

Module 3 Final Project Presentation Terry v. Ohio

An investigation into the aspects and features of police activity by analyzing data from the Seattle police department

By: Rachel Beery

The background of Terry v. Ohio

Story

Terry and two other men were observed by a plain clothes policeman in what the officer believed to be "casing a job, a stick-up." The officer stopped and frisked the three men, and found weapons on two of them. Terry was convicted of carrying a concealed weapon and sentenced to three years in jail.

Question

Was the search and seizure of Terry and the other men in violation of the Fourth Amendment?

Resolution

In an 8-to-1 decision, the Court held that the search undertaken by the officer was reasonable under the Fourth Amendment and that the weapons seized could be introduced into evidence against Terry.

The Court found that the searches undertaken were limited in scope and designed to protect the officer's safety incident to the investigation.

What questions do we want to answer?

What officer and subject demographics influence policing including arrests?

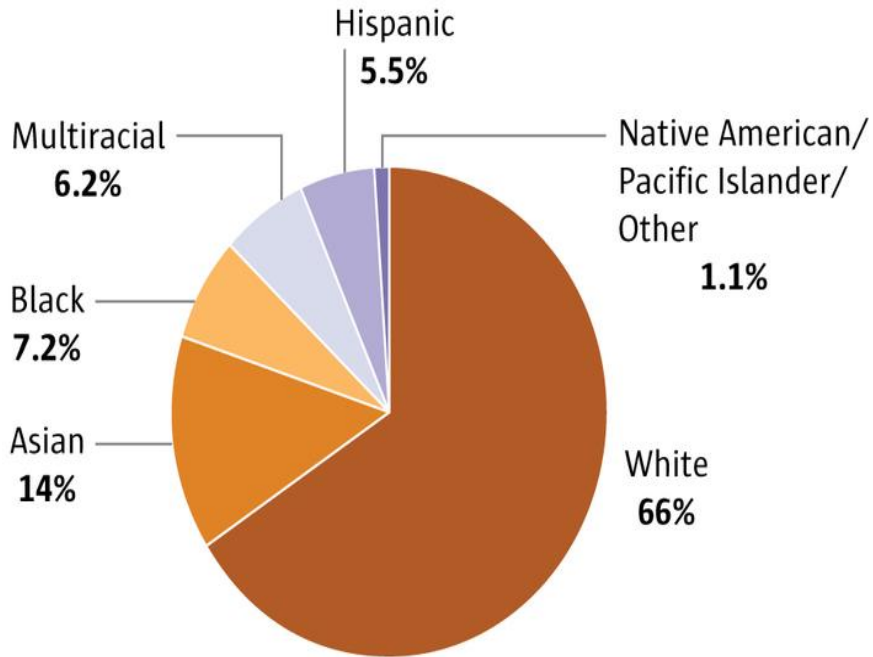
Is there a difference in demographics among the different call types?

Does gender have an influence on certain arrests/stops?

Does carrying a weapon affect subject arrested?

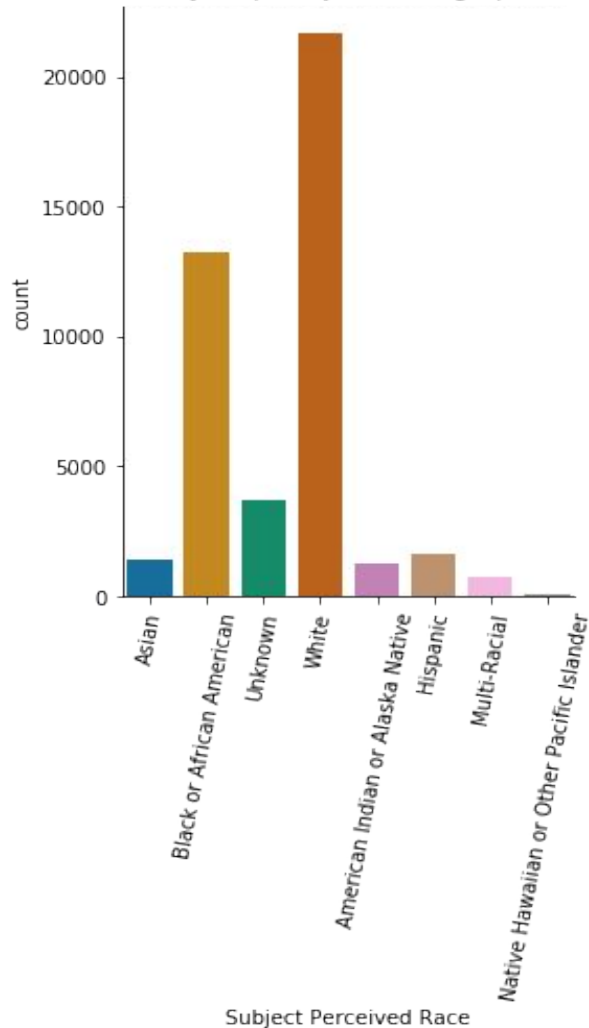
Using a machine learning model can we find what feature has the most influence on an arrest?

Seattle diversity



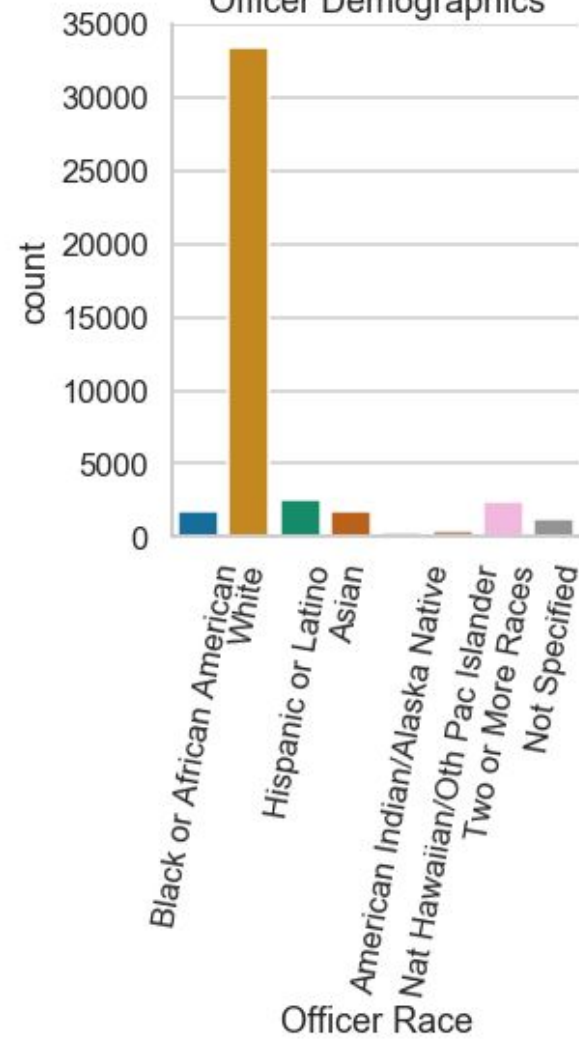
Seattle Demographics

Terry Stop Subject Demographics

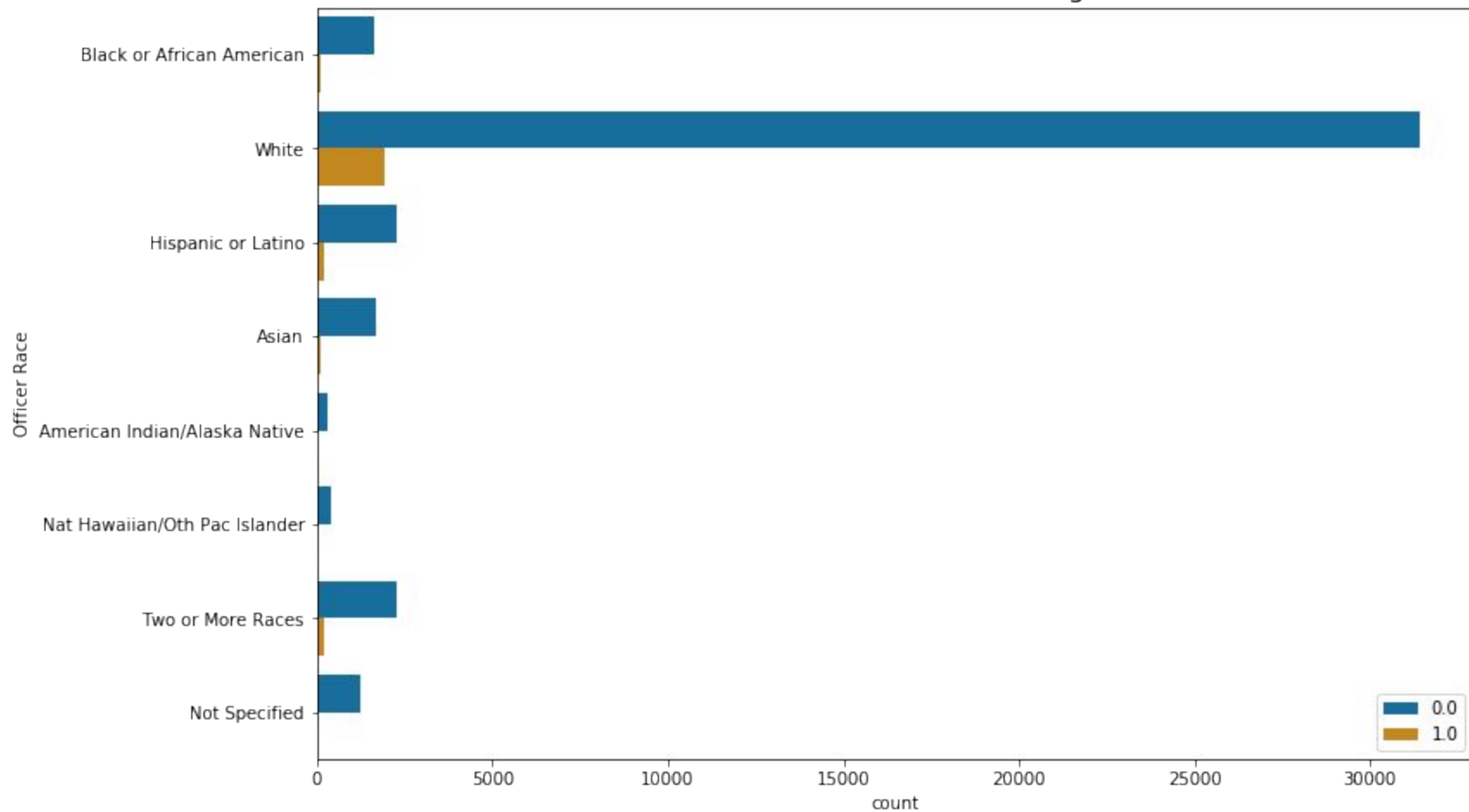


What officer and subject demographics influence policing including arrests?

Officer Demographics

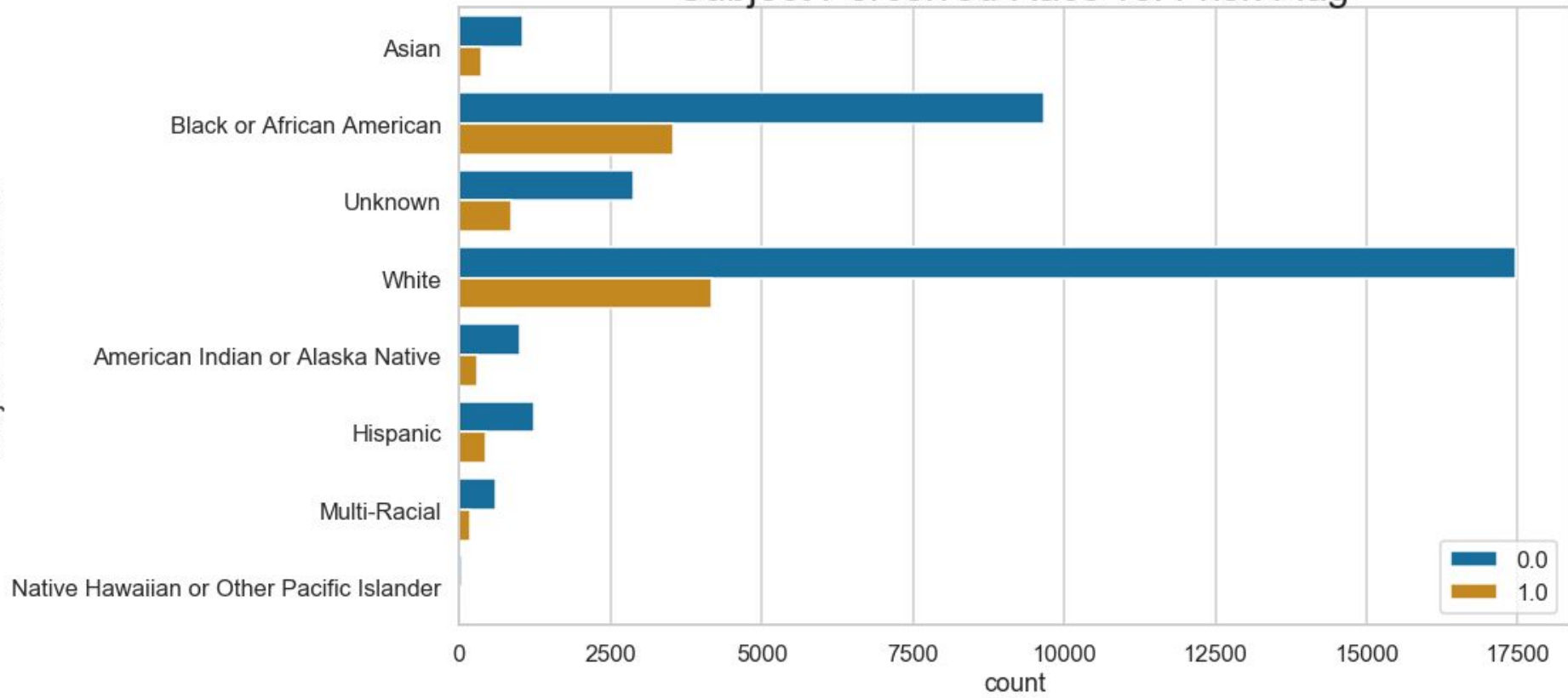


Officer Race vs. Arrest Flag



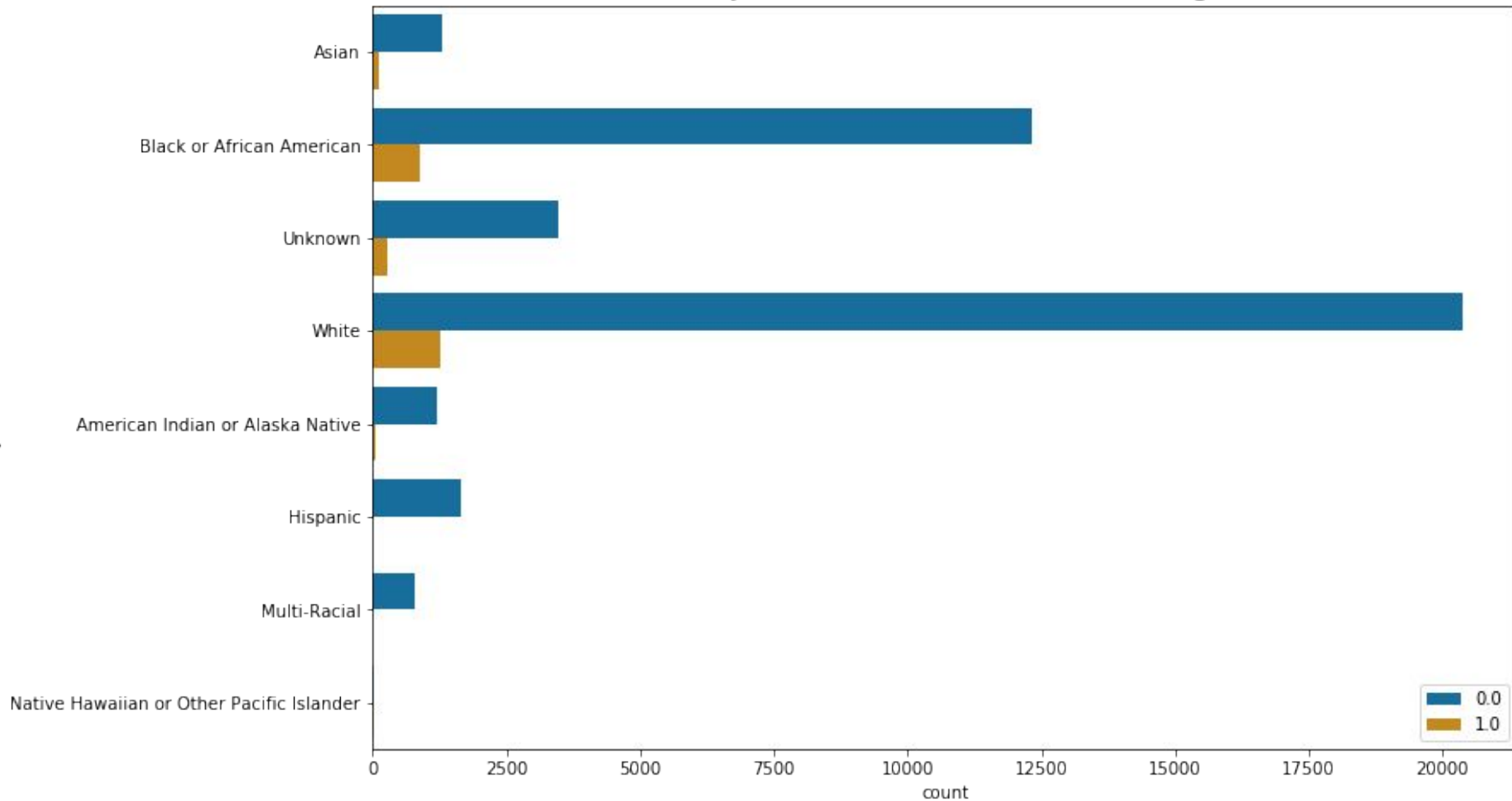
Subject Perceived Race vs. Frisk Flag

Subject Perceived Race

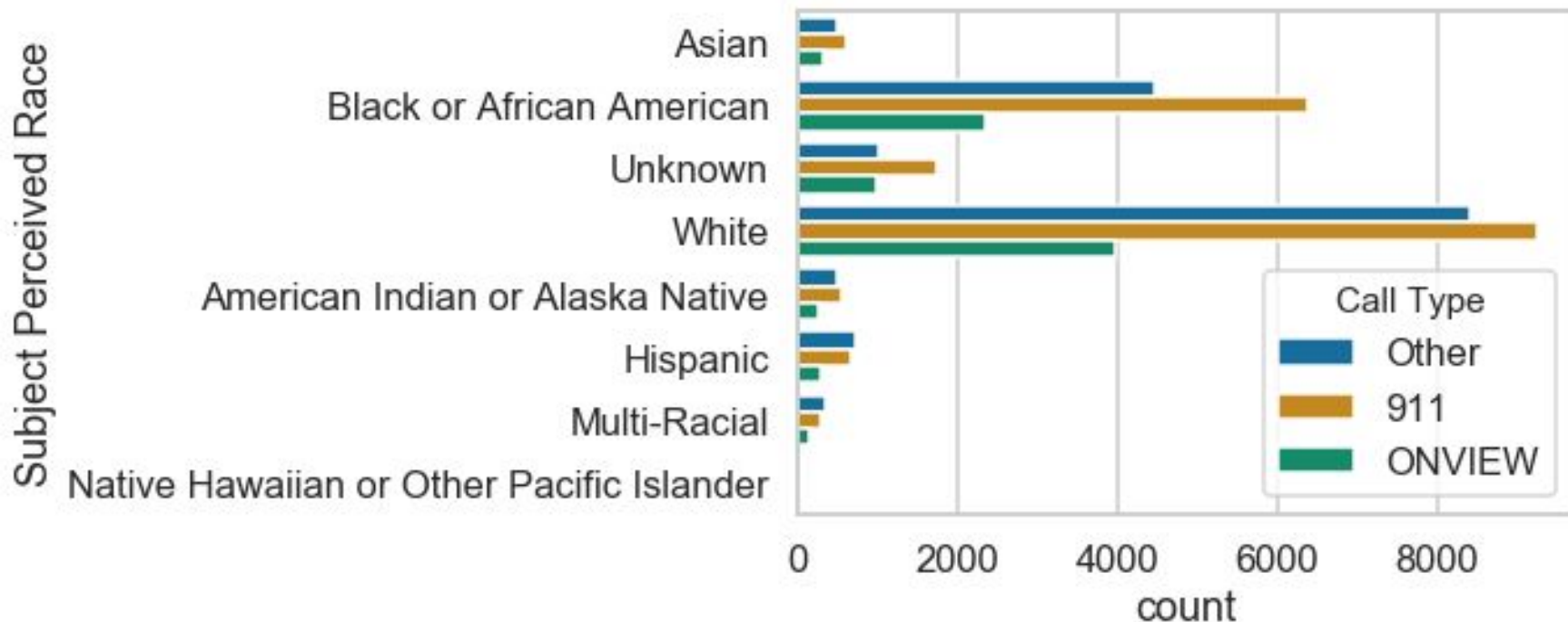


Subject Perceived Race vs. Arrest Flag

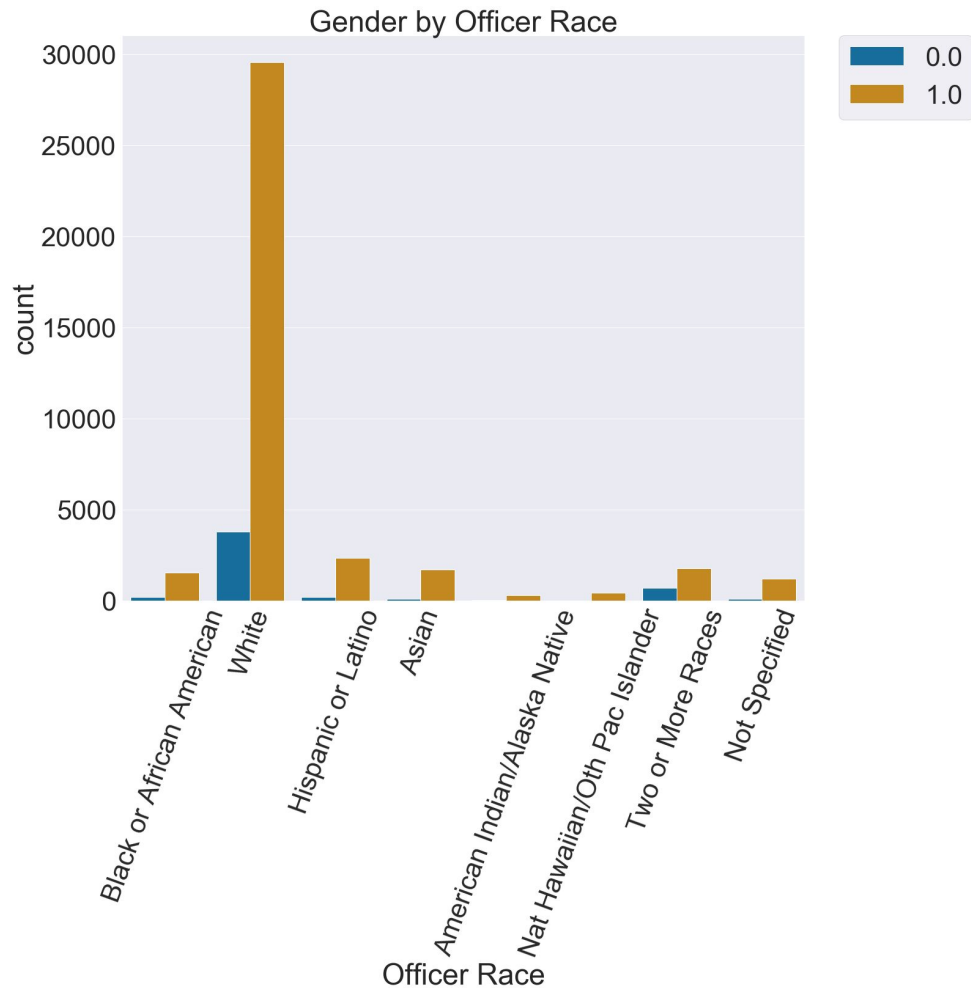
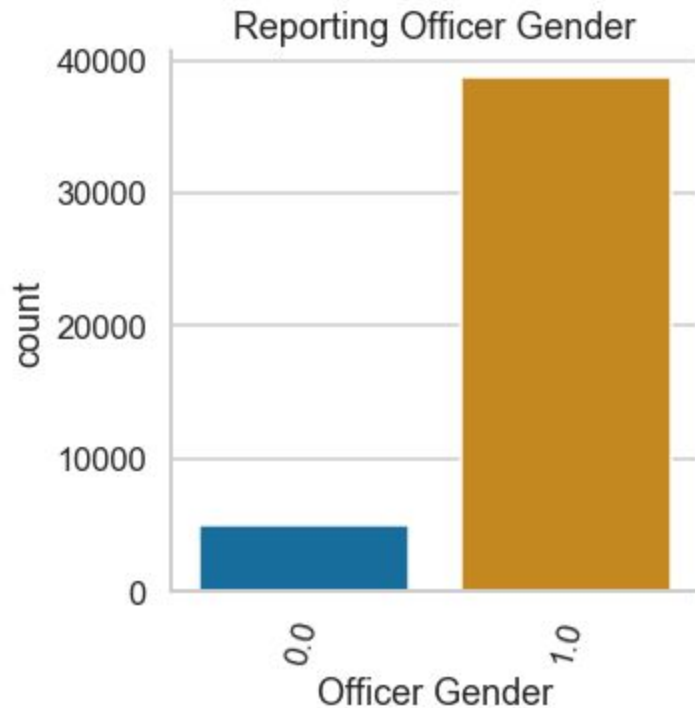
Subject Perceived Race



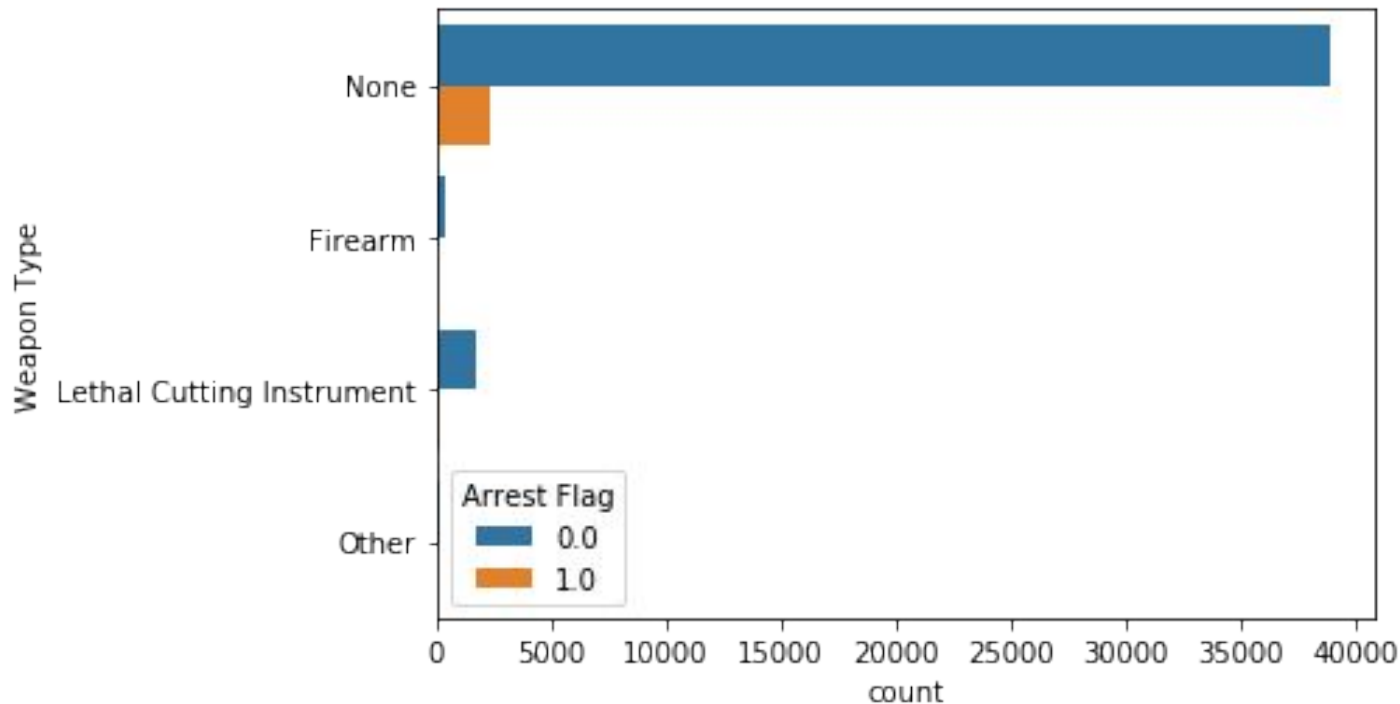
Is there a difference in demographics among the different call types?



Does gender have an influence on certain arrests/stops?

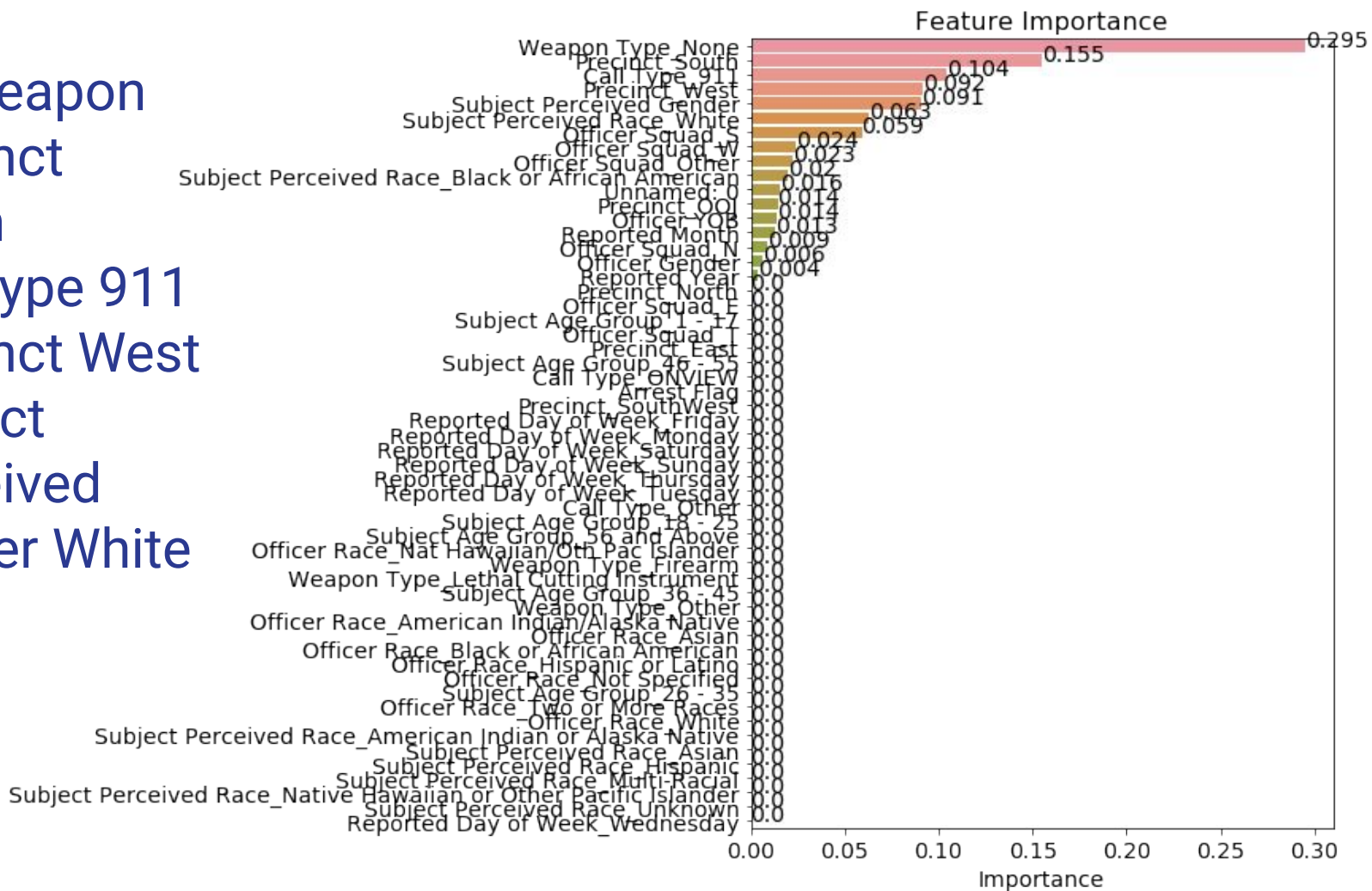


Does carrying a
weapon affect
subject arrested?



Feature Importance Results

1. No Weapon
2. Precinct South
3. Call Type 911
4. Precinct West
5. Subject Perceived Gender White



Recommendations

- From researching the Seattle police department's dataset I recommend the following:
 - Recruitment of a more diverse officer workforce in Seattle
 - There is a lack of female officers
 - There is a lack of officers of other races other than white
 - Better record keeping
 - There was a consistent 12,776 rows of missing values or nulls
 - Further training of the police officers to understand when there is suspicious activity
 - There is an increased number of black subjects stopped proportionally to every other race group



Future Work

- If given more time and resources I would suggest the following:
 - Research into why certain precincts have more frisks and arrests
 - Precinct South and West
 - Try to obtain more information for our dataset or process of collecting data
 - Compare the practices of other police departments in order to find a better system of collecting data
 - Compare what effects a more diverse police force would have on crime and police activity





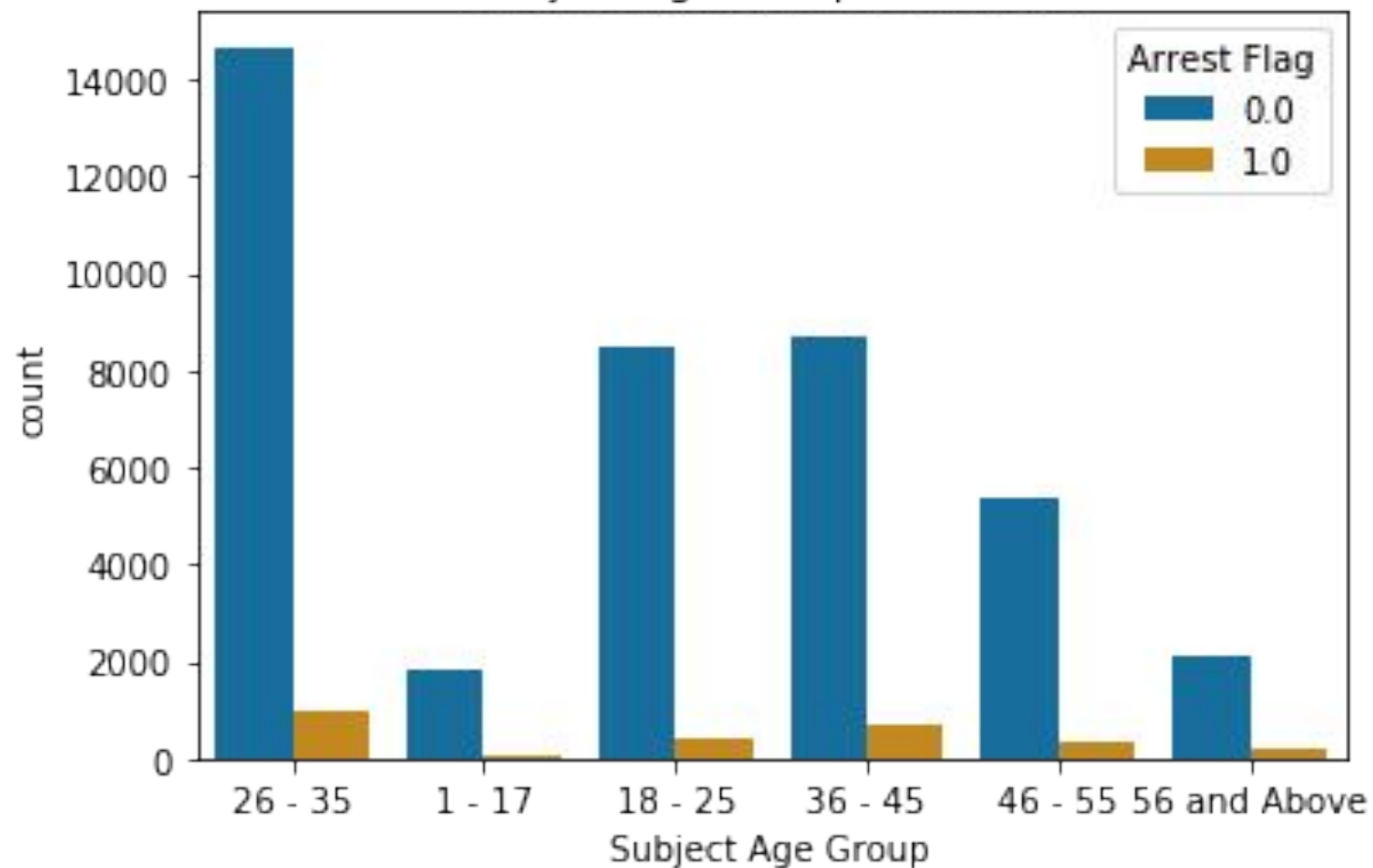
Thank you!

Data provided by Seattle Police Department and Flatiron School at the following website:

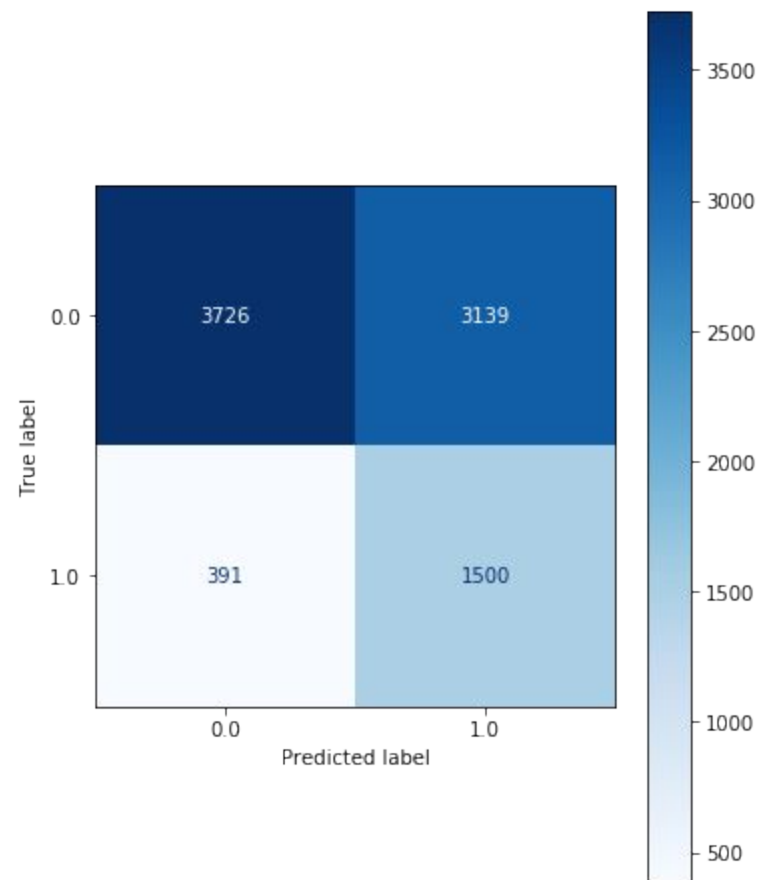
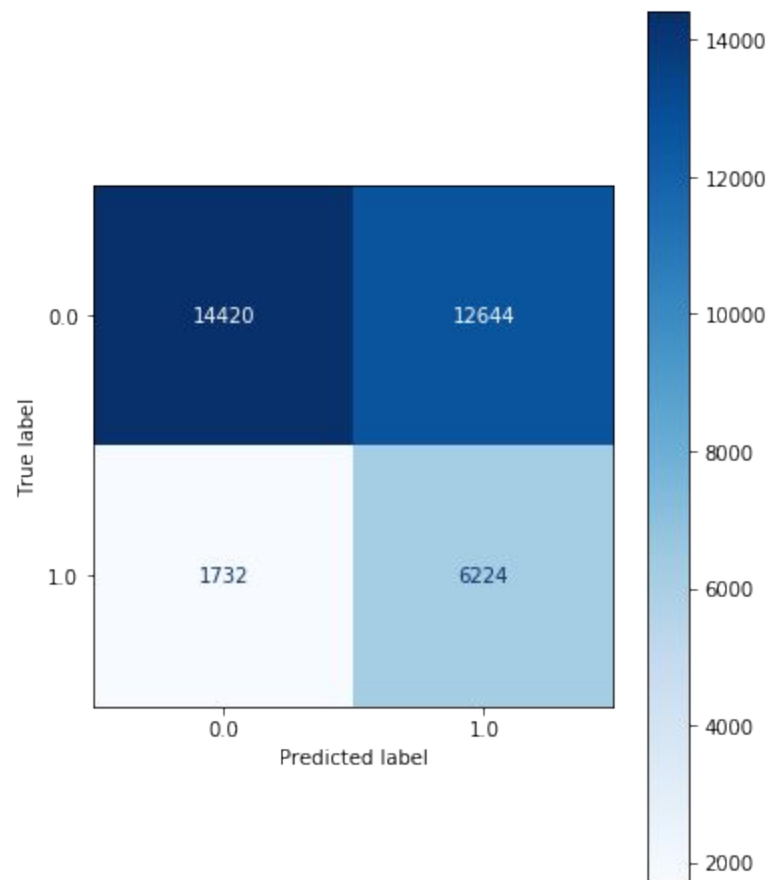
<https://catalog.data.gov/dataset/terry-stops>

Appendix

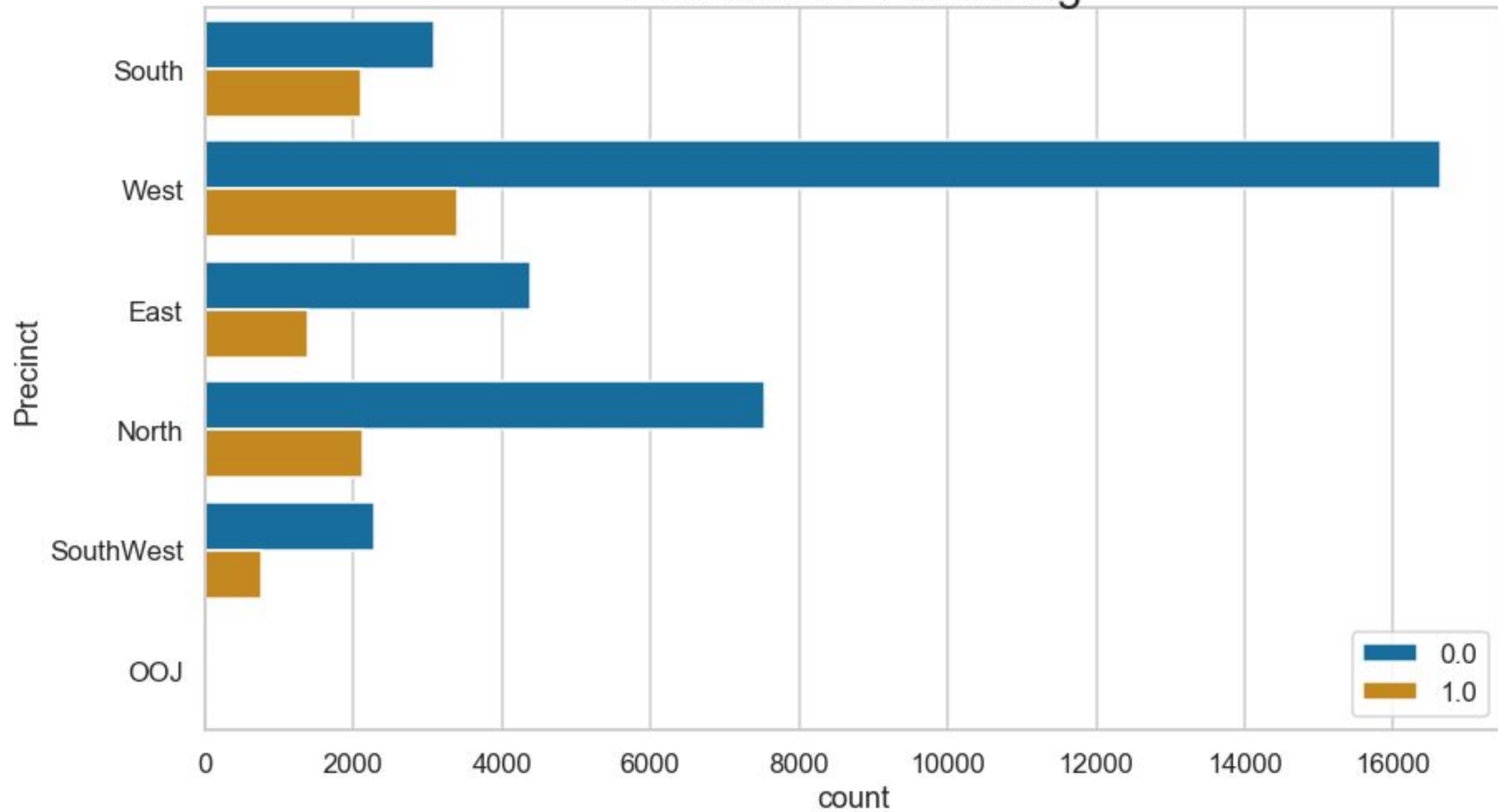
Subject Age Group vs. Arrest



Train & Test Confusion Matrices



Precinct vs. Frisk Flag



Precinct vs. Arrest Flag

