

Black Lives Matter Data Analysis

As a conservative with centrist view points, I hear pieces of information from both sides constantly - and honestly I don't know what to believe anymore since it's as clear cut as one might think. As a student of data science I am in a unique position to find out the truth for myself, and that's exactly what I did. The questions I wanted to answer is:

- How many black people were really killed since 2015 and whats the average
- Was there justifiable cause to kill the person
- Are black people overrepresented in police shootings
- Is the most black people killed in Democratic states

Data Sources:

Washington Post: People Shot By Police (<https://github.com/washingtonpost/data-police-shootings>)

Violent Crime Victimization, Bureau of justice (<https://www.bjs.gov/content/pub/pdf/cv18.pdf> - Table 12) [Only used in Q3 and its stated when it's used]

US Census Data 2019 (<https://www.census.gov/quickfacts/fact/table/US/PST045219>)

How many black people were really killed since 2015 and whats the average

Total Killed By Police: 5399

Total Black People Killed By Police: 1292

Average Killed by year (5.5 years thus far): 235 rounded

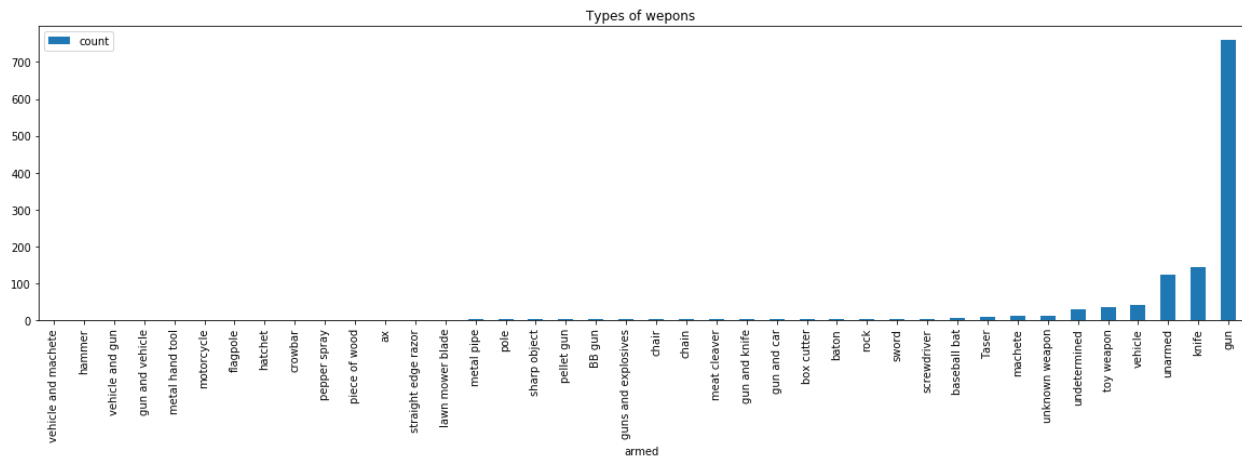
Answer

This was a fairly easy question to answer. Roughly 235 per year. With a total population of 328.2 million (2019) that is: 0.000098% of the total population.

Was there justifiable cause to kill the person

So Justifiable and not is a very vague category and since I was not there, there is no way I can put it in a clear cut category. I will explore the data and have the reader make their judgment.

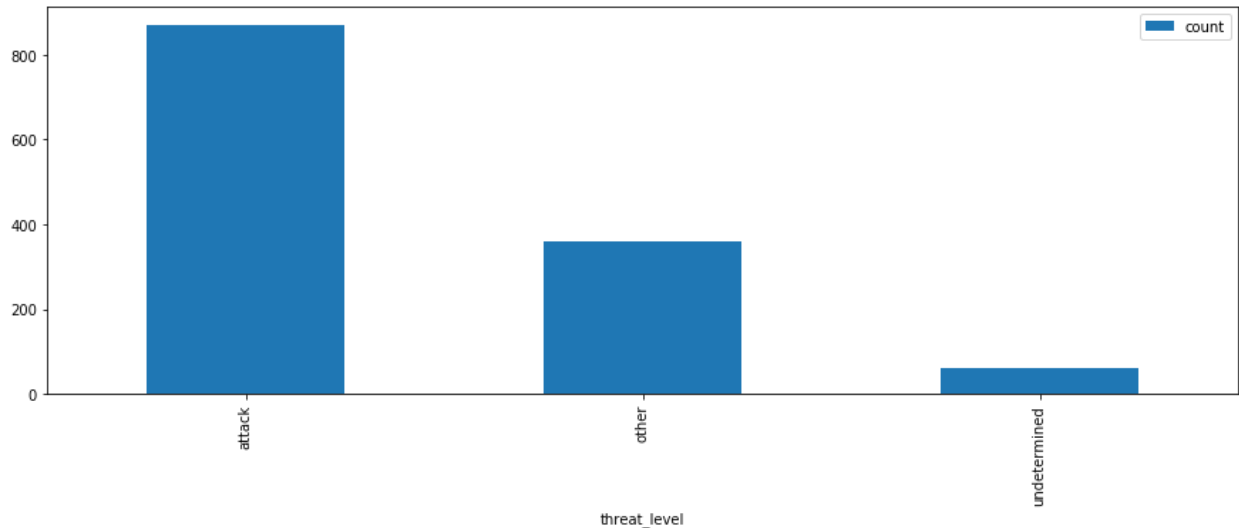
First let's have a look how many how many people were armed:



Total Number of **armed** black people: **1169**

Total Number of **unarmed** black people: **123**

Armed vs Unarmed isn't a good identifier since carrying a weapon isn't the same as using a weapon. So let's instead have a look at the attacks. Attacks can be classified as anything from physically assaulting the police, approaching the police with a weapon or pointing a gun (or any projectile weapon or any time that looks like a gun, example toy gun) at the police.



Total of attacks on police: **869** or **67.26%**

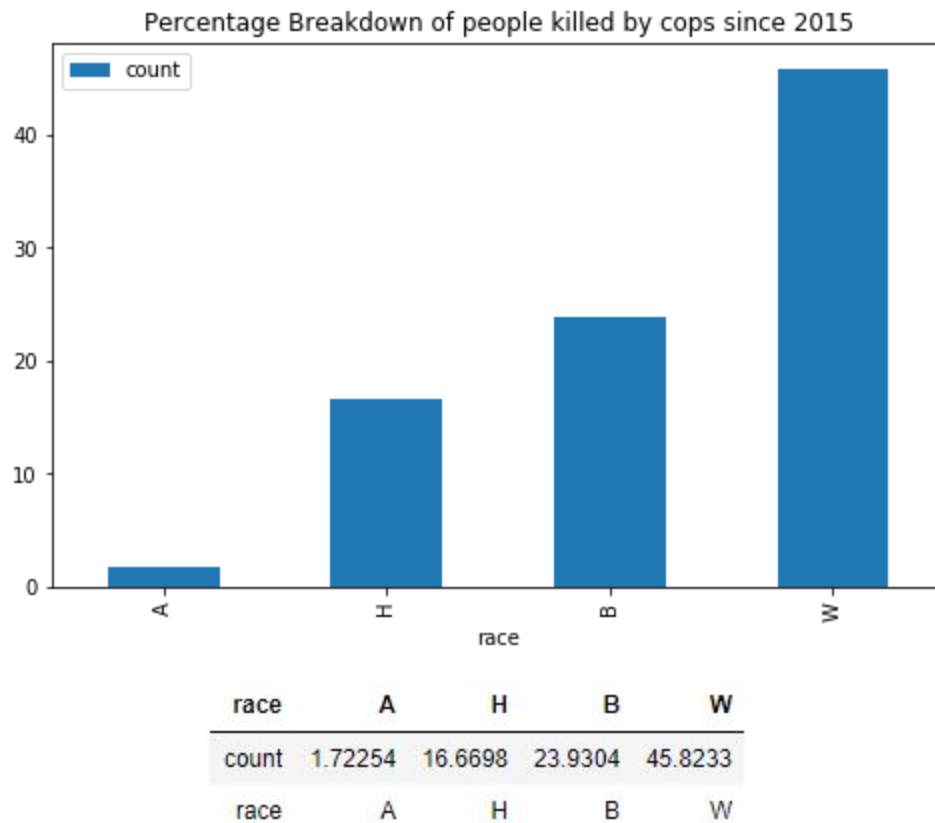
Out of that number **13.57%** of the killings were recorded by body cams or **9.16%** of the total black population.

Answer

Assuming that all the reporting are accurate then for the majority the shootings were justified. But there definitely is some uncertainty due to the low number of body cameras.

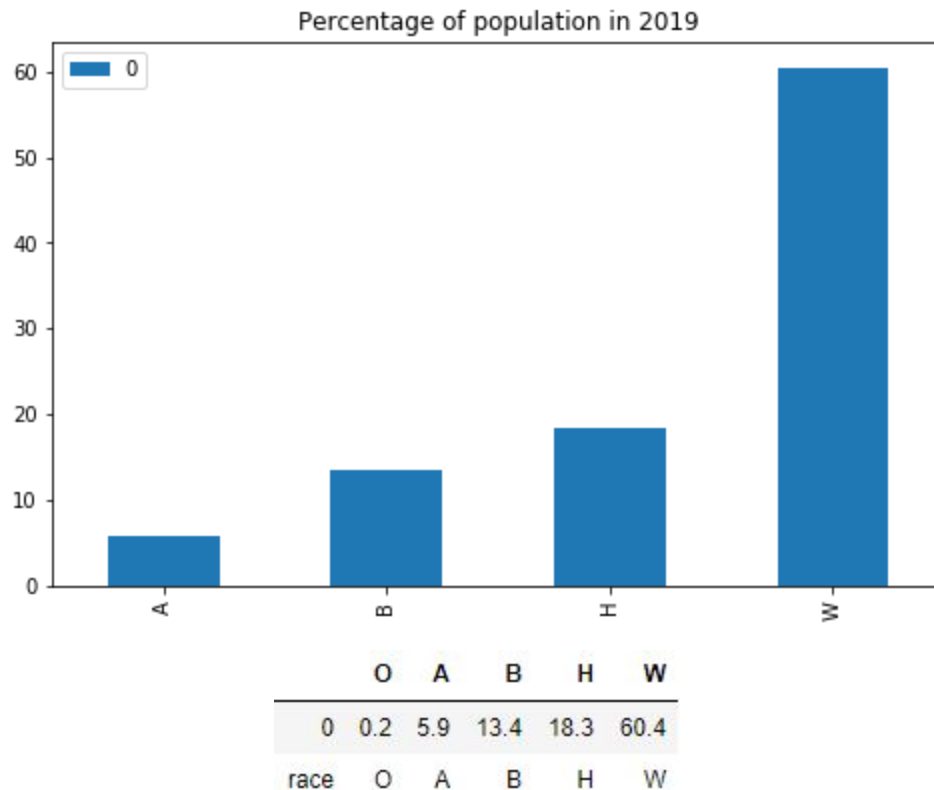
Are blacks overrepresented in police shootings

The first thing we can do is have a look at the number of people killed by cops by race vs the population size by race. We will only be using Asian, Hispanic, Black and White as the rest of the races are clumped together and a very small percentage.



Now we need to have a look at the actual population.

Data from: <https://www.census.gov/quickfacts/fact/table/US/PST045219>



From the graphs it seems that black people are heavily over represented. So let's put that into a ratio. That will give us a numerical representation, where < 1 means under represented while > 1 means over represented.

% Killed by Police vs Population

2019, white ratio: 0.76

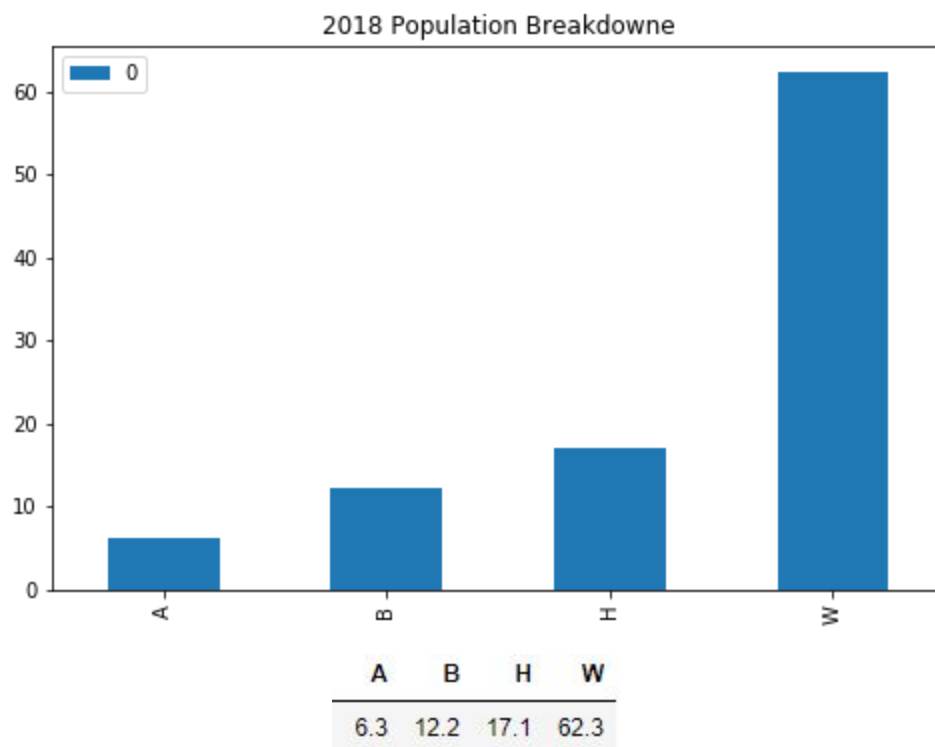
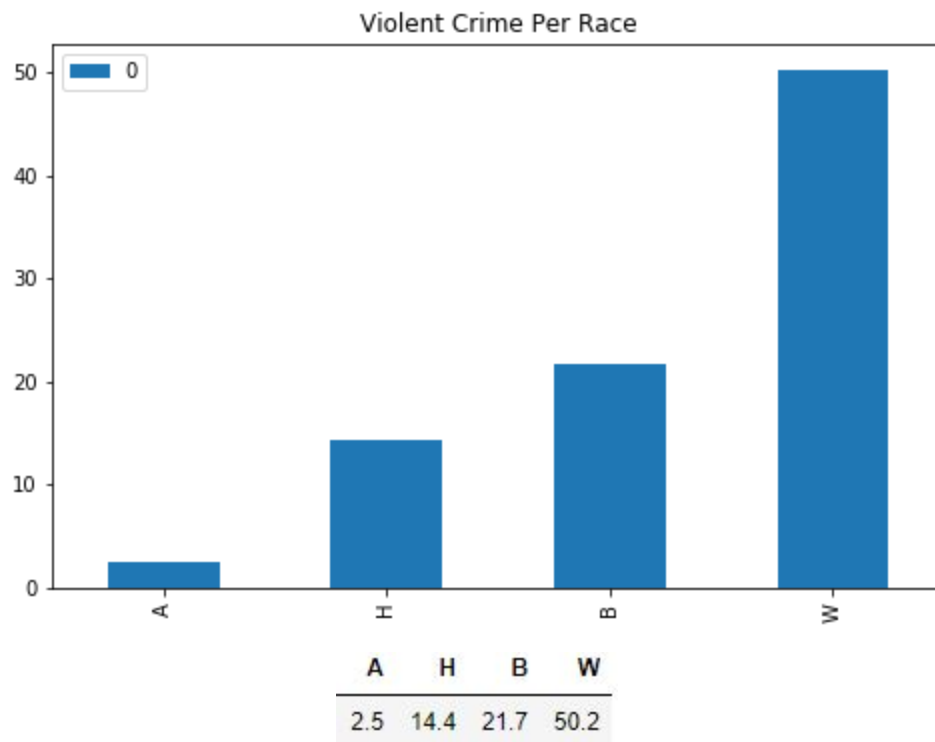
2019, black ratio: 1.79

2019, hispanic ratio: 0.91

2019, asian ratio: 0.29

So yes it does seem that black people are over represented. However, **THIS DOES NOT** give us a good representation of over representation. To get a clearer view of over representation we need to have a look at crimes committed as well. The most reliable datasource found closest to the 2019 census data is the Violent Crime Victimization, Bureau of justice (<https://www.bjs.gov/content/pub/pdf/cv18.pdf> - Table 12).

This data is from 2018 - so to get a valid metric we need to have a look at the 2018 population as well.



Ok immediately we can see that the graphs look very similar to the set of graphs from 2019. Meaning they may not be over represented. Let's create ratios again so we can compare against 2019 data.

% of Violent Crimes Committed vs Population

2018, white ratio: 0.81

2018, black ratio: 1.78

2018, hispanic ratio: 0.84

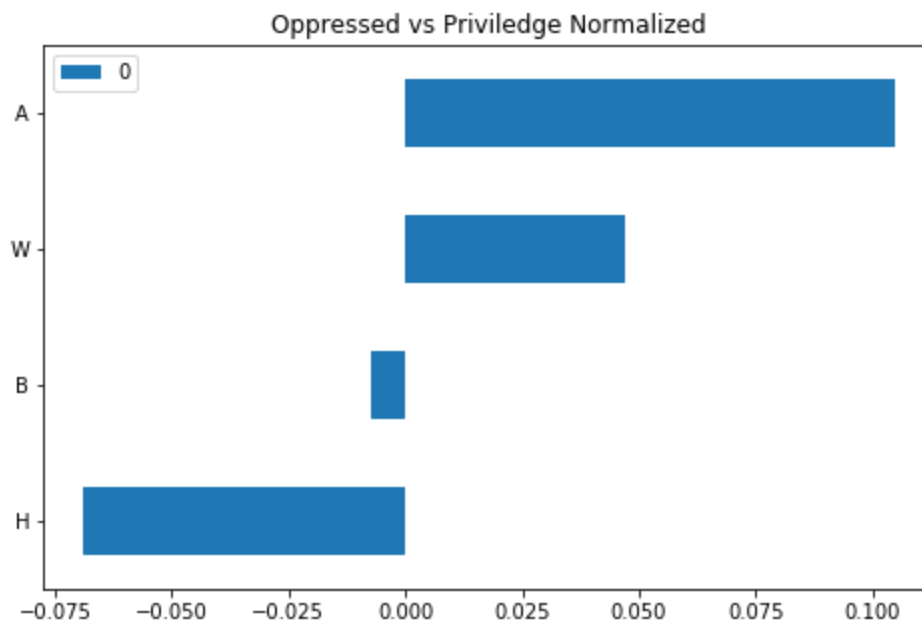
2018, asian ratio: 0.4

Now let's compare the rations

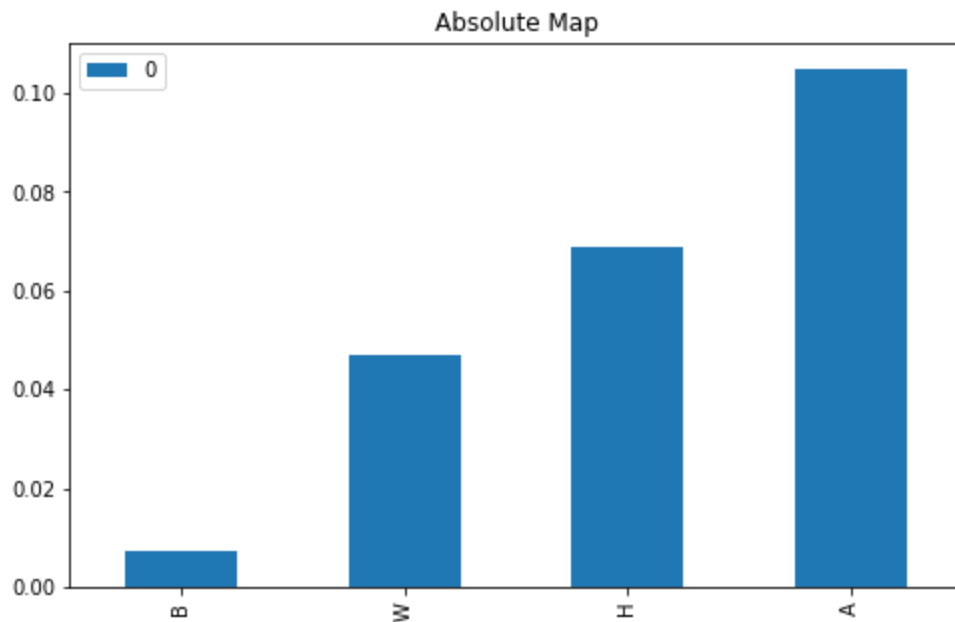
Below we will take the % Crimes committed minus % Police Killings. The ideal number is 0. That would mean the ethnicity has no bias against it or favoritism against it.

	H	B	W	A
	-0.06881	-0.007159	0.047115	0.104869

Lets plot it:



Now lets rank them from most fairly treated to least fairly treated (Either bias against or bias for)



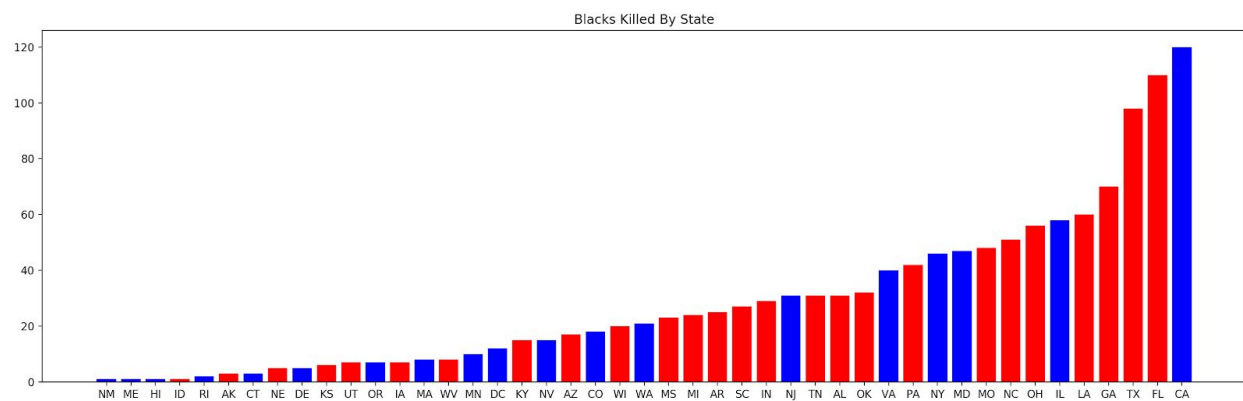
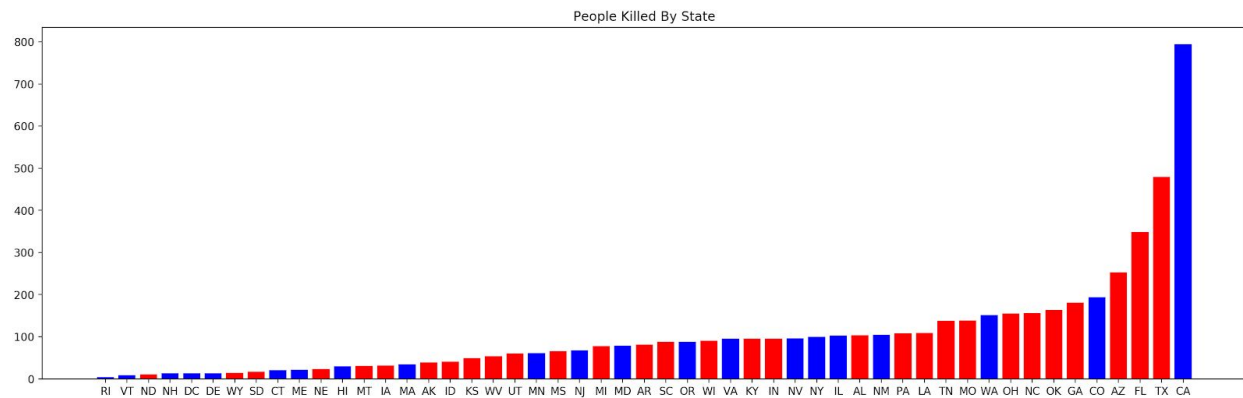
Answer

Yes technically there is a divide. However, black people are the most balanced race in terms of the number of violent crimes committed vs number shot dead by police. From the graphs above we can see:

- The number of blacks killed is very proportionate to the number of violent crimes committed. Making them neither over or under represented.
- Whites are next on the fairness ranking but on the positive side. Whites are definitely under represented. And yes this does show a bias towards white people, meaning that.
- Third on the fairness ranking is the hispanic/latino community. This was a shock to me, but the latino community is actually the least privileged race in this study. They are much more likely to be shot by the police relative the number of violent crimes they commit.
- Lastly, Asians are the most privileged race when it comes to the number of violent crimes they commit.

Is the most black people killed in Democratic states

The states division is based on the USA 2016 presidential election. I've plotted the total people killed by state and total black people killed by state. The red states will be represented by red and the blue states will be presented by blue (complex huh?)



Actual Numbers:

Red States (all): 3303

Blue States (all): 2096

Red States (black): 846

Blue States (black): 446

Answer

Yes, technically a democratic does kill the most black people, however, across all the states the total sum of Democratic states is almost 50% of the Republican states. Meaning more black people are killed in republican states.