

# MTA Coffee Shop Placement Project

Elisabeth Johnson

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## Abstract

The Goal of this project is to best understand the key locations for which to place a coffee shop for Coffee Shop X, a fictional shop. For this project I worked with New York MTA data as well as NY Census Bureau data in order to gather individual demographic data to best understand where coffee drinkers may be located. In the attached document, I have a powerpoint presentation as well as a Jupiter notebook detailing my findings. The result of my findings offer a proposal for Coffee Shop X to focus on placing their shops near *Penn station* and *Harold sq. Station*.

## Design

For this project, I gather population volume data to MTA station turnstiles, time of exit and entry to MTA stations, and County population details. Using this information, I am able to best inform my client, Coffee Shop X, of where to place their shops.

## Data

The data I used consists on 3.5 Million rows containing 4 months of data. The primary columns used are entry and exit time, population entry and exit volume, date, station, and turnstile. For demographic information, this table consisted of less than 20 rows of data detailing total population count, by age, for 5 different counties located in New York.

## Algorithms & Models

For this analysis I focused on Data Cleaning and gaining insights via data exploration.

## Tools

- \* NumPy and Pandas
- \* Matplotlib
- \* Beamer for the presentation
- \* SQL for querying the data