PDC
Thank you for listening!

PDC

# CONCLOUSION & RECOMMENDATION

PDC
ONE STOP SOLUTION

- After observing data, most congestions were found between morning and evening time.
- Better targeting congestions by the map between morning and evening time for faster operations support to these congestions.
- MTA should fetch for buses from the map to help reducing congestions on time that has been detected.
- MTA should use map for tracks switch management and act upon morning and evening congestion (recommended).

# DEMO

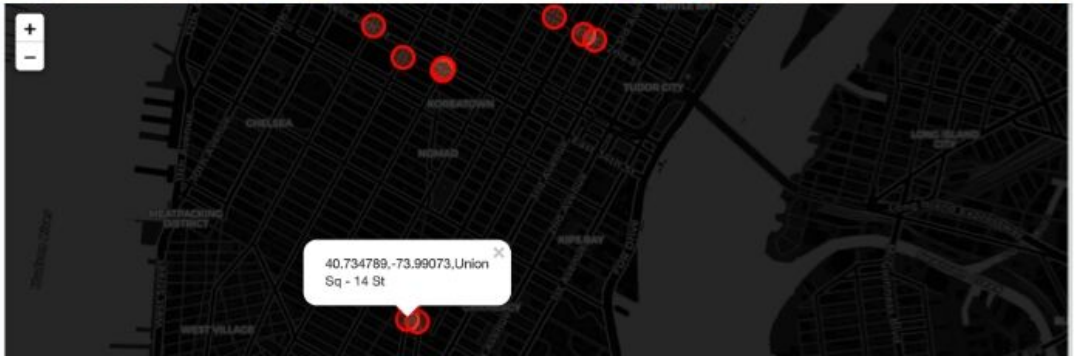
PDC

# DATA MODELING

- Congestions are used to detect on the map between morning and evening.
- Fetching external transportations by map (denoted with blue sqares) ■
- A railroad (tracks) switch management.

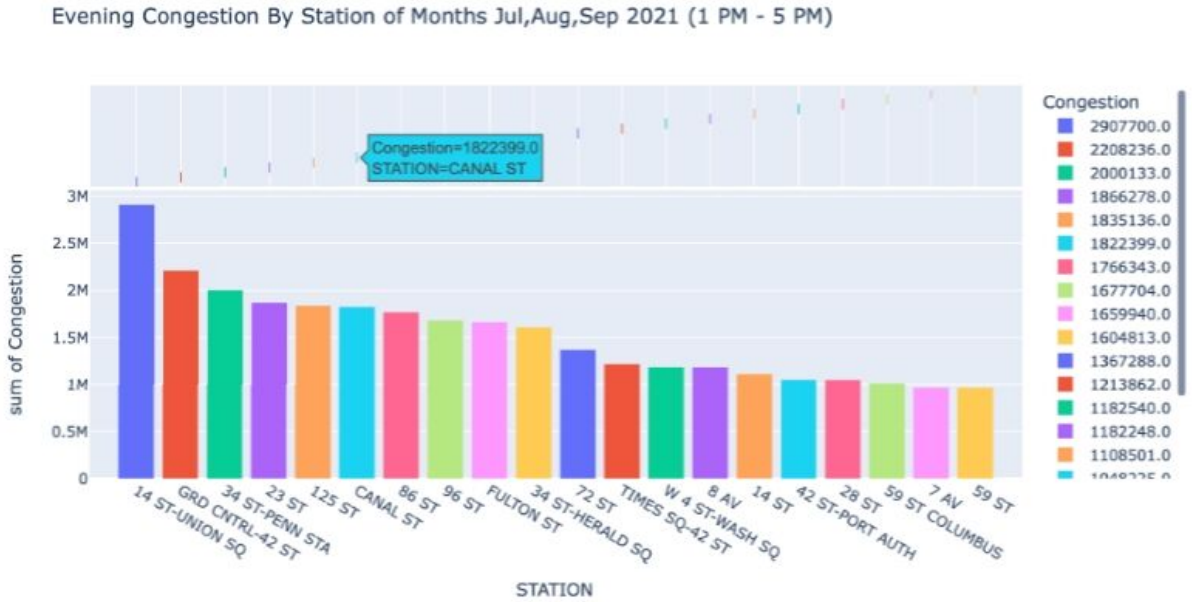
**More details will be on PDC dashboard online!**

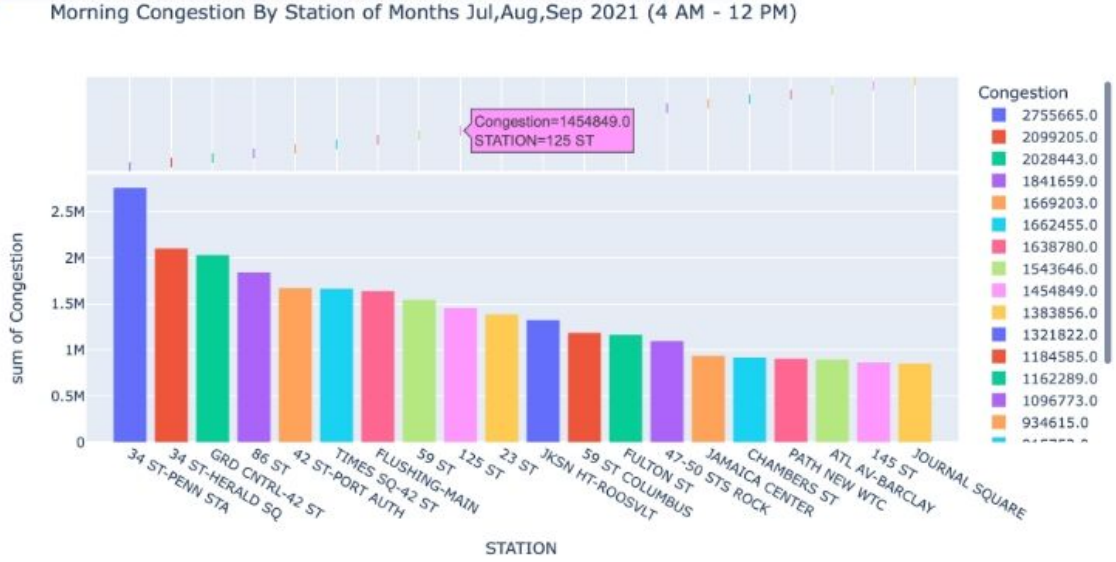
PDC
ONE STOP SOLUTION



# PDC FEATURE IMPORTANCE

predicting the whole 3 months




Congestions change between times!

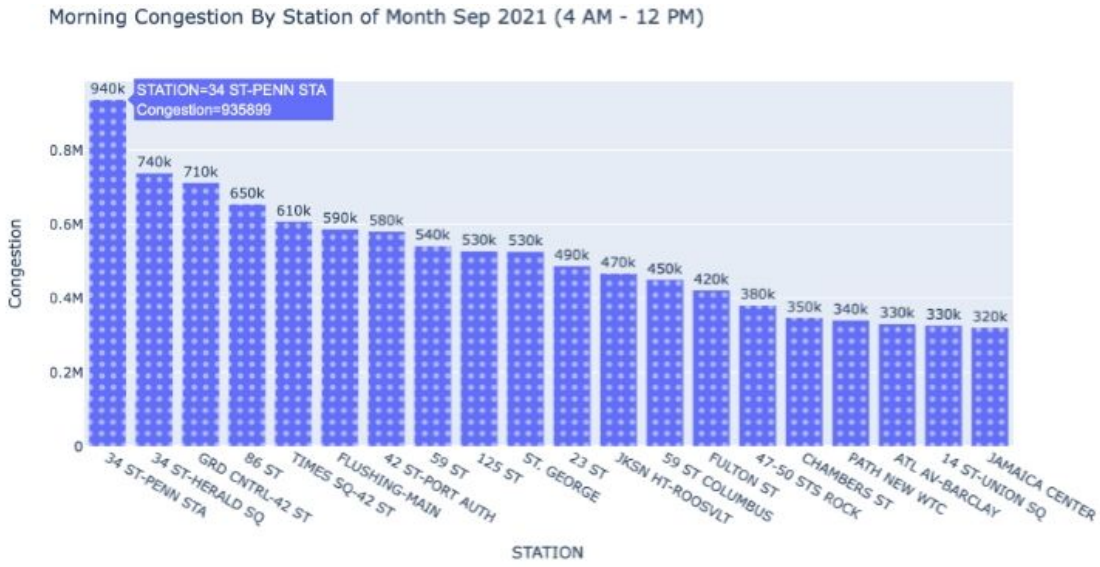
| Morning | Evening | High to low |
|---|---|---|
| 34 ST-PENN | 14-St-Union | Highest |
| 34 ST - HERALD Sq | Grand Center-42 | Second |
| Grand Center-42 | 34 ST-PENN | Third |

PDC

# FEATURE ENGINEERING

*Observations:*

- Predicting most congestion stations of 1 mon.
- Split the time between evening and morning.
- Observing where to dis-congestion during a specific time frame.



PDC

# DATA EXPLORATION

Data preparation &
Data Imputation

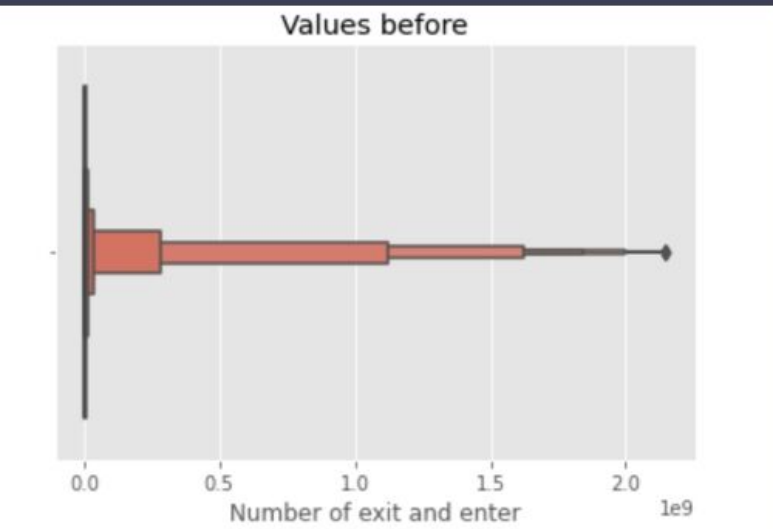
# DATA VALIDATION

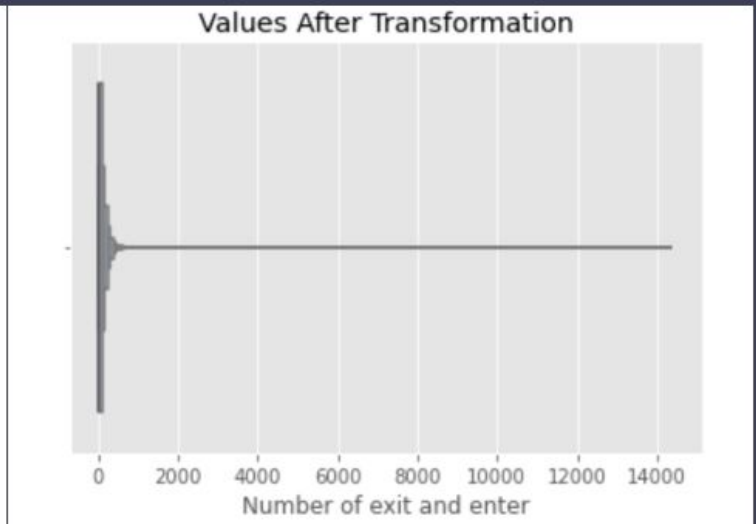
Validate for

Duplicate Data

Missing Values

outlier and Illogical Entries



PDC

PDC
ONE STOP SOLUTION

# PROBLEM UNDERSTANDING

## Overview:

- MTA commute plagued by delays as riders gripe over crowds and delays on lines led to dangerously crowded trains.

## Problem Statment:

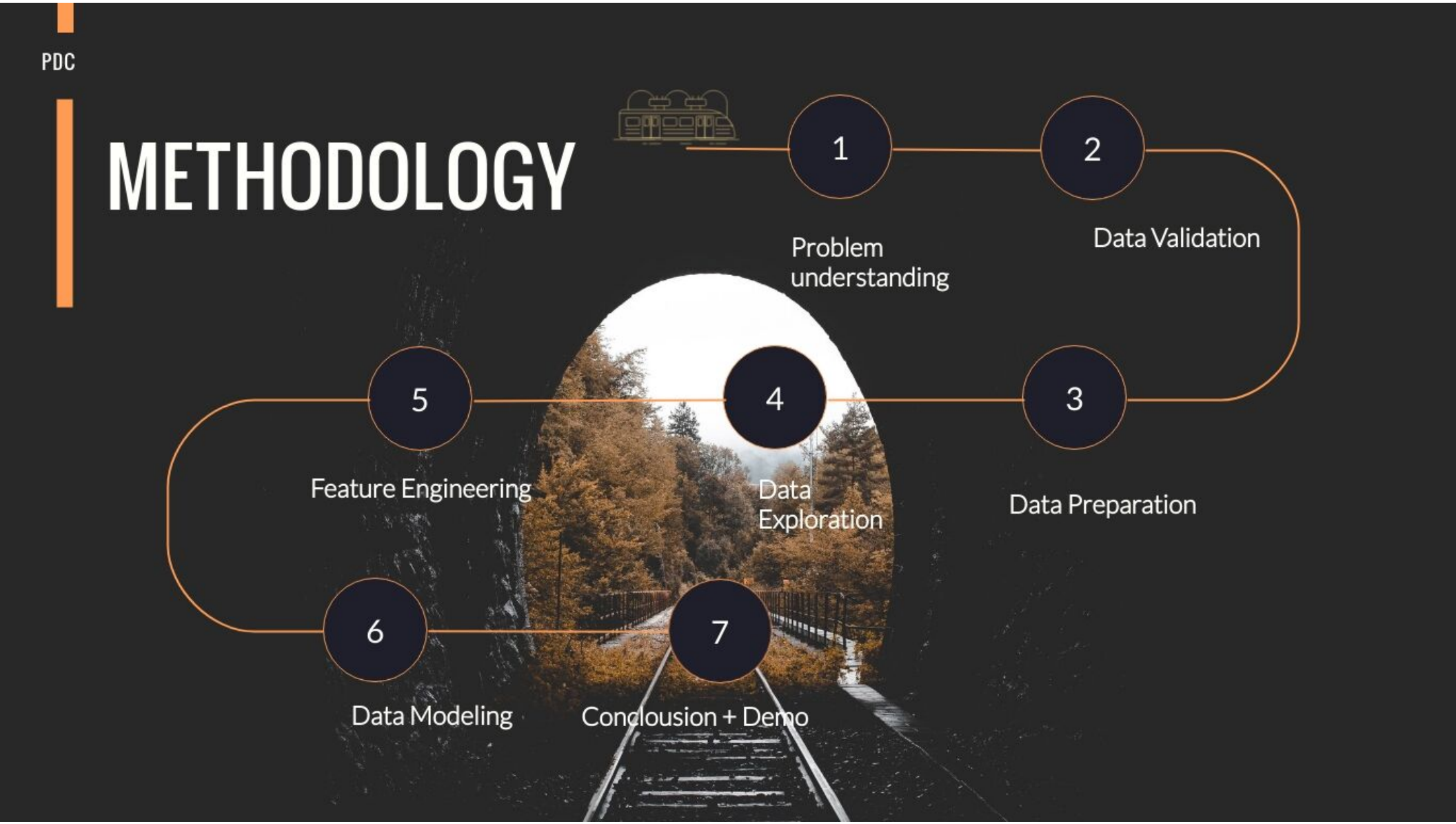
- Find the congestion and detected it on a live map.
- Discover demand of trains across all stations and further optimize the availability of trains to busy stations.
- Identify how to reduce congestion and delays on crowded station that waste commuters' time.

## Scope:

- Due to the computational and time constraint as well as the unavailability of complete datasets. The MTA Turnstile and MTA maps will be used.

PDC

# METHODOLOGY



EDA OF MTA TURNSTILE DATA
NEW YORK CITY
PDC
ONE STOP SOLUTION
Abdultawwab Safarji
Oct 7, 2021
The crowds are still there
Really?