Stop-and-Frisk in New York City

December 18, 2019

Overview

Stop-and-Frisk is the practice of temporarily detaining, questioning, and searching civilians for weapons or contraband.

Allows police officers to conduct frisks without probable cause for an arrest

Ends in either an arrest, an issued summons, or being let go

Understanding the problem

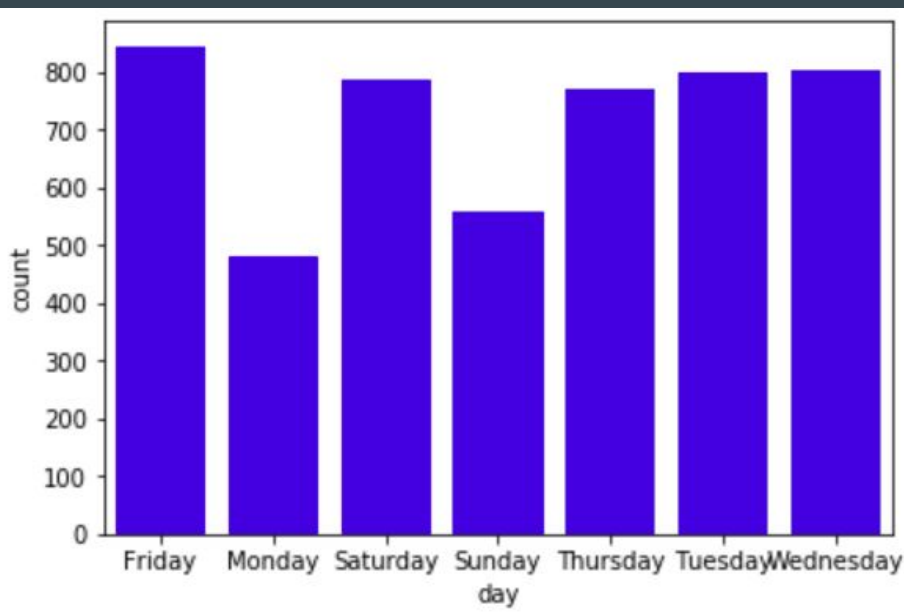| Unconstitutional?	Racist?	Not Effective?
4th Amendment issues Search and seizure	Minorities targeted much more frequently • 90% were minorities • 10% were white	Over 5 million stops in past 17 years Only around 10% result in arrests Doesn't reduce crime

Project Objective:
Can we predict who will be arrested based on information obtained before the stop begins?
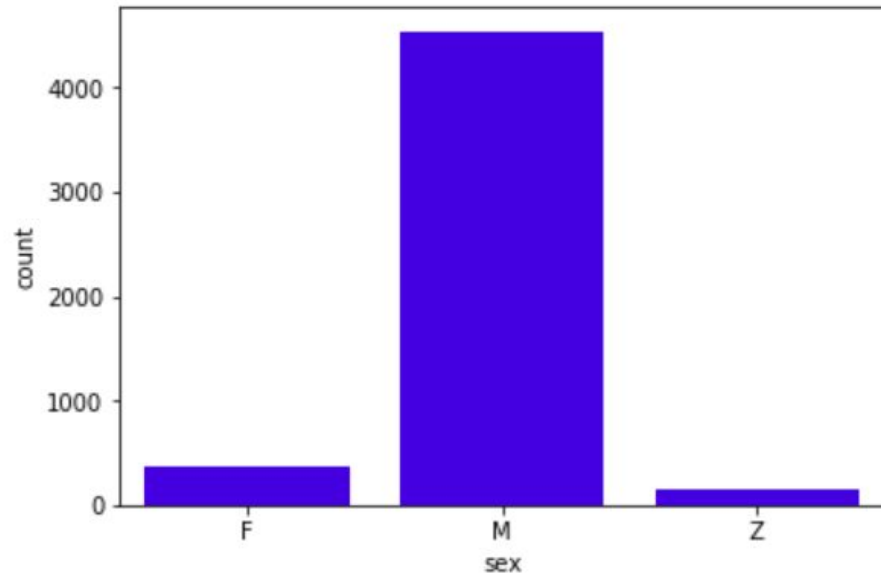
First Look

Looking at only 0.1% of data

Features Used
- Only used info known a priori
- Categorical and Y/N info
- 33 features in total

Results

Best predicted features:
Day of the week
Suspect chasing a victim
Officer in uniform

Balanced Accuracy used due to imbalanced data set

$$\text{Balanced Accuracy} = \frac{TPR + TNR}{2}$$

59% balanced accuracy score

Future Work

Ensemble more models

Use more of the data

Make a pipeline

Examine how arrest rates change over time