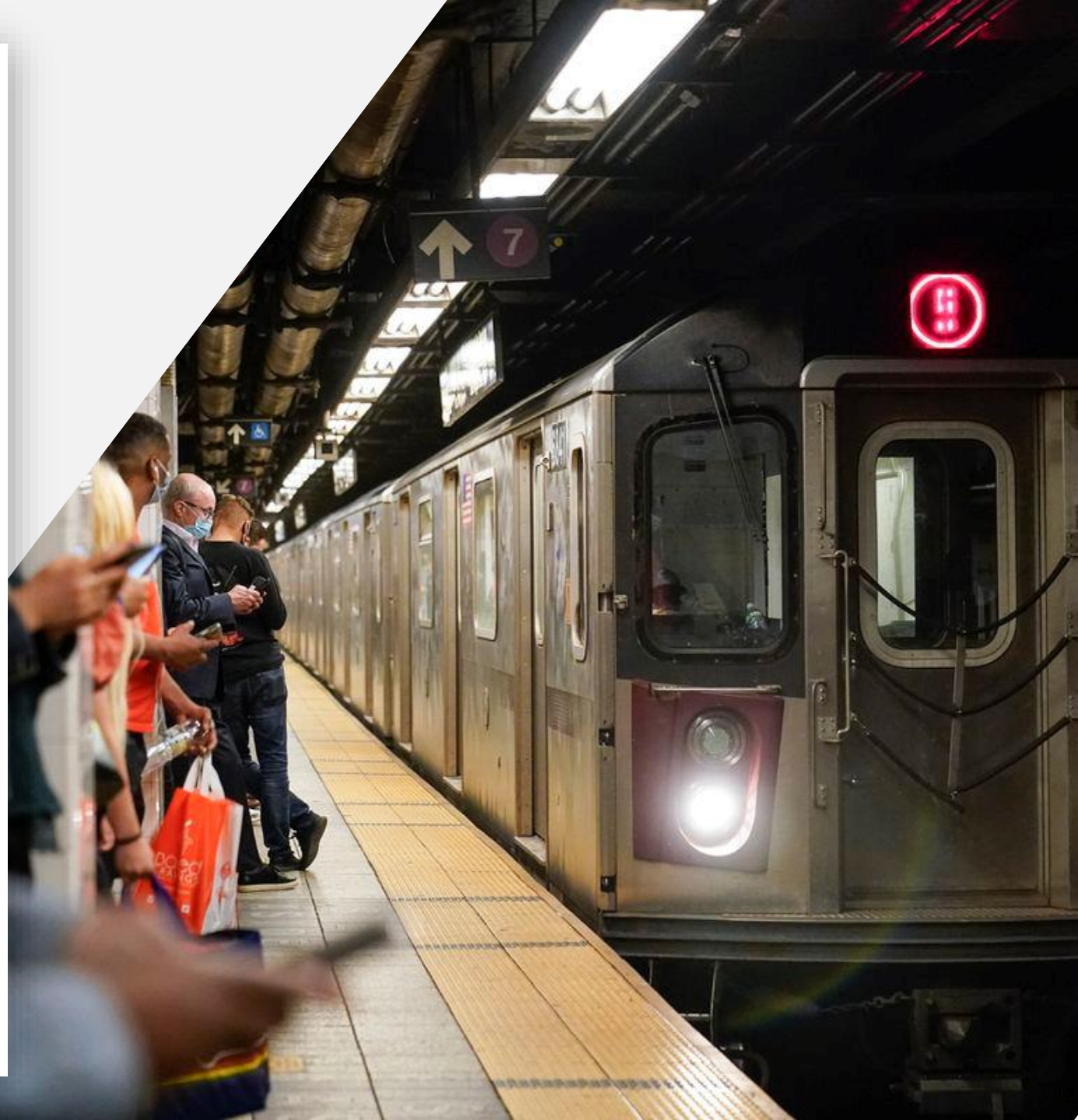# MTA

MTA DATA ANALYSIS NEW YORK CITY SUBWAY
SHELTER COMPANY

By Shahad Almubki.

BACKSTORY :

- The United States of America has the highest rates of homeless people, as the number of homeless people in New York reached 78,676 in 2018, New York City aspires to realize its vision that by 2024, there will be no homeless people.

- Shelter is a company that shelters homeless people and provides them with permanent housing, contributes to be part of achieving the vision, and helps collect donations from people to contribute to reducing homelessness.

- A shelter company wants to start collecting donations by placing donation boxes at the entrances and exits to the crowded New York City subway stations .

- The mission is to use subway data from the New York City Public Transportation Authority (MTA) to help the shelter company raise as many donations as possible. The data retrieved through the online MTA portal is used to extract a list of the most frequently used and crowded stations in the morning, noon, and evening to explore residential areas and attract the kindness of nearby residents to donate, as well as commercial areas, gathering people at stations and the presence of a large number of homeless in them.

TOOLS:

- **Pandas**
- **NumPy**
- **SQLPy**
- **SQLalchemy**
- **Matplotlib**
- **Seaborn**
- **math**

Data Sources

• From the MTA data I took three months (July,   August, and September in 2021).

• Looking for the stations near residential and most crowded commercial areas,

• For each station, I added both their turnstile's daily entries and turnstile's daily exits data To know where is the residential and commercial areas and to find the busiest stations.
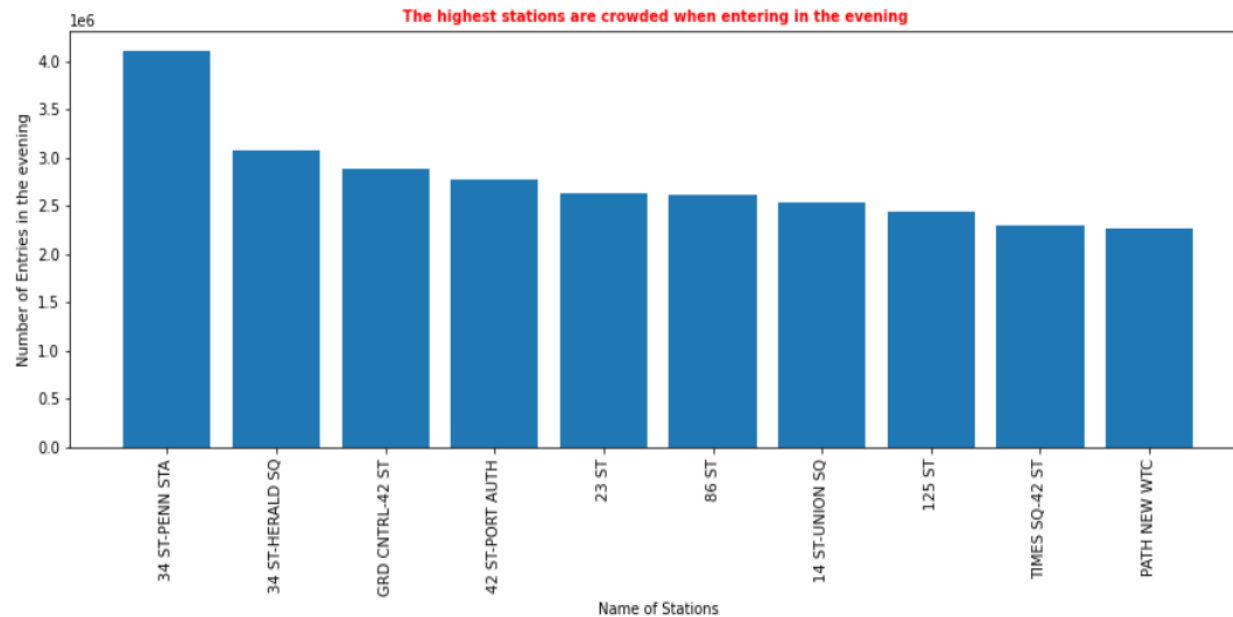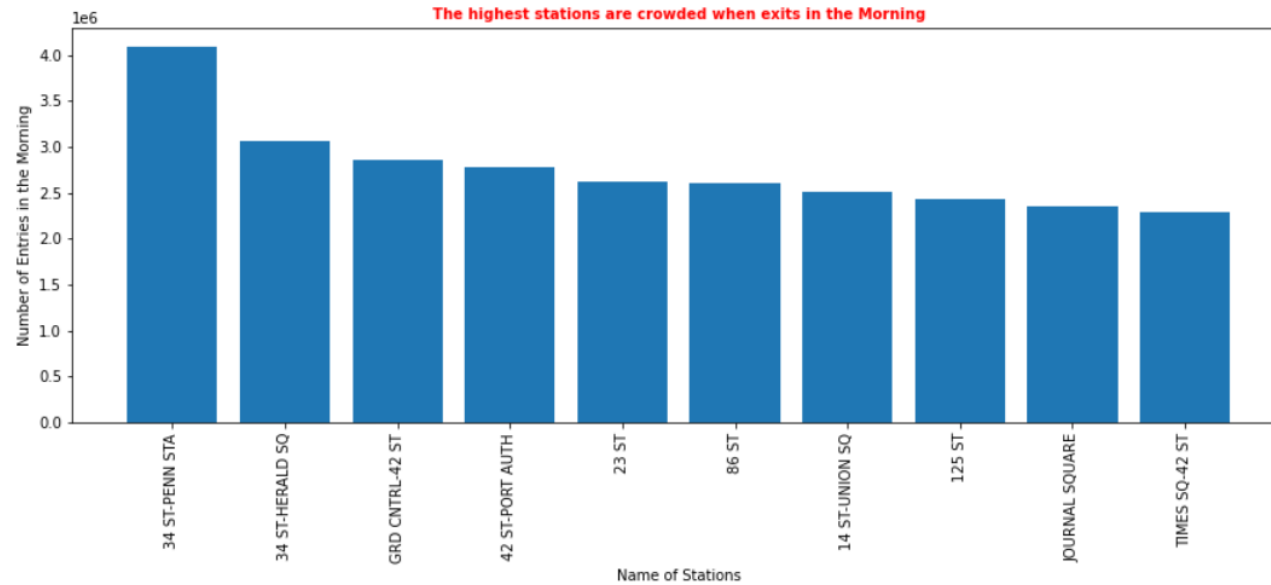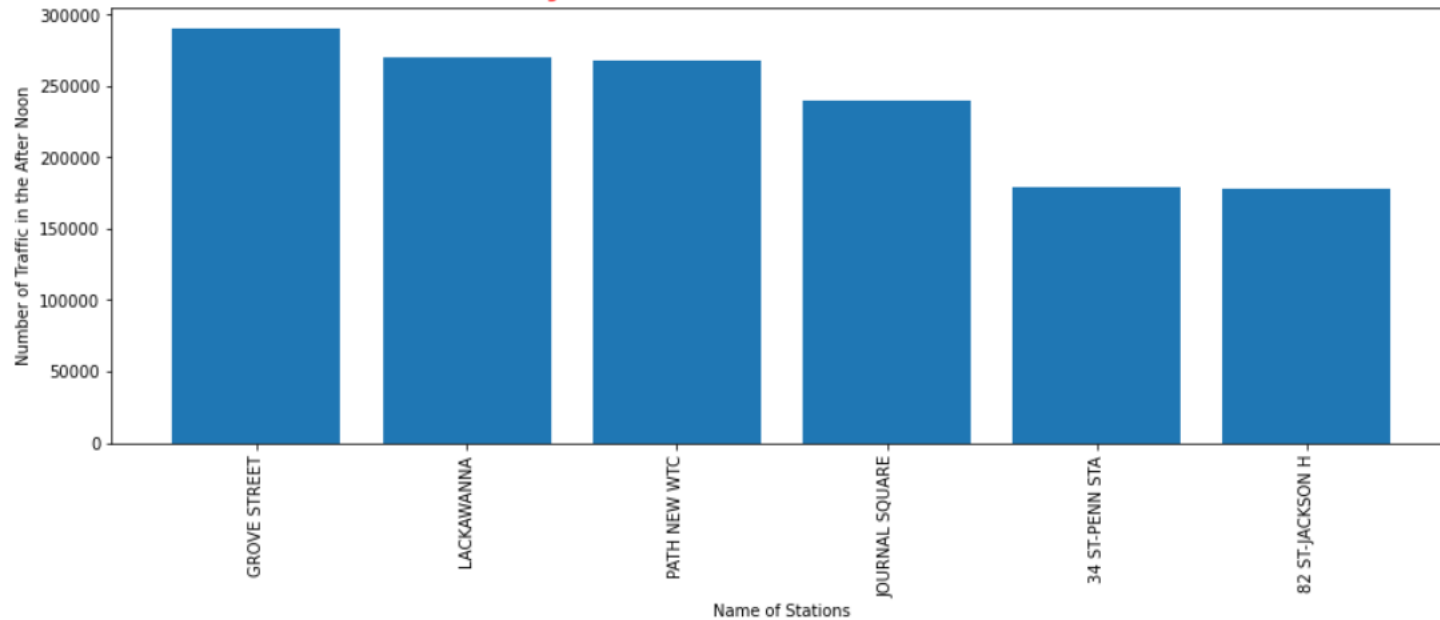
Results:

The highest stations are crowded when exits in the Morning

The highest stations are crowded when entering in the evening

Residential Area

Exits in the Morning

Entries in the Evening

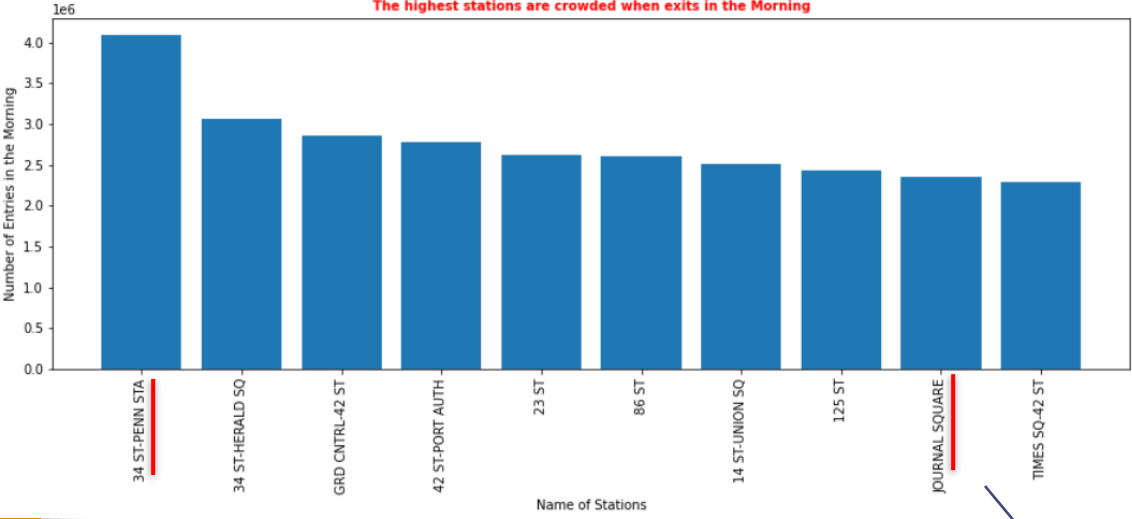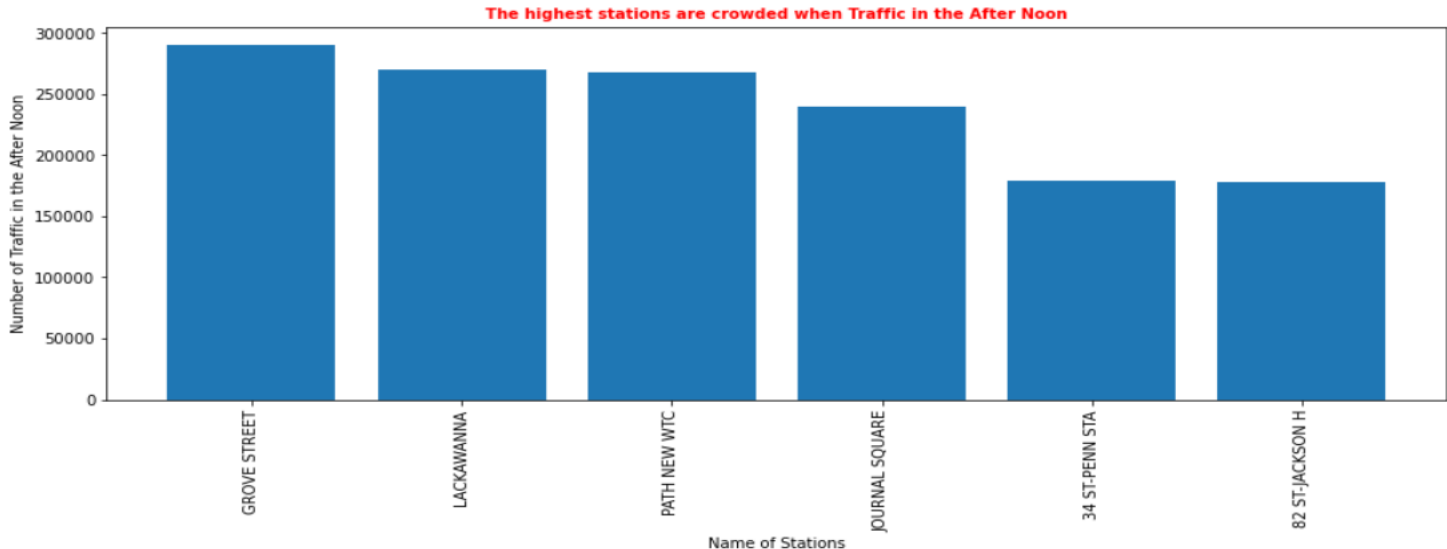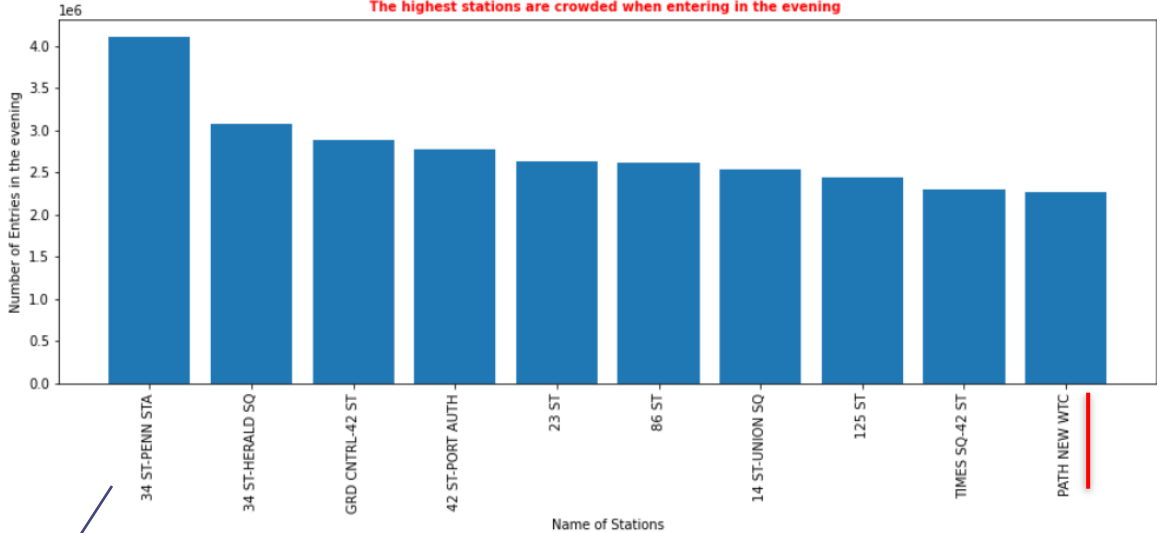Commercial Area

Entries + Exits
in the After Noon

Residential Area "Exits"

Residential Area "Entries"

Commercial Area

CONCLUSION:

My recommendation is to place donation boxes in the 10 stations for each of the residential areas and commercial areas that were previously proposed, thus we will have contributed to achieving the vision and collecting donations to reduce homelessness.

THANK YOU