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**CDS 492**

**Capstone Project Visualizations**

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The visualizations above represent the initial summary statistics for both gender and race for both police officers and subjects. They show the distribution of race and gender and how many subject and officers are of a specific race or gender. These visualizations represent the initial data as it has not yet been manipulated so these visualizations cannot yet be used to determine whether there is racial or gender inequality.

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These plots are similar to those above where it plots the race of each officer and subjects but the gender column is faceted over the data to provide the race summary statistics along with gender. There were only reports of White, Black, and Asian females in this data set whereas there are instances of almost every race for males.

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This plot is created using a table which compiles the total number of fatal incidents along with the officer race summary statistics. By analyzing the visualization above, most fatal incidents occur when the officer was within policy. This can be identified as an anomaly as typically, officers that are operating within policy would be assumed to be operating in a safe environment but according to the graphic, most fata interactions occur when officers are within policy. It can also be seen that when out of policy, there were no fatal incidents and many fatal incidents also happened when the subject was missing. When the stop was justified, there are more non-fatal encounters compared to fatal encounters. Although race and gender have not been factored in, the justification of attacks will be useful to compare with other visualizations for predictive analysis.

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As seen in the figure above, there are significantly more white officers reported in the data set than any other race. When looking at white officers, there is only slightly more encounters with non-fatal injuries than fatal injuries. However, when looking at officers of Hispanic or African American descent, there is significantly more fatal encounters than non-fatal. This can be used to show that for African Americans and Hispanic officers, they are more likely to be fatally injured which can used to prove racial injustice which is an anomaly in the data as there are zero reported cases where officers were left not fatally injured.

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When looking at the fatality of police encounters with respect to gender, male officers are more often fatally injured whereas female officers are more often not. This can be used to show some slight gender inequality but seeing as there is very little disparity, many of these incidents can be concluded as not gender equality as well since the number of fatal and non-fatal encounters is very close for both genders.

Dataset Used:

City of Seattle. (2020, August 13). SPD officer involved shooting (OIS) data. City of Seattle Open Data portal. <https://data.seattle.gov/Public-Safety/SPD-Officer-Involved-Shooting-OIS-Data/mg5r-efcm/explore/query/SELECT%0A%20%20%60frb%60%2C%0A%20%20%60go%60%2C%0A%20%20%60date_time%60%2C%0A%20%20%60blurred_address%60%2C%0A%20%20%60longitude%60%2C%0A%20%20%60latitude%60%2C%0A%20%20%60city%60%2C%0A%20%20%60state%60%2C%0A%20%20%60rank%60%2C%0A%20%20%60officer_gender%60%2C%0A%20%20%60officer_race%60%2C%0A%20%20%60years_of_spd_service%60%2C%0A%20%20%60officer_injured%60%2C%0A%20%20%60number_of_rounds%60%2C%0A%20%20%60subject_gender%60%2C%0A%20%20%60subject_race%60%2C%0A%20%20%60subject_dob%60%2C%0A%20%20%60subject_age%60%2C%0A%20%20%60subject_weapon%60%2C%0A%20%20%60type_of_weapon%60%2C%0A%20%20%60fatal%60%2C%0A%20%20%60on_duty%60%2C%0A%20%20%60justified_policy%60%2C%0A%20%20%60officer_disciplined%60%2C%0A%20%20%60summary%60/page/filter>