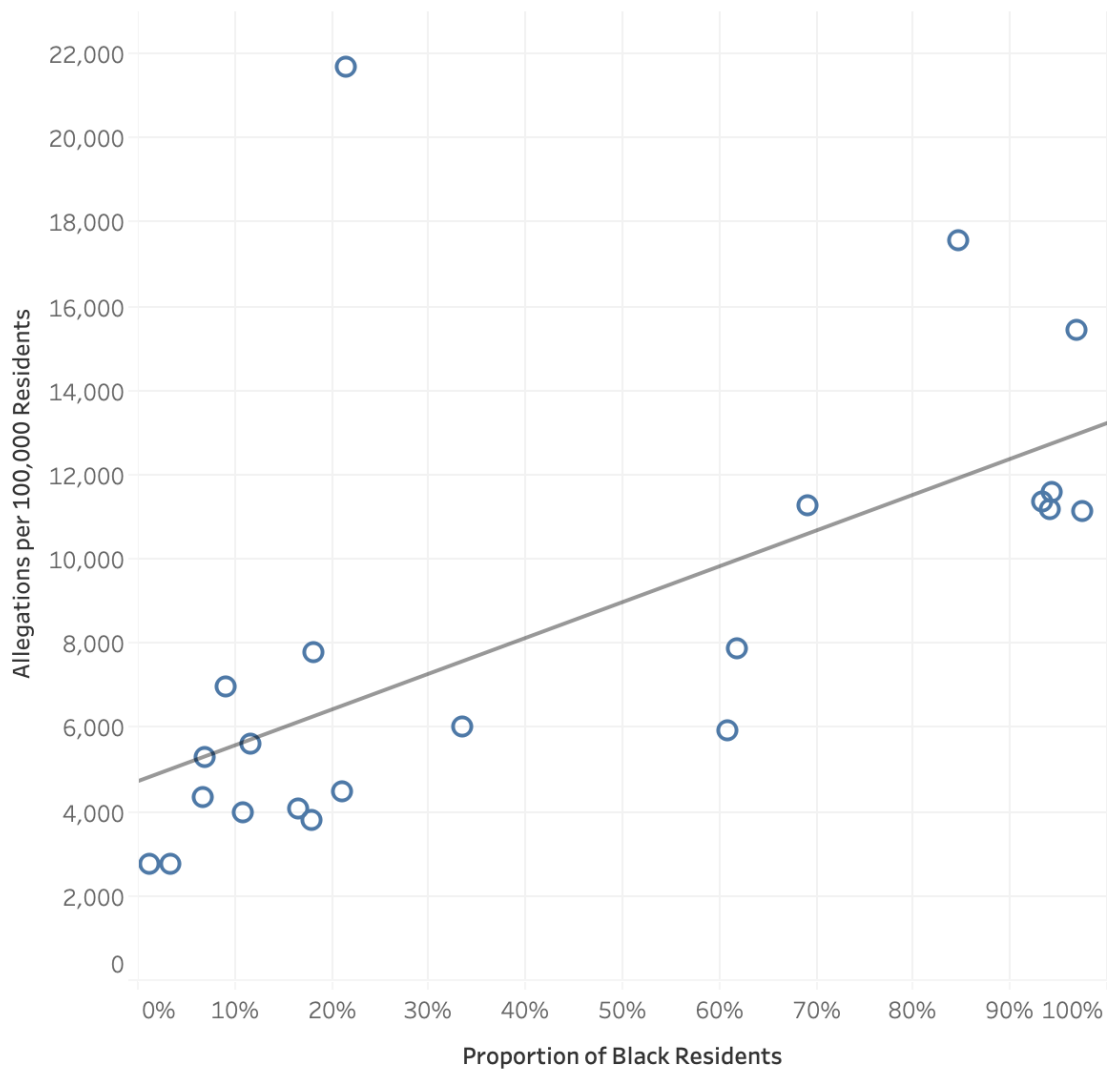Nathan Heidacker, Jackson Oh

CS396

21 October 2021

Checkpoint 2 Findings

Visualization 1: Scatter Plot of the relationship between proportion of black residents in a district

and the number of complaints per capita

While this question was a relatively obvious path of inquiry for the topic of our investigation, we did not anticipate the relationship to be so blatant or pronounced. That there exists a disparity between the number of complaints per person in black vs white neighborhoods is not necessarily surprising, but the magnitude of that disparity absolutely is. The result of this visualization provides foundational evidence to support the conclusion that racial demographics influence the way an area is policed, and more specifically, the propensity for an officer to commit misconduct in black and white neighborhoods. This visualization not only legitimizes the investigation, but opens the door to new, deeper inquiries about the nature of police interactions with minorities. Some examples may include investigating disparities in what kinds of allegations are submitted in black vs white neighborhoods (are complaints in black neighborhoods more likely to regard violence?), how the rates of complaint submission by minorities relates to the proportion of minorities in a locality, or how the racial demographics of a locality affect the rate at which complaints are sustained.

Visualization 2: Grouped histogram showing breakdown of proportion of complaints submitted by black vs non-black residents for each type of complaint
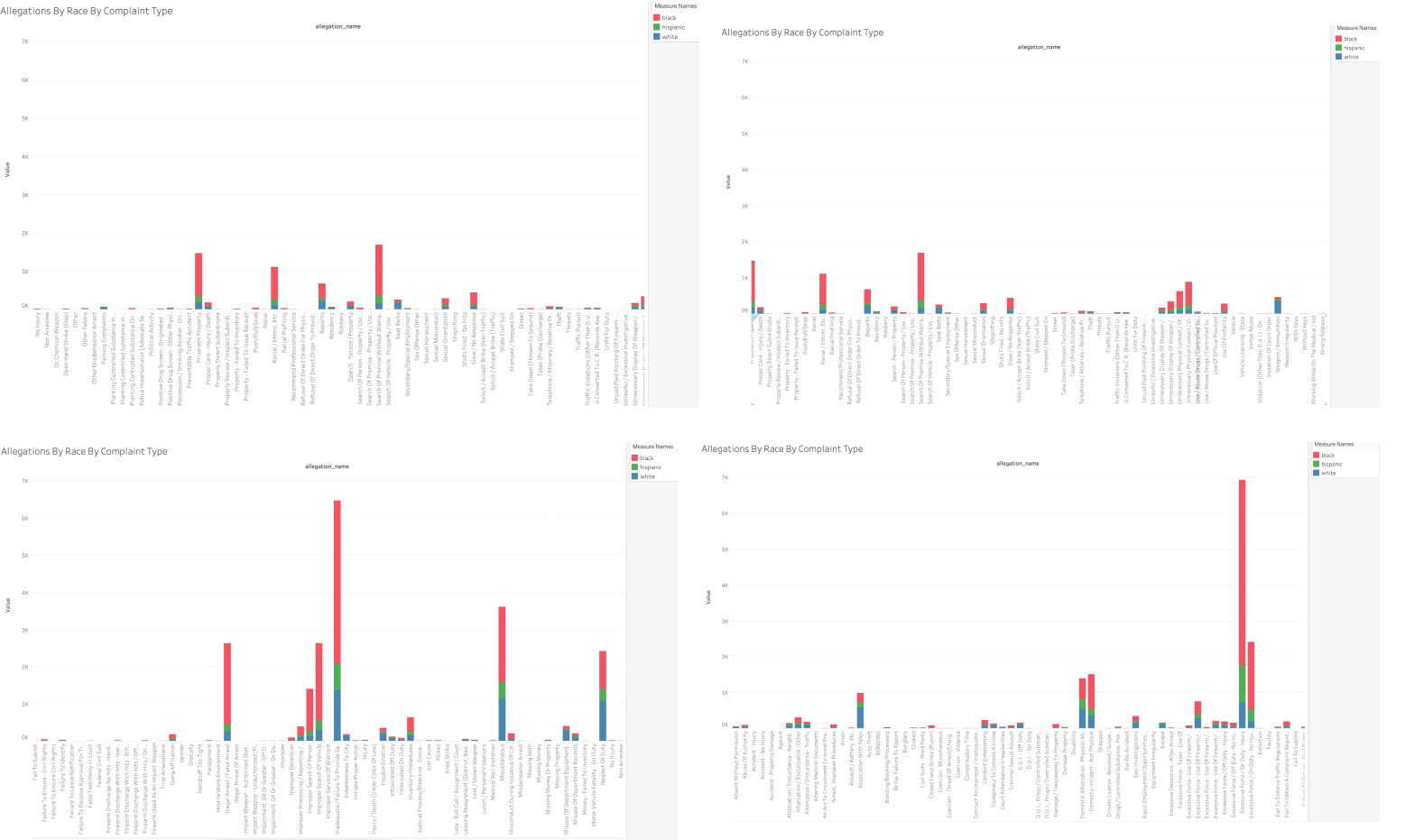
These histograms clearly demonstrate that black residents make up the vast majority of complaint types in nearly all categories. Interestingly, the distribution of complaints is not always the same. There are some allegations like improper search of a vehicle which have an extremely disproportionate number of allegations from black residents. This is in comparison to the already disproportionate amount of complaints we see across all allegations. In contrast, association with a felon has the most complaints from white residents. By breaking down the allegations by their type, we can get a more accurate representation of how black residents are being targeted by police officers. The previous example demonstrates that black residents

seem much more likely to be the targets of vehicle searches than non-black residents. Similarly,

black residents are almost 10 times more likely to be the victims of a false arrest than white or

hispanic residents. The breakdown of allegation type gives CPD a clearer view of the ways

their officers are targeting black residents, instead of the typical overarching, non-specific data

of just allegations as a whole.

For myself, using tableau was very helpful. The data visualizations were very intuitive

and I had to look up very little to get a working graph.   For me the only challenge was figuring

out how to properly manipulate the measure names and measure values to get the visualization

I needed. Overall I had a very positive experience with Tableau.