



Thank You

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SDAIA Bootcamp T5

A low-angle, upward-looking photograph of several tall skyscrapers in a city, likely New York City, under a clear blue sky. The buildings are made of glass and steel, and their lines converge towards the top of the frame, creating a sense of height and urban density. The image is used as a background for the report cover.

EDA - MTA REPORT

Leveraging Foot-Traffic For Marketing
Purposes



INTRODUCTION

1

MTA DATASET

(MTA) publishes data on a weekly basis. This data does not represent value, Unless it is analyzed and used correctly to serve certain business domain to take advantage of this foot-traffic.

2

OBJECTIVES

- Identification of the subway stations that have the most crowded.
- Helping an Ads agency to target crowds from busy stations.
- Improve the ads cost based on the busiest stations and day hours.

Overview



Data Scraping



Data Preparing



Data
Visualisation

Data Scrapping

- Data gathered from MTA official web-sit in the period from August to October of 2021

	C/A	UNIT	SCP	STATION	LINENAME	DIVISION	DATE	TIME	DESC	ENTRIES	EXITS
0	A002	R051	02-00-00	59 ST	NQR456W	BMT	07/31/2021	00:00:00	REGULAR	7611181	2603110
1	A002	R051	02-00-00	59 ST	NQR456W	BMT	07/31/2021	04:00:00	REGULAR	7611192	2603113
2	A002	R051	02-00-00	59 ST	NQR456W	BMT	07/31/2021	08:00:00	REGULAR	7611197	2603126
3	A002	R051	02-00-00	59 ST	NQR456W	BMT	07/31/2021	12:00:00	REGULAR	7611235	2603178
4	A002	R051	02-00-00	59 ST	NQR456W	BMT	07/31/2021	16:00:00	REGULAR	7611357	2603211

Data Preparing

- Replace the outliers with mean values of the turnstile before and after the error data datetime
- Total traffic at time period = sum of entry difference and exit difference

STATION		DATETIME	DAY_OF_WEEK	ENTRY_DIFF	EXIT_DIFF	TOTAL_TRAFFIC
0	59 ST	2021-07-31 04:00:00	5	11.0	3.0	14.0
1	59 ST	2021-07-31 08:00:00	5	5.0	13.0	18.0
2	59 ST	2021-07-31 12:00:00	5	38.0	52.0	90.0
3	59 ST	2021-07-31 16:00:00	5	122.0	33.0	155.0
4	59 ST	2021-07-31 20:00:00	5	155.0	30.0	185.0

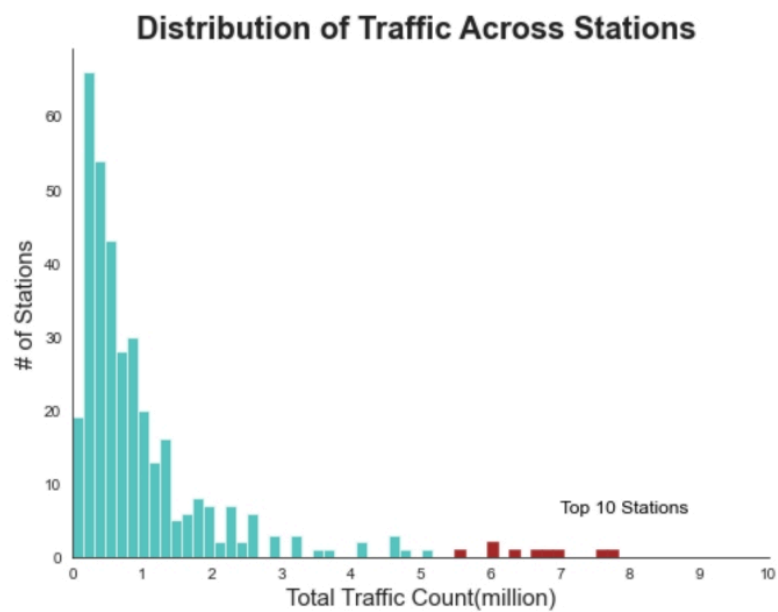
Data Visualisation

- Distribution of traffic across station
- Top 10 Busiest Subway Stations In NYC

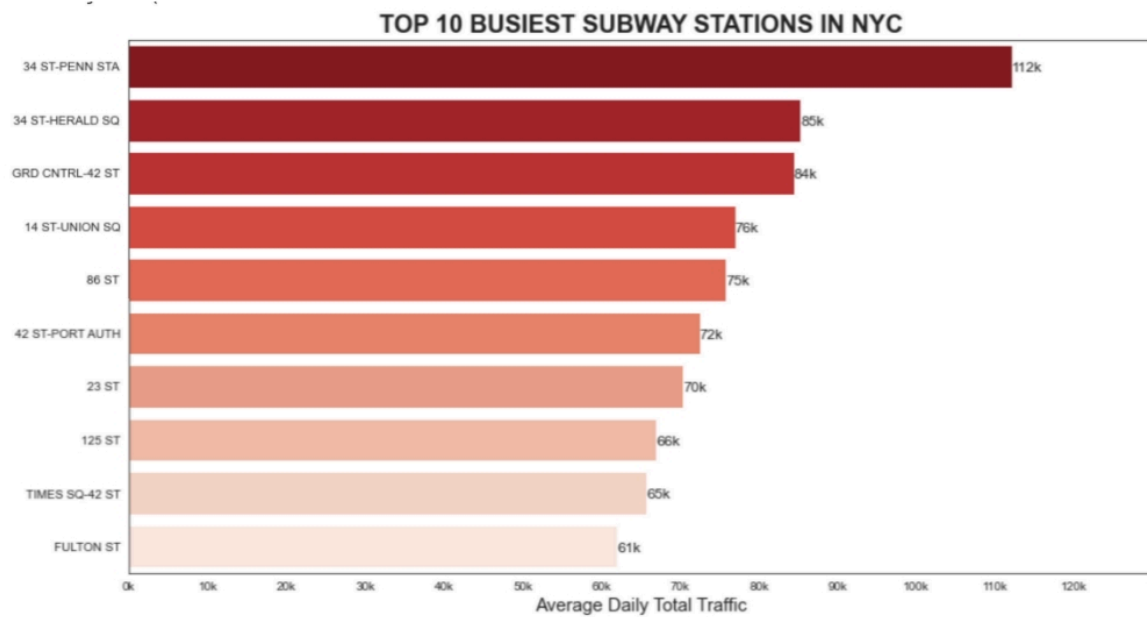


Data Visualisation

- Distribution of traffic across station



Data Visualisation



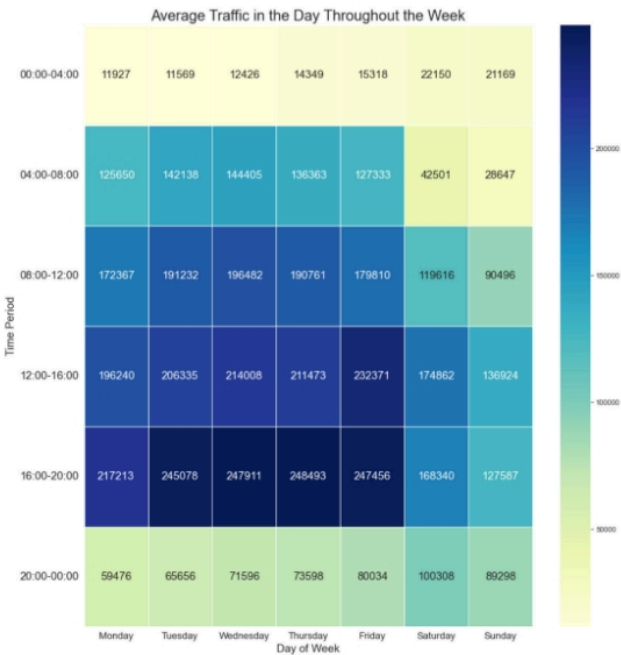
- Distribution of traffic across the week
- Traffic on weekdays > weekends



Result

Top 10 Stations Traffic pattern

- Most crowded days: Tues, Wed, Thu, Fri.
- Traffic is heavier in afternoon





Future Work

- Interactive Dashboard
- More EDA on each stations