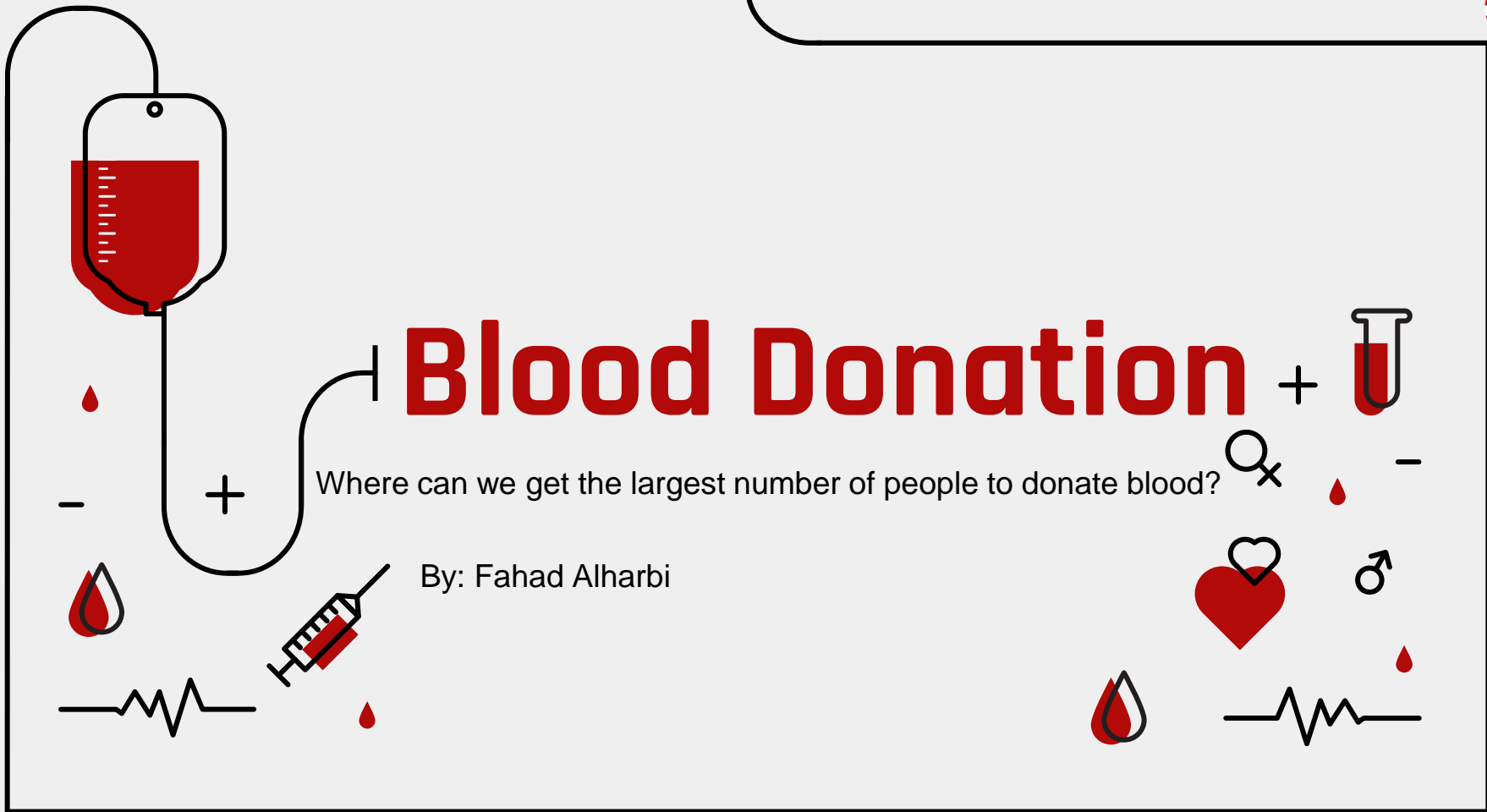




# Blood Donation +

Where can we get the largest number of people to donate blood?

By: Fahad Alharbi





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## Blood Bank

Blood donation



## Data Description

Scope



## Problem?

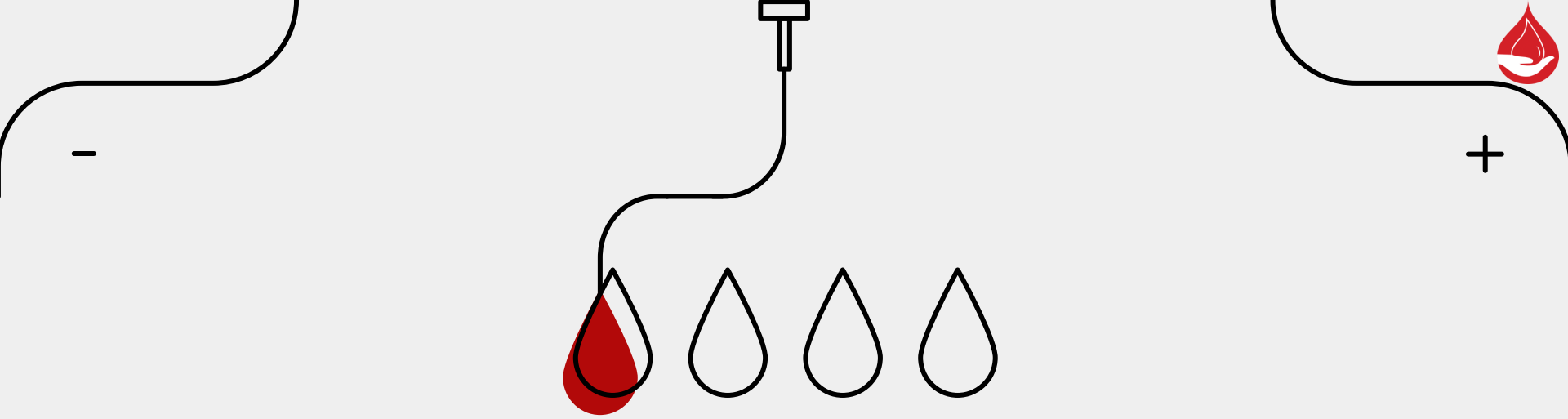
Urgent need for blood



## Validate Data

Data cleaning





# Blood Bank

Blood donation



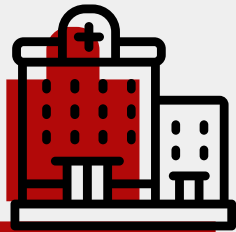
# Introduction

- What is Blood Bank ?
- Blood Bank Responsibility





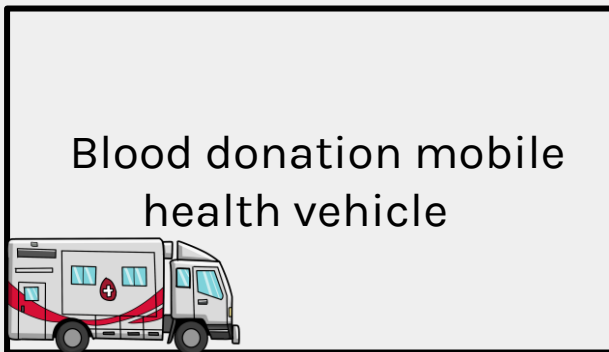
# Problem?



- There is an urgent need for blood in hospitals



## Solution



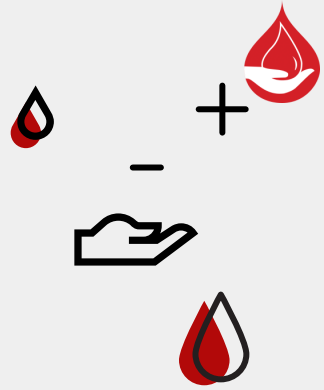
Blood donation mobile  
health vehicle



## Where?

Provide a mobile  
health vehicle for  
blood donation  
near the busiest  
stations

How to Know the busiest  
station in new York city ?

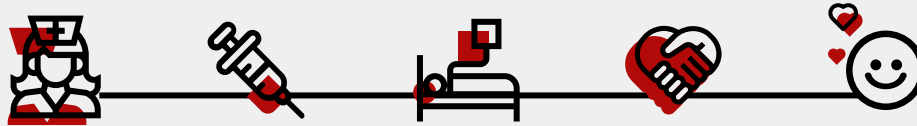


**The New York subway MTA Dataset**

# Scope

A data set was used in this project for a period of more than 3 months from MAY to AUG 2021.

- Quick result in this period
- I assumed that the data when it is less than 5000 for entry will be closer to true

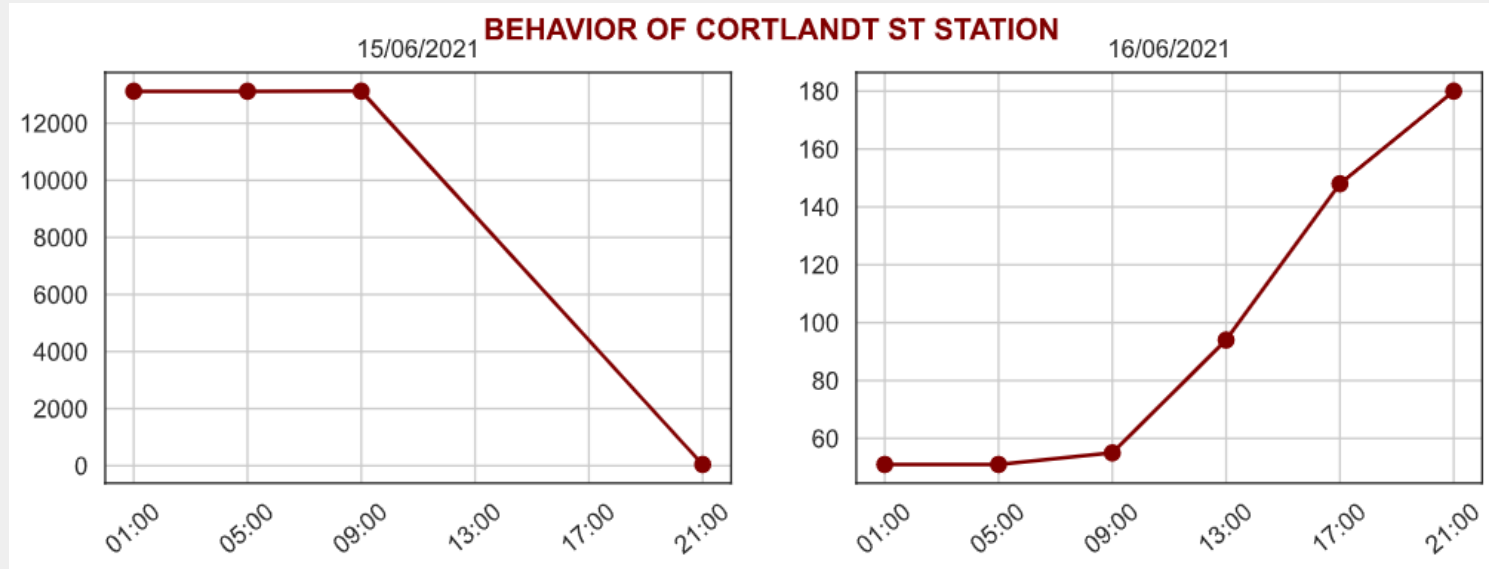




# Validate Data

- Duplications were found in the dataset
- A lot of missing values were found
- A lot of outliers was observed across the dataset
- Absolute negative entry for reverse entry
- For the numbers that reset entry counter, I set the data as less than 5K entry per day we found the number of rows = 458182 and when we put less than 10K we found the number of rows = 458185 and this means that the difference is 3 rows

# Example of problem in dataset





# TOP 3 STATIONS



**3 Million**

**34 ST-HERALD SQ**



**4 Million**

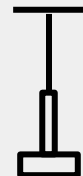
**34 ST-PENN STA**

TOTAL ENTRY FOR 14 WEEKS



**3 Million**

**GRD CNTRL-42 ST**



# TOP 15

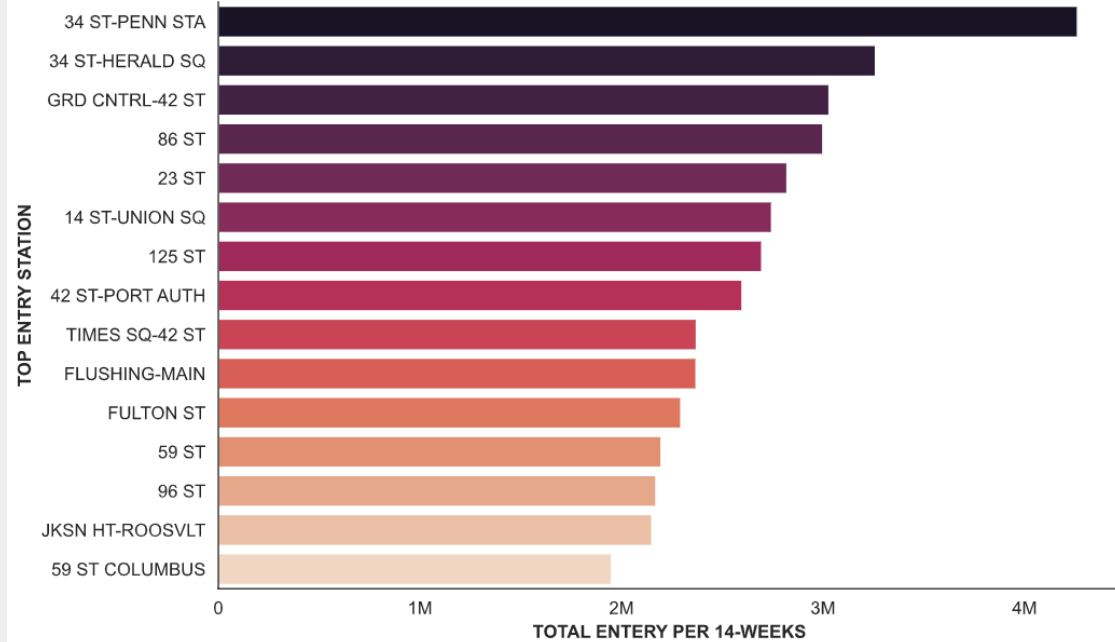
X axis

TOTAL ENTRY PER 14-WEEKS

Y axis

TOP 15 STATIONS

## MOST ENTRY STATIONS





## Why did you assume that?

- Based on the result I got if I compare it to the MTA stats for 2019, the busiest stations with my result

Top 10 busiest subway stations in 2019

Rank	Station/Complex	Lines	Ridership
1	Times Sq-42 St/42 St	N, Q, R, W, S, 1, 2, 3, 7, A, C, E	65,020,294
2	Grand Central-42 St	S, 4, 5, 6, 7	45,745,700
3	34 St-Herald Sq	B, D, F, M, N, Q, R, W	39,385,436
4	14 St-Union Sq	L, N, Q, R, W, 4, 5, 6	32,385,260
5	Fulton St	A, C, J, Z, 2, 3, 4, 5	27,715,365
6	34 St-Penn Station	1,2,3	25,967,676
7	34 St-Penn Station	A,C,E	25,631,364
8	59 St-Columbus Circle	A,B,C,D,1	23,040,650
9	Chambers St, WTC /Park Pl/Cortlandt	A, C, E, 2, 3, R, W	20,820,549
10	Lexington Av-53 St/51 St	E, M, 6	18,957,465

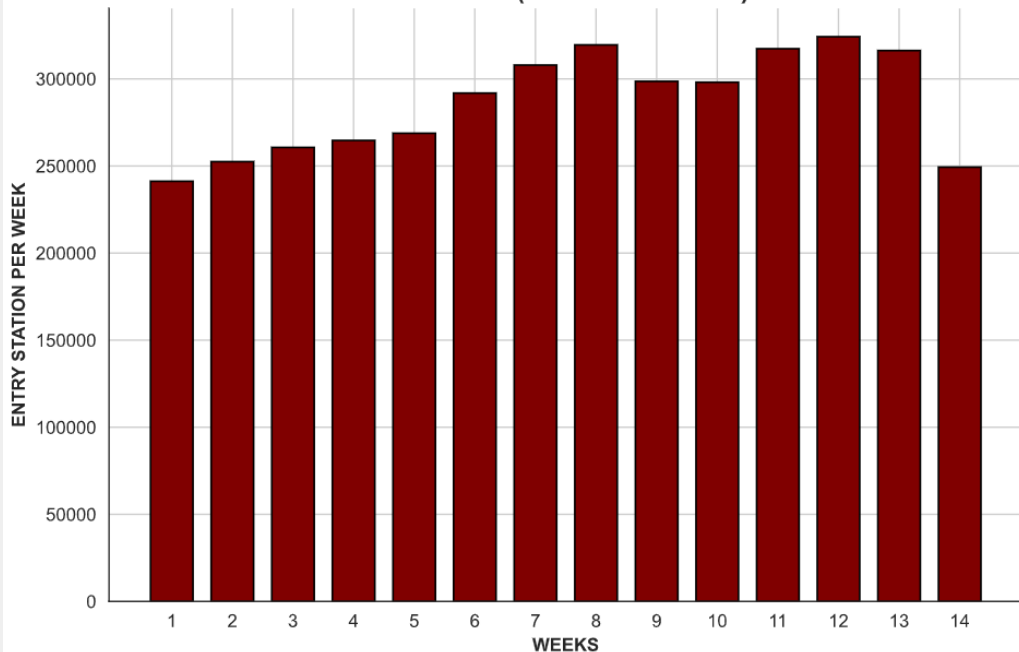
[Find source here](#)





# Expect More

ENTRY FOR STATION (34 ST-PENN STA) PER WEEK



## Observations

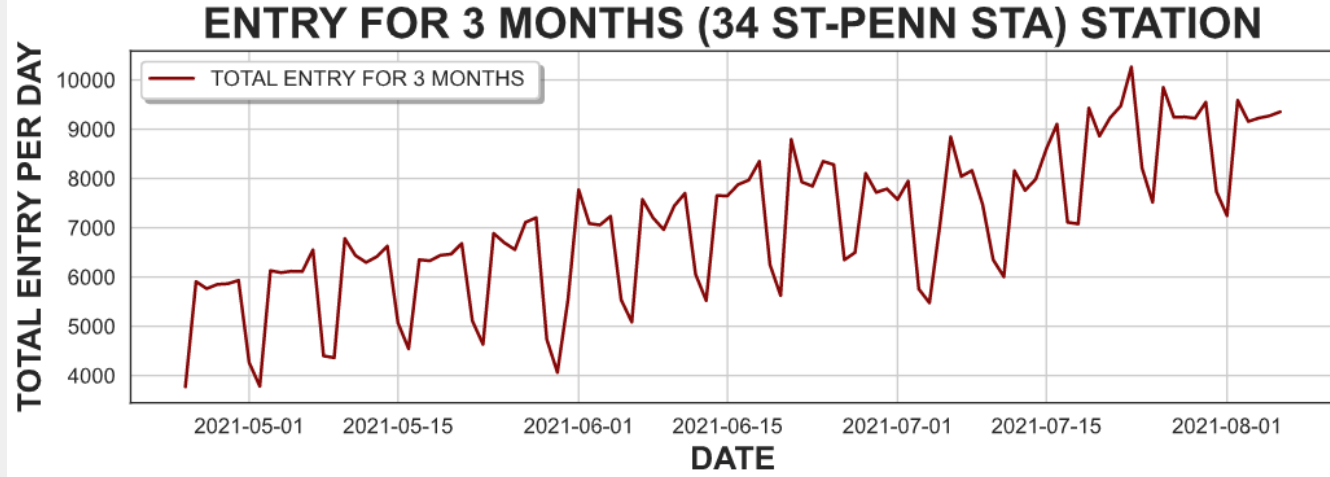
- Through this chart, we can know the sum of the entry per week for the most visited station over a period of 3 months



# Expect More and More



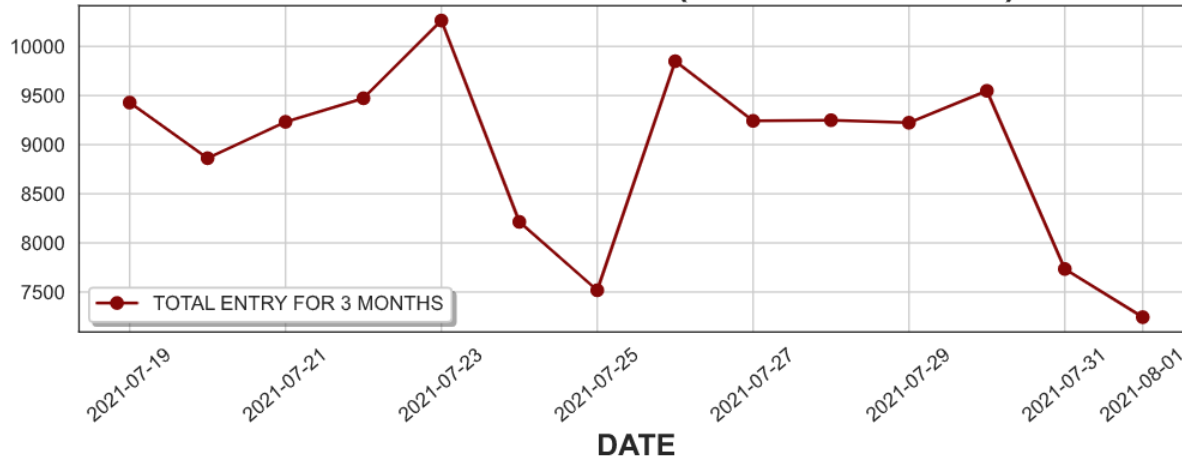
- In this chart, we can know for 3 months each day which days have the most entry to the station





# Expect Extremely More

ENTRY FOR STATION (34 ST-PENN STA)



- If we go deeper, and choose two weeks at random to know the days and see them more clearly, we find that the days of the week are more crowded than the weekend





# Finally

After all the available data, you can decide where to put the blood donation mobile health vehicle to the most crowded Subway station to benefit from blood donations from the station's visitors



# Thanks!

Do you have any questions?

