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Introduction

The act of dodging the payment of a fare while riding public transportation is known as **fare evasion.** Recurrent fare evaders in New York may be arrested and prosecuted **with theft of services**, which is a category **A** felony. Furthermore, arrests have been collected into a dataset and associated to the subway station where they transpired. The arrests were conducted by the **New York City Police Department (NYPD)** at subway stations run by the **Metropolitan Transportation Authority (MTA)** around **2018**.

New York Police Department

This study is proposed to the **New York Police Department (NYPD)** to help in managing the act of crime that undergo the subway station and especially the act of fare evasion that is considered to be a constant issue. By knowing the peak hours and the busiest stations **with the help of the analysis of this study NYPD** will be capable of bettering the distribution of officers around the subway stations and minimizing the crime rate.

Data Set

The datasets that will be used to conduct this study are:

- **Turnstile Dataset**: which will be the center point of the analysis. It contains **11 columns** and about **3M rows**. The time period that was chosen is **late 2017 to 2018** (**a year**) since NYPD provided fare evasion arrest up to 2018. Most of the columns will be used especially linename/station to link it to the NYPD dataset.
- **NY Fare Evasion Arrest**: a complementary dataset to gain information about fare evasion arrests. It contains **16 columns** and about **200K rows**. It specifies everything about the fare evasion crimes from the arrest date to the coordinates of where it happened.

Tools

By using the tools that are introduced in this course a clear vision will be produced to know what is the core point of the possible ramifications of fare evasions. Moreover, the use of simple and easy to read graphs **will showcase a summary of the racial, sex, nationality groups** whom are **responsible for the crimes** based off the turnstile and subway information. The tools that will be used are: **Pandas, Numpy, Matplotlib, SQL, Seaborn, SQLite.**

Additional tools are going to be used to squeeze out the data for more information like **Tableau**.

Conclusion

This analysis will help greatly in handling the fare evasion problem in New York. Recurrent fare evaders were criminally charged with theft of services throughout the years but this study will focus more on the year of 2018. The New York City Police Department made the arrests at subway stations administered by the Metropolitan Transportation Authority and by shinning the light on the intelligently interrupted data NYPD will use this as a weapon to better spread the manpower and to catch criminals beforehand.