

Is NYC Subway More Dangerous?

Problem statement:

Fear of crime and harassment in New York City subways is keeping many New Yorkers out of the system, when the live are came back after covid pandemic, City officials and transit leaders have consider whether subway crime has actually gotten worse and created a sense of greater danger for riders.

Our goal in this work to capture NYC subway station entry/exit data along with crime statistics around the stations, then determine the correlation between the two to help the NYPD Transit Bureau can employ that 'understaffed' stations to prevent/thwart crime.in our work we propose to find solution to the following questions .

Questions:

- what impact between NYC Crime Statistics with MTA Station Traffic?
- Did number of passenger in new York city avoid subway to be safe?
- where will be more risk to use the new York city subway?
- Which station he new York city subway will be is more safe for riders from crime?

Data collection :

1-MTA Turnstile Data

We obtain may, jun ,July ,August in 2021data from : <http://web.mta.info/developers/turnstile.html>

Field Name	Description
C/A	Control Area (A002)
UNIT	Remote Unit for a station (R051)
SCP	Subunit Channel Position represents an specific address for a device (02-00-00)
STATION	Represents the station name the device is located at
LINENAME	Represents all train lines that can be boarded at this station
DIVISION	Represents the Line originally the station belonged to BMT, IRT, or IND
DATE	Represents the date (MM-DD-YY)
TIME	Represents the time (hh:mm:ss) for a scheduled audit event
DESC	Represent the "REGULAR" scheduled audit event (Normally occurs every 4 hours)
ENTRIES	The comulative entry register value for a device
EXITS	The cumulative exit register value for a device

2-The crime/complaint information

We obtain data from:<https://data.cityofnewyork.us/Public-Safety/NYPD-Complaint-Data-Historic/qgea-i56i/data> , The dataset includes all valid felony, misdemeanor, and violation crimes reported to the New York City Police Department (NYPD) from 2006 to the end of last year (2019).

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Tool:

Sqlite:to aggregate the raw data from database.

Jupyter: to run python code ,Pandas for load data and exploratory data analysis and cleaning.

Plotly: to visualize relationship between crime and stations.

SQLAlchemy : to query resulting database into Python.

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