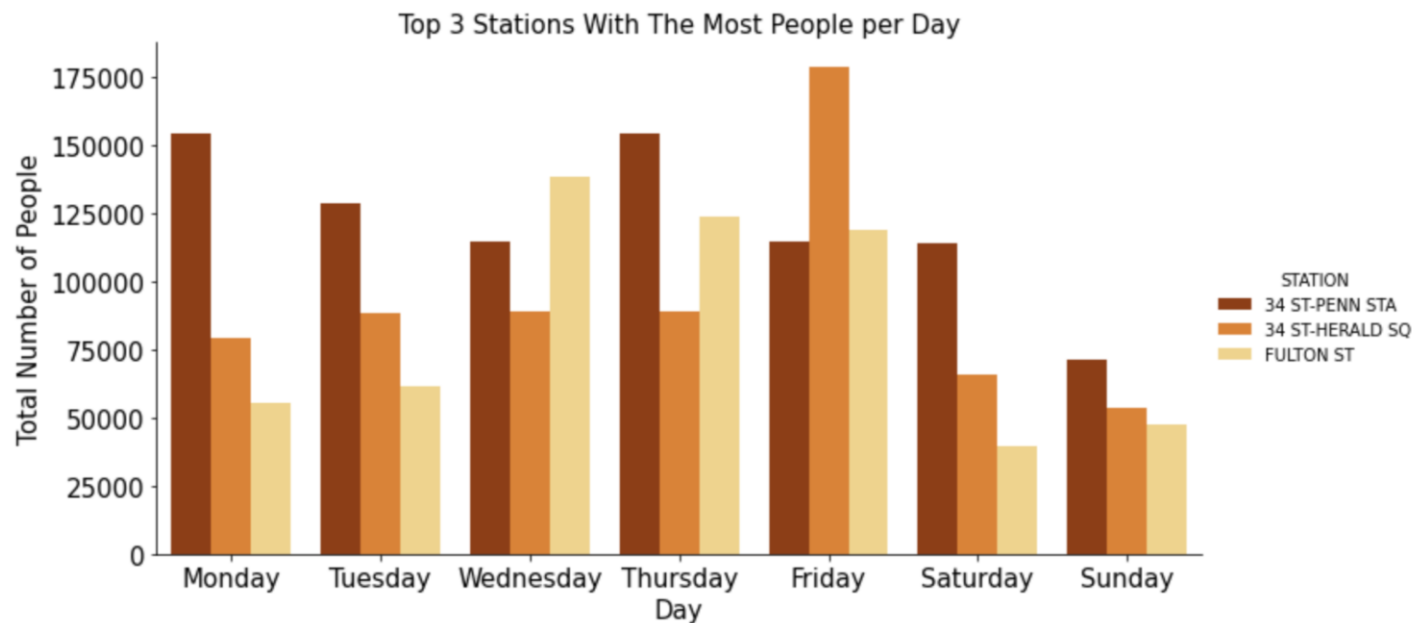# TOP 10 STATIONS WITH THE MOST NUMBER OF PEOPLE
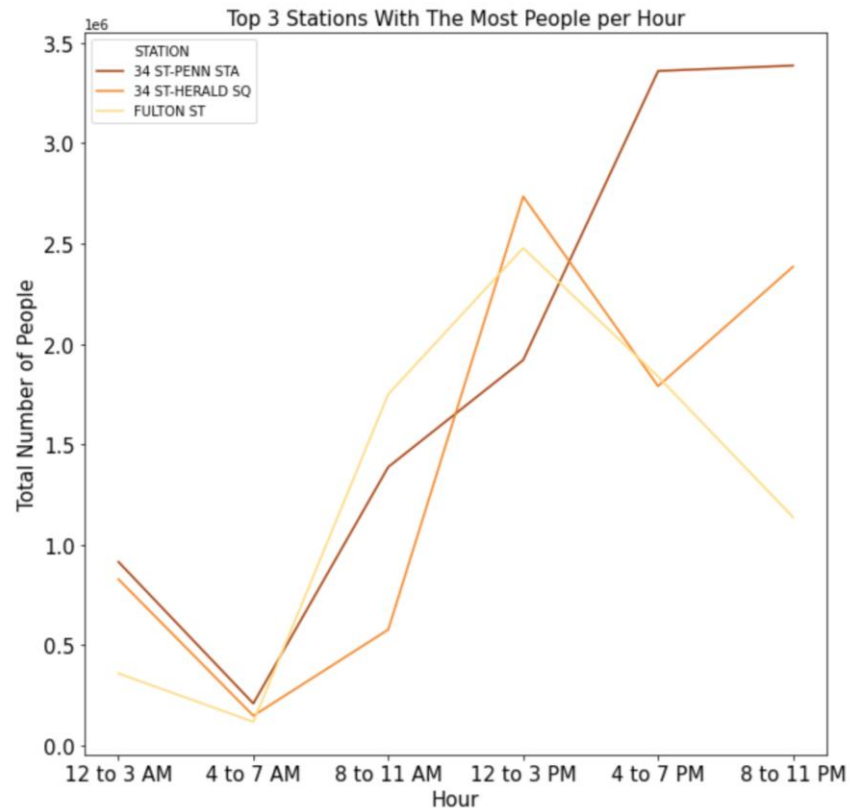
Top 10 Stations With The Most Number of People

Top 3 Stations With The Most People per Month

Top 3 Stations With The Most People per Day

TOP 3 STATIONS WITH THE MOST PEOPLE PER HOUR

Top 3 Stations With The Most People per Hour

DASHBOARD

Exploratory Data Analysis of MTA Turnstile Data Dashboards

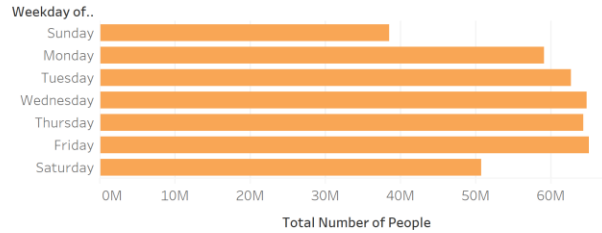| Total Number of People	All Stations	Top 3 Stations

Total Number of People

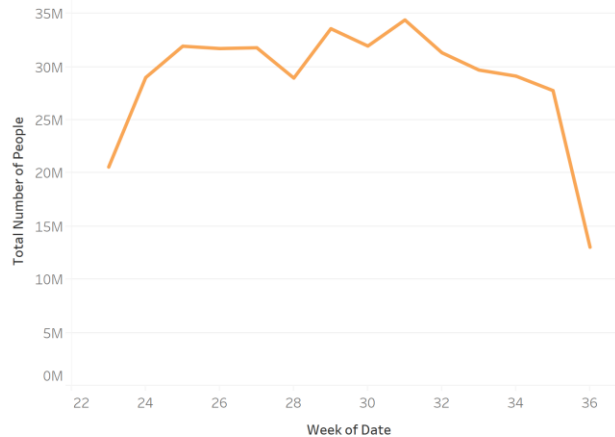### Total Number of People per Month
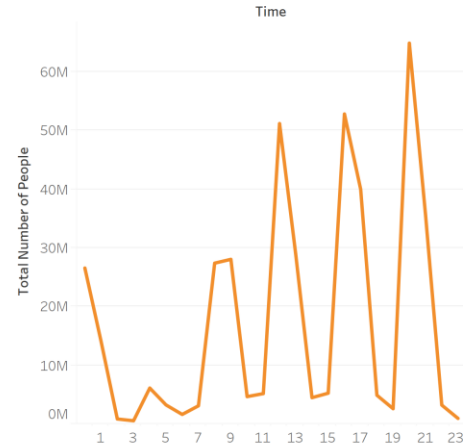

Month
- June
- July
- August

Stations With Total Number of People per Day

Total Number of People per Week
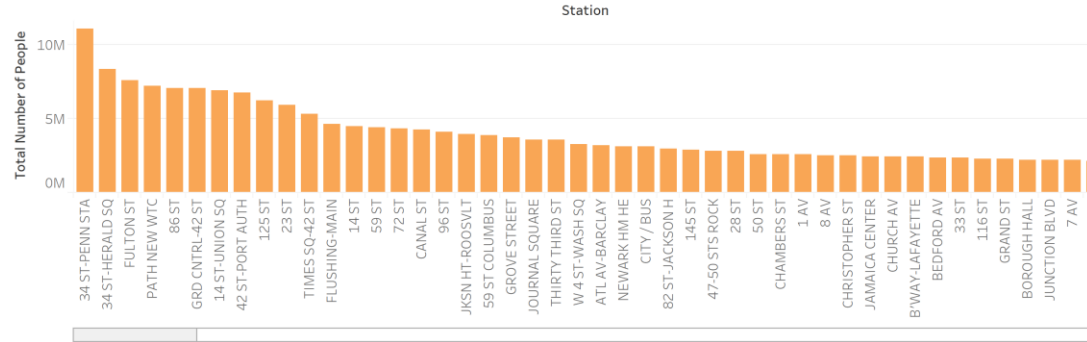

Total Number of People per Hour

Exploratory Data Analysis of MTA Turnstile Data Dashboards

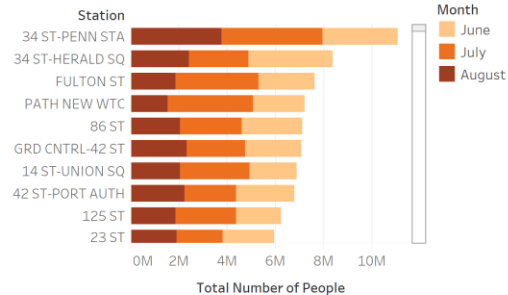| Total Number of People	All Stations	Top 3 Stations

All Stations

Station All   Month All   Day All

Stations With Total Number of People

Station

Stations With Total Number of People per Month

Station
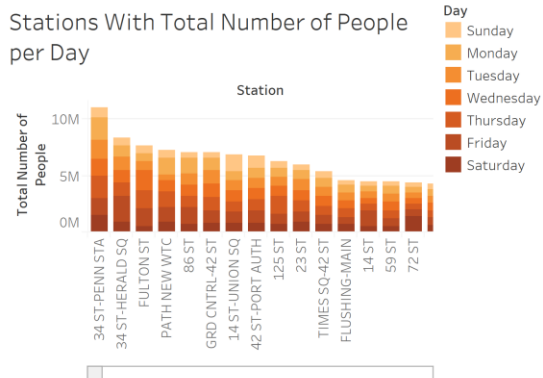
Month
- June
- July
- August

Stations With Total Number of People per Day

Station

Day
- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Exploratory Data Analysis of MTA Turnstile Data Dashboards

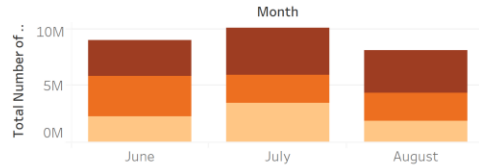| Total Number of People	All Stations	Top 3 Stations

Top 3 Stations

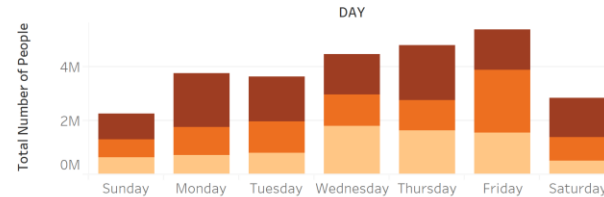Station ■ 34 ST-PENN STA ■ 34 ST-HERALD SQ □ FULTON ST

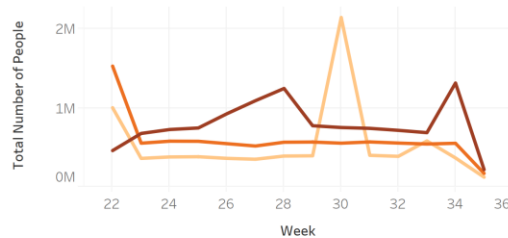### Top 3 Stations With The Most People

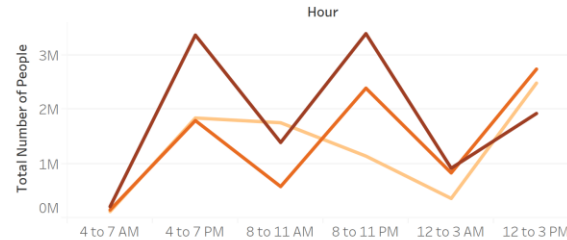### Top 3 Stations With The Most People per Month

Top 3 Stations With The Most People per Day

Top 3 Stations With The Most People per Week

Top 3 Stations The Most People per Hour

CONCLUSION

The top 3 stations

- 34 ST-PENN STA, 34 ST-HERALD SQ, FULTON ST.

Recommendation

- Open a new branch near to 34 ST-PENN STA
- Day of opening on Monday or Thursday
- Employed more employees between time 4 to 11 PM.

THANK YOU FOR LISTENING