

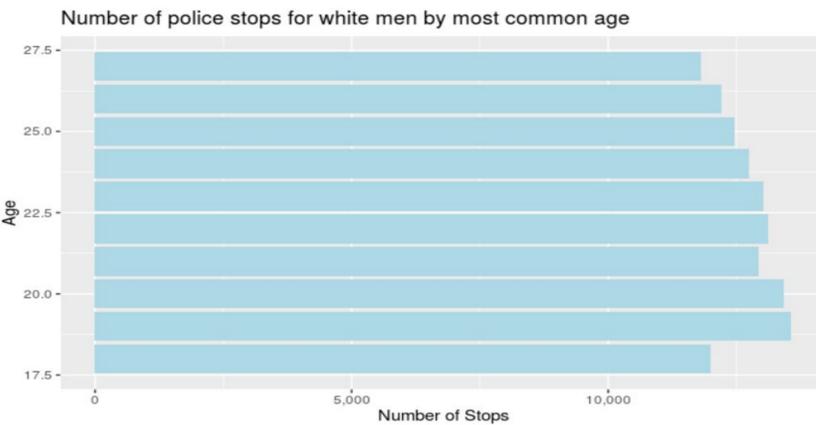
Abstract

The purpose of this analysis was to uncover multiple correlations occurring in Montana police stops occurring between the years 2009-2016. Data on the Montana police stops was obtained from The Stanford Policing Project. The program RStudio was utilized in order to calculate and reveal information and correlations surrounding the following:

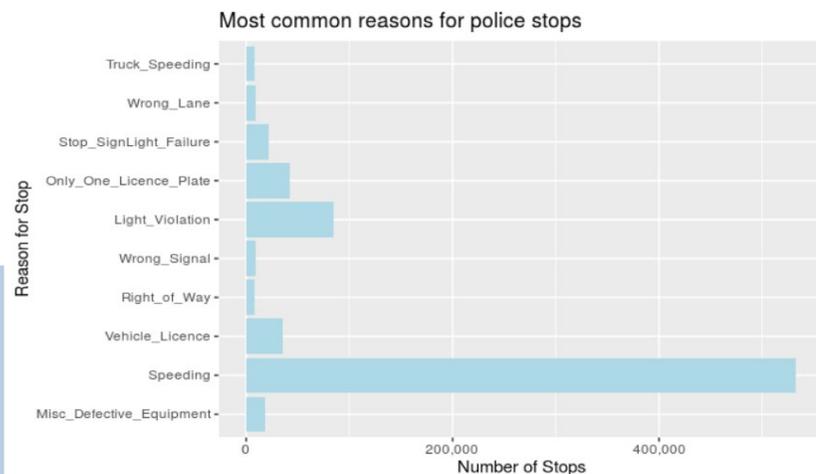
- Most common race/gender/age group to be stopped.
- Most common reasons for police stops.
- Correlations between vehicle make and police stops.
- Correlations between police stops and racial features.
- Geographical information and correlations for police stops across Montana roads, particularly for negligent homicide and DUIs.

Most common race/gender/age/reason group to be stopped.

When examining the dataset for the ten most common groups by race/gender/age that were stopped by police, that group showed to be white men between the ages of 18-27. Those at the age of 19 had the most stops at 13,557. Additionally, the most common reasons for these stops in this group of variables was due firstly to speeding, then light violations, having only one license plate, improper vehicle license, miscellaneous defective equipment, and lastly stop light/sign failure.

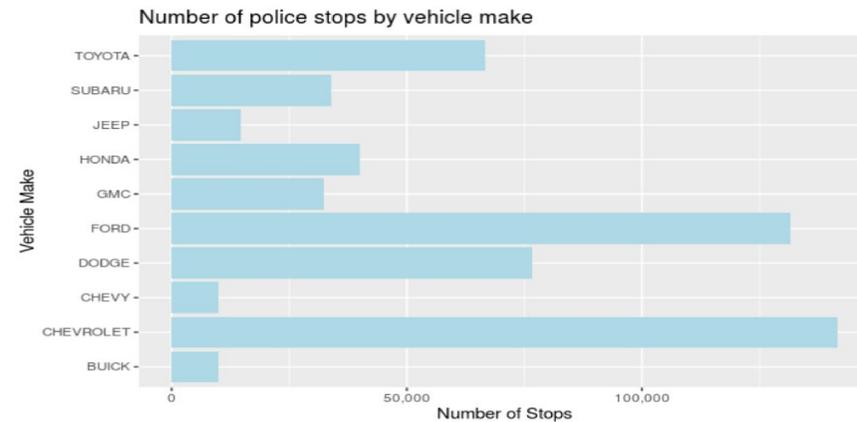


Overall, across all groups, the three most common reasons to be stopped was due to speeding (532,803), light violations (84,518), and having only one license plate (42,702). The graph below shows the additional top ten reasons.

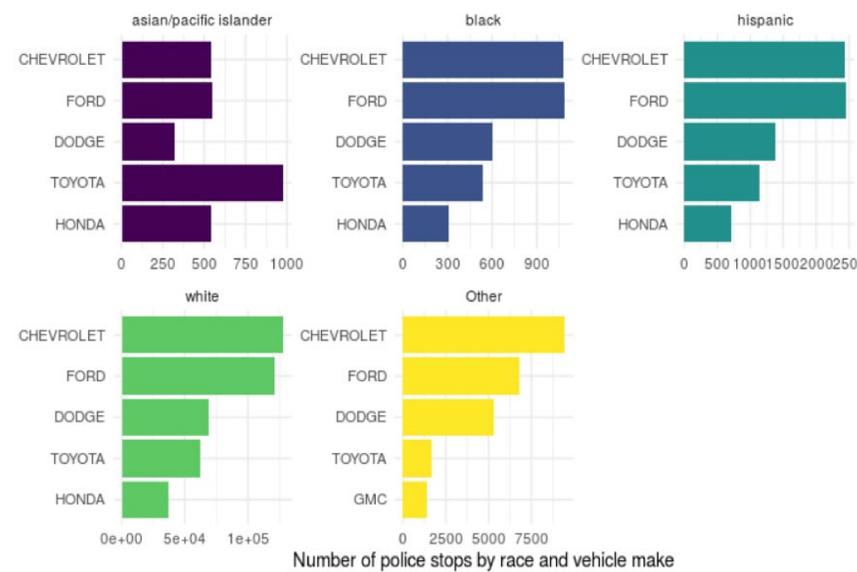


Correlations between vehicle make and police stops.

When examining the correlations between the vehicle make and police stops, the three most common vehicles to be stopped were Chevrolets (151,517), Fords (131,494), and Dodges (76,722). The graph below shows the additional top ten.

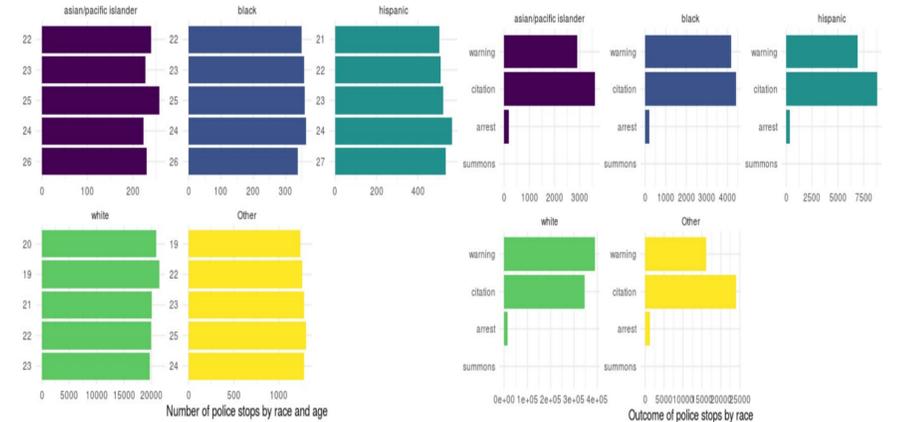


Correlations between the most common vehicle make to be stopped and racial features were also observed. The Black, Hispanic, White and other/misc. groups were similar. Although, the other/misc. group's fifth most common vehicle was GMC instead of Honda. However, it was the Asian/Pacific Islander group that stood out from the others. Unlike the others, Chevrolet and Fords were much less common. Instead, the most common vehicle make was the Toyota.



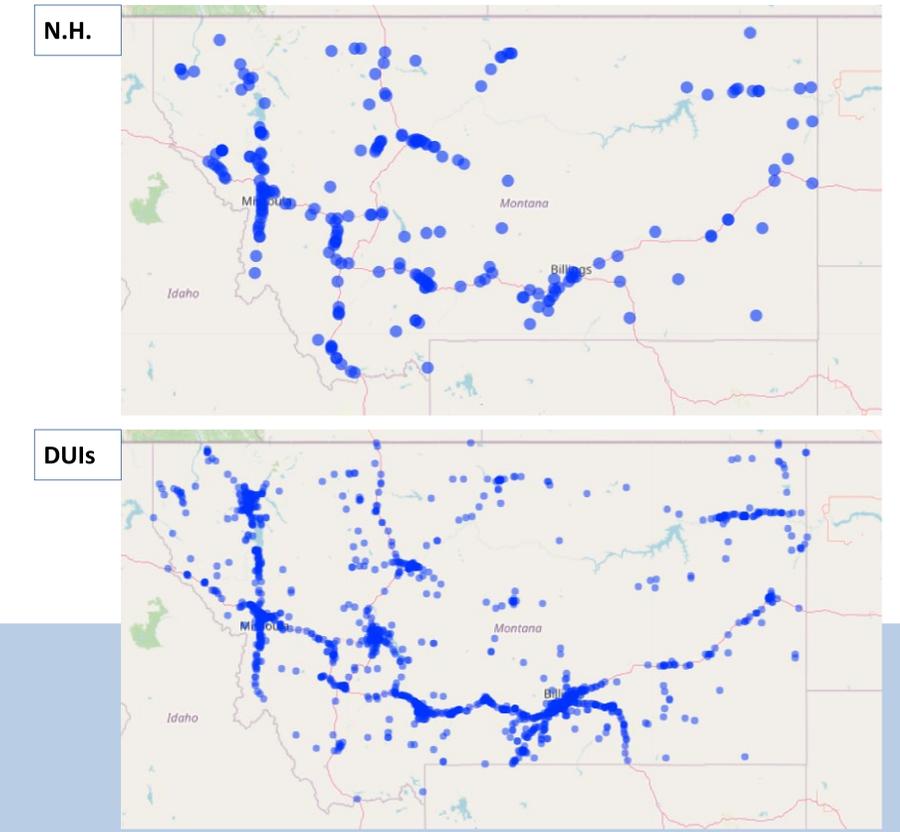
Correlations between police stops and racial features.

The most common racial groups to be stopped in Montana were White (752,035), other/misc. (41,417), Hispanic (16,055), Black (8,805), and Asian/Pacific Islander (6,700). The below graphs shows the most common ages in each racial group to be stopped and the varying outcomes of the stop.



Geographical Information

Looking at Montana counties, the most stops occurred in Flathead County (73,240), Gallatin County (67,425), Yellowstone County (60,109), Cascade County (57,881), then Missoula County (55,709). Looking specifically at stops relating to negligent homicide (232 cases) and DUIs (1,889 cases), we can also see where they commonly occurred across the map. Aligning with the previously stated information, the stops cluster around the larger cities/towns and counties.



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References

1. Dataset retrieved from <https://openpolicing.stanford.edu/>