

The Regal Swans – Checkpoint 3

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In this checkpoint, the goal of our team was to take a look at the CPDB data interactively.

For the first part, we assessed whether more experienced officers are more likely to use a certain type of weapon than others. For this part, we created two plots, one for comparing the percentage of use of a certain type of weapon versus the total amount of cases for each age group (where each ten years separate two age groups), with a user-changeable weapon type to query for each weapon type or unarmed; the other plot allows the user to query the distribution of weapon uses for each age group.

The results for this part indicate that while the majority of reported cases from TRR do not involve weapon uses, the percentage of use of tasers are high among the age groups ¹ 30s, 60s and 70s, where the highest is 70s on 9.1%, and the lowest is 80s on 5.6%. The age group 80s, however, is the highest on the use of firearms – 2.4% of cases reported in this age group involve firearms, whereas on average only 1.4% cases of other age groups involve firearms.

For the second part, we evaluated whether the career of an officer influenced the amount of violations. In the plot, we compared the minimum, maximum and average of violations for each category for each distinct employed year, with a slide bar to change the employed year interactively.

Sliding over all available number of employed years, we observed that for most categories and employed years, the average is usually below 5 violations per category while the maximum can go well beyond 50 (when employed year = 32). In addition, there is a general trend across all officers where the highest maximum of violations falls within the (60, 80) interval.

We have two conclusions from this checkpoint. First, we found out that experience does not affect the probability that an officer decides to use a weapon, but as experience is accrued, an officer is more likely to choose firearm over taser. Secondly, for some categories there are always a high amount of violations regardless of experience, and further, in most cases the maximum number of violations is much higher than the average in each category, signifying that the “outliers” are present across different years of experience – in other words, there are a few “bad apples” who commit most violations compared to the remaining officers.

¹We define an age group as the multiple of tens, such that an officer is at or older than this age, but younger than the next age group. For example, the age group 30s include all officers at or older than 30 years old but not yet 40 years old.