The Metropolitan Transportation Authority (MTA)
Wi-Fi Netwrok Locations Work Plan

Proposed By
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Overview:

The Metropolitan Transportation Authority (MTA) is the entity responsible over New York state subway system, recently they require to install Wi-Fi network in the subway stations to minimize the inconveniences that might results due to the wait time before train arrival by keeping the daily commuters well connected. The MTA contracted us as a consultancy group to advise on a working plan for this project.

Questions:

- What are the busiest train stations across New York City?
- What is the average wait time in the busiest stations?
- Should the Wi-Fi network be installed across all stations?
- What are the stations that need to be prioritized in the working plan and why?

Data Description:

In order to conduct the analysis, we will be utilizing the below datasets:

1. MTA Turnstile data – to understand traffic trend
2. MTA Wi-Fi locations data – to understand at which station the ISP towers are installed

Field Description:

Field Name	Description
C/A	Control Area (A002)
UNIT	Remote Unit for a station (R051)
SCP	Subunit Channel Position represents a 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

Tools:

IDE: Jupyter Notebook, DB Browser for SQLite
Languages: Python, SQLite
Libraires: Pandas, NumPy, SQLalchemy, matplotlib, seaborn

MVP Goal:

A working plan to install and operate the Wi-Fi network in New York state subway system