

# Variables Affecting Terry Stops

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BY CHARLOTTE BASCH

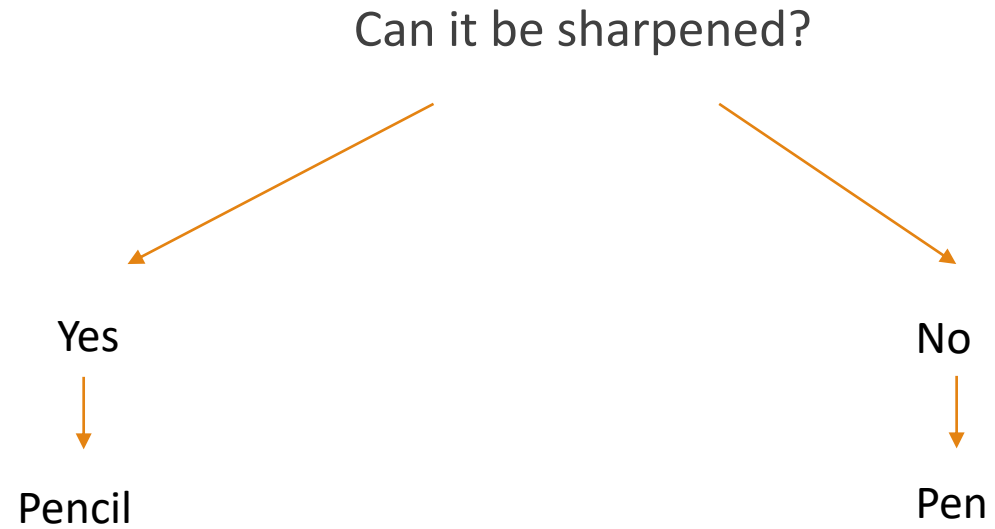
# Data

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- Seattle police provide data on Terry Stops
- Variables include:
  - Age, race, and gender of both the officer and subject of the stop
  - Time of the stop
  - Initial call type and method
  - Officer precinct (but not necessarily where the stop occurred)
  - Whether a frisk occurred
- 2015-2020
- Use data to see if these stops are being made in an objective and unbiased manner

# Decision Tree

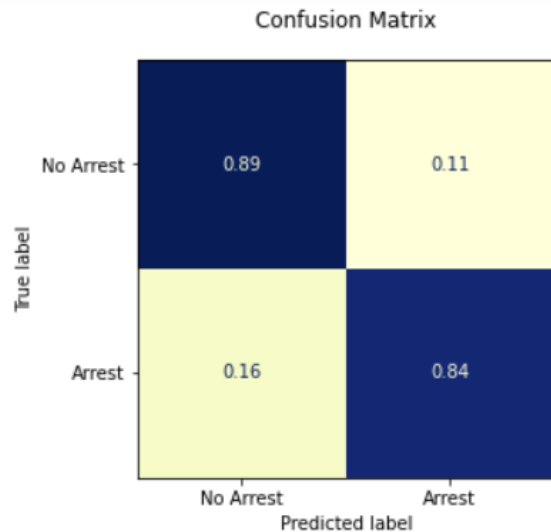
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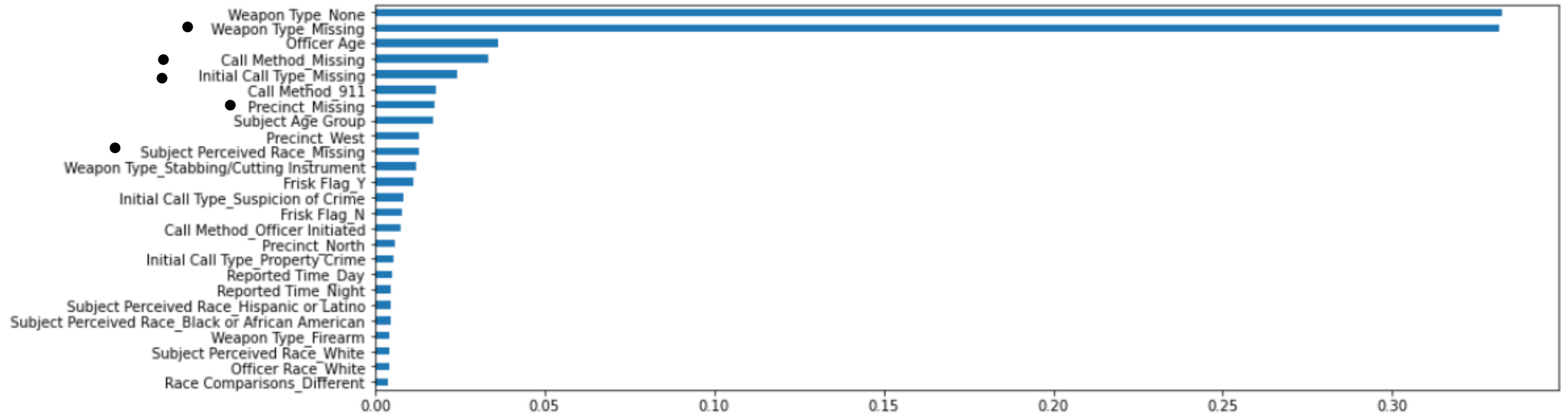
# Random Forest

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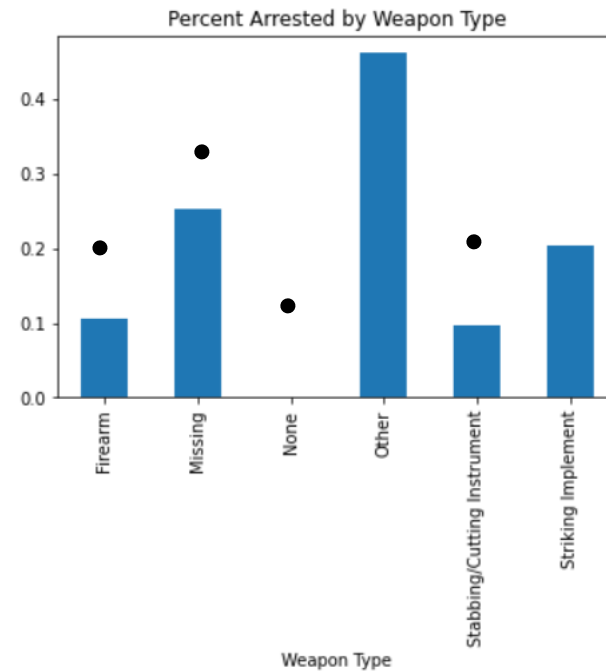
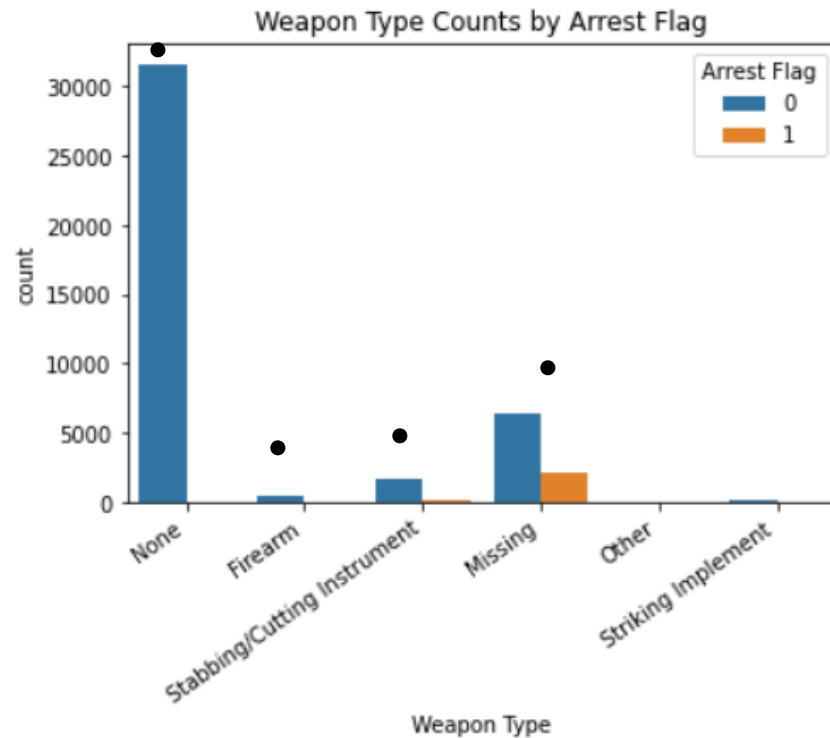
- Decision trees can keep going until it has used every element so it can be hard to apply to new data
- Much like working on a project together, multiple decision trees working together can make a model more accurate
- In this case we created a decision tree that was 88% accurate.



# Feature Importance

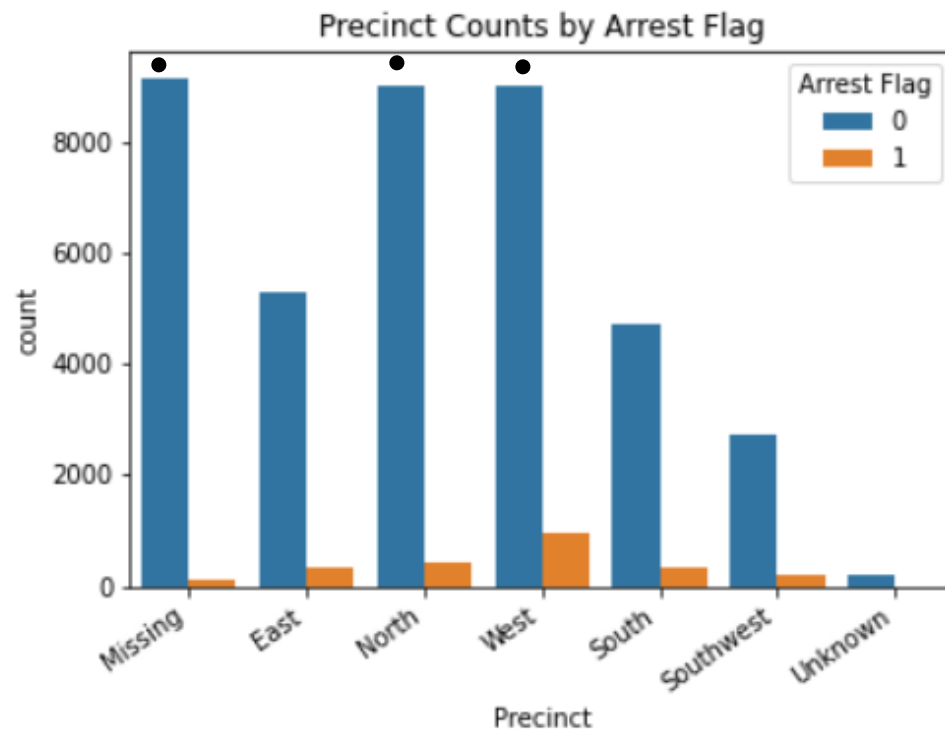


# Weapon Type

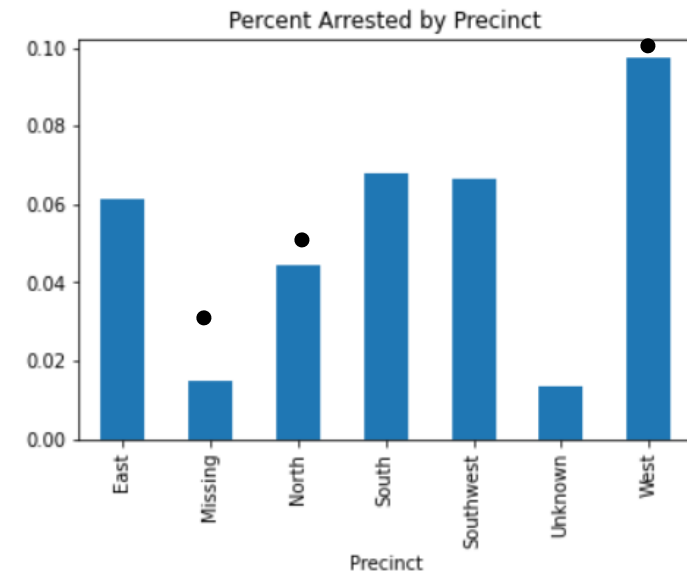


- Having no weapon was associated with few arrests as would be expected
- Have a firearm or stabbing weapon were also associated with lower arrest rates
- Missing data plays an important role

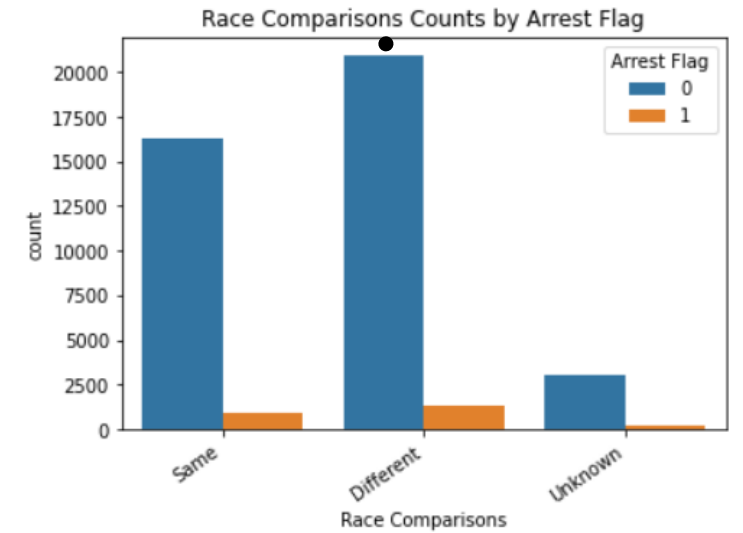
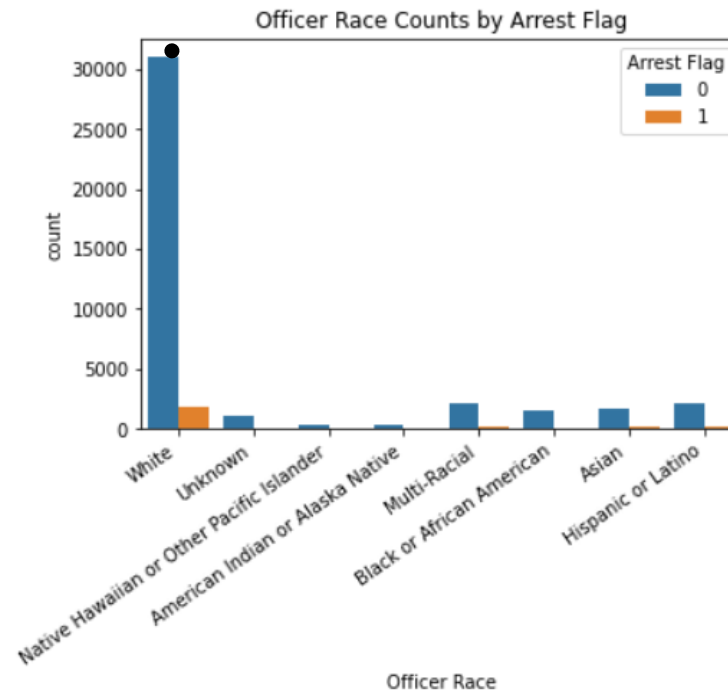
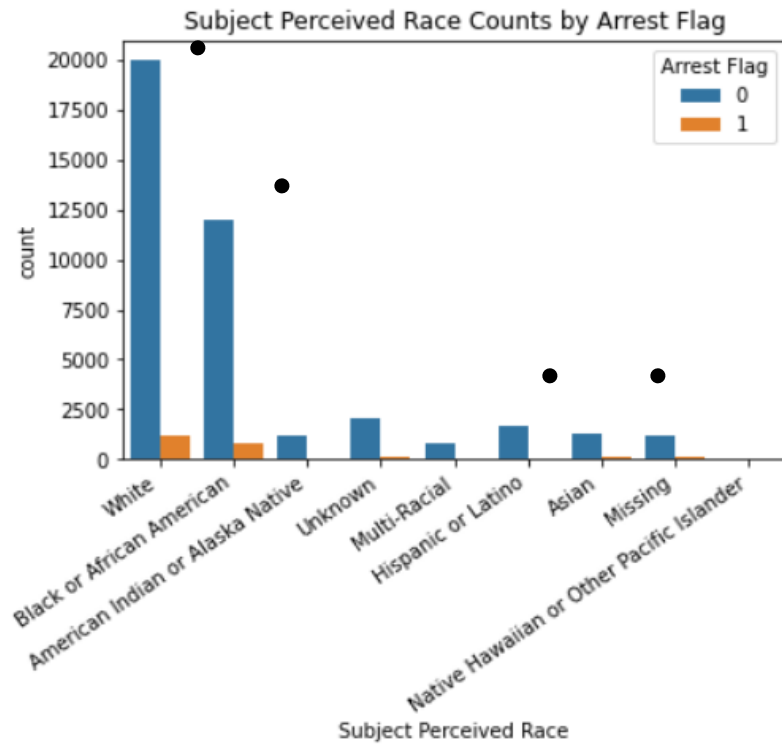
# Precinct



- Once again missing data is important
- West Precinct had a higher proportion of arrests while the North Precinct had lower rates
  - They had the highest rates of different and same race stops respectively
- However they all have high rates of stops

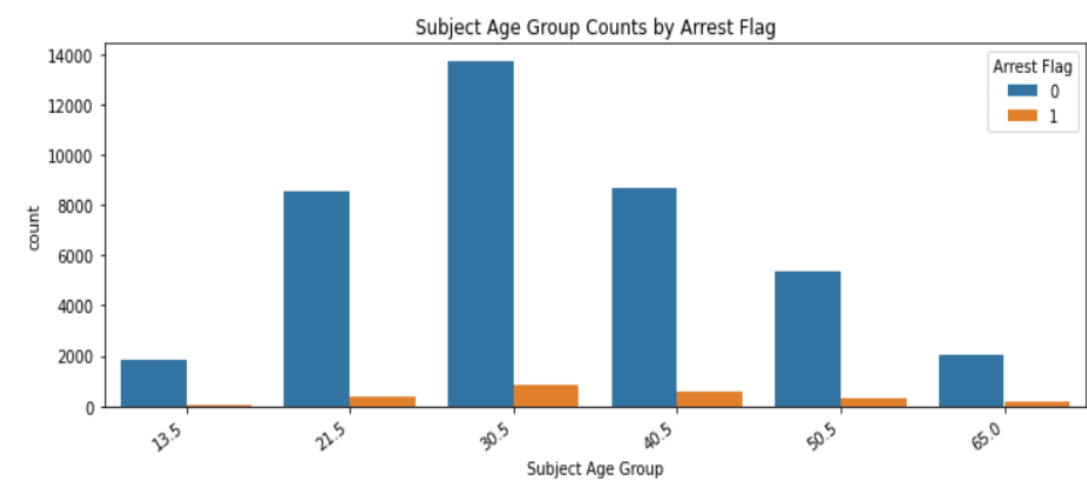
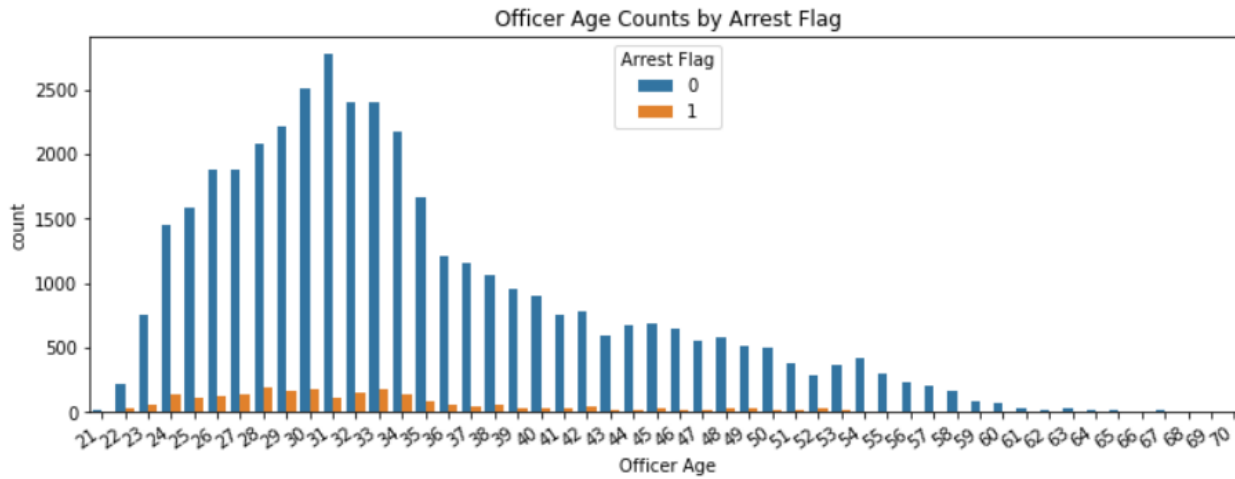


# Race





# Age



- More stops and arrests occurred for younger officers and subjects
- May be a function of the job responsibilities of younger officers

# Recommendations

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- Measures should be taken to address racial overrepresentation in stops and arrests
- Precincts should be evaluated on their same/different race stops
- The reasons for missing data should be investigated further

# Future Work

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- Investigate why so much data is missing
- Look into why different precincts have different stop rates when precinct and stop location are not necessarily related
- Look into officer age
- Collect data about stop location

# Summary

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- Data collection should become more stringent and the reasons for missing data should be investigated
- Officers should be more race conscious concerning their stops
- The discrepancies in precinct and officer/subject age should be studied further

Thank you!