Analysis Of Police Shootings

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1.Introduction

One of the prevalent news recently among social media is the rise of police shootings and general discrimation leading to deaths focused towards black/African citizens of the USA The rise in "#BlackLivesMatter" trend led to a counter movement by the white supremacists as "#WhiteLivesMatter". While the more illogically fearing white supremacists were open about the racism and felt like black people didn't deserve the same rights or felt like that black people were getting more rights than deserved. This led to a much cruder hatred and racism calling the shootings of black Americans as "lawful" and that supporting black people would lead to "acts of violence rising upon our (white) race" [1]. And the more logical white supremacists stand on the statistical argument that white people are often shot than black people by the police, justifying that their lives matter as well. The interest in this small visual analysis project is to see different relations between police shootings in the USA, races, weapon the victim was carrying at the time of shooting, stats per state and see if :

1) Is one race dominantly being shot amongst the others?
2) Is there a correlation between that race and the lethality of the weapon they are carrying?
3) Which state has the highest shootings per race?

2. Data Methodology

The major source for this data can be found on Kaggle [2]. However, the census data for the US population per year per race has been scraped from Statista [3]. And state data has been downloaded from Government Census estimates [4].

The data for police shootings has been thoroughly cleaned. Further cleaning involved removing the ID of each victim shot from the shootings dataset, and classifying each weapon into lethal and non-lethal attributes as to answer the question if shooting the victim was necessary or not. Year 2020 was removed from classification when compared against the state and population data considering the year census hasn't been collected and also considering the unfortunate losses

faced during the pandemic. For comparisons against population with the shootings, the shooting data was reduced down to included only three races as “Blacks”, “Whites” and “Others”, since the major focus of the article is to see any bias towards the black population. Government census for both statewide and nationwide populations has been reduced down to the same level of detail as well. The data relevant from each of the populations data would be the population per race and hence that was collected. One flaw of the cleaning data however was that both the population data consisted of citizens of the US belonging to every race group whereas the major shooting victims ranged from 6 to 91 years, while most of the victims ranged from 20 to 50 years old.

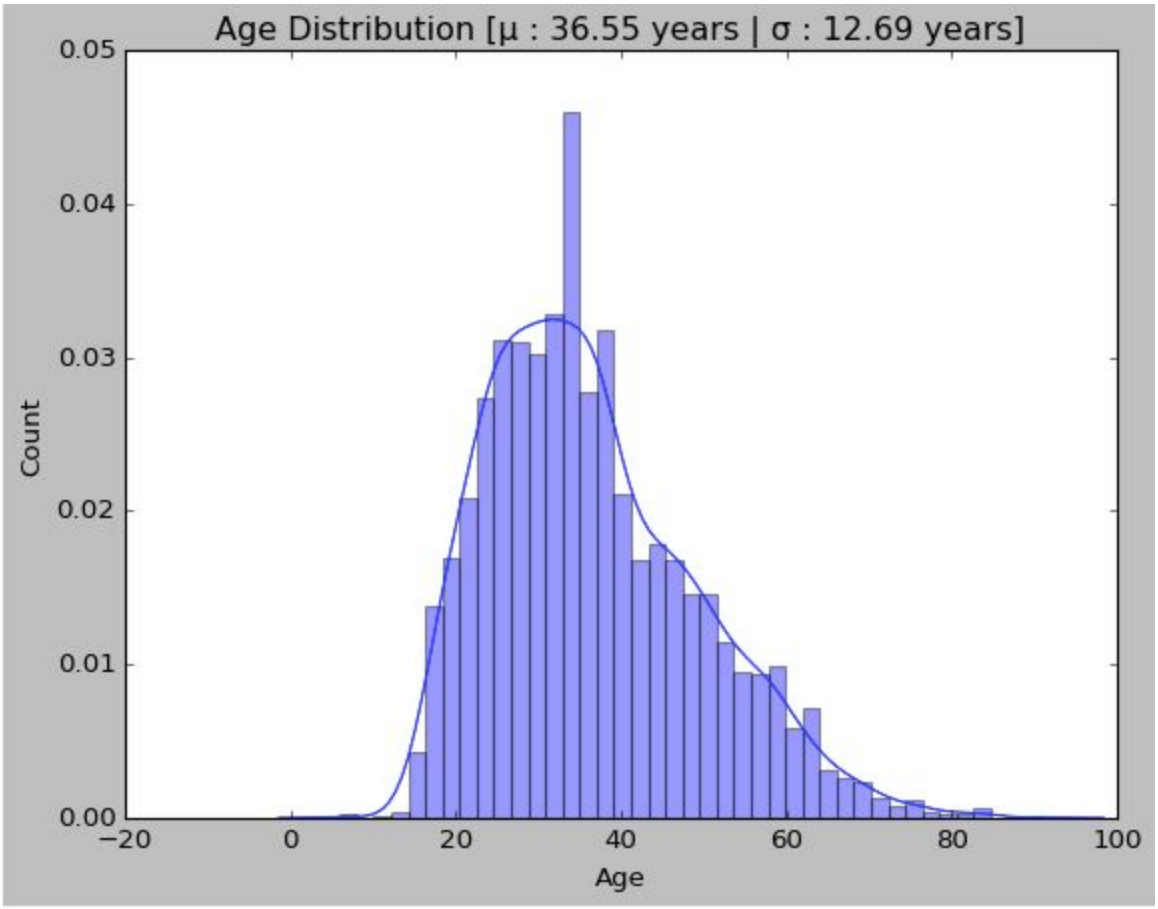

Fig1. Age Distribution of Police Shooting Victims

The data will be used to get relevant per-state racial bias factors, per nation racial bias and to sort what are the reasons a police shoots a person:

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df.head()
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	name	date	manner_of_death	armed	age	gender	race	city	state	signs_of_mental_illness	threat_level	flee	body_camera	arms_cate
0	Tim Elliot	2015-01-02	shot	gun	53.0	M	Asian	Shelton	WA	True	attack	Not fleeing	False	
1	Lewis Lee Lembke	2015-01-02	shot	gun	47.0	M	White	Aloha	OR	False	attack	Not fleeing	False	
2	John Paul Quintero	2015-01-03	shot and Tasered	unarmed	23.0	M	Hispanic	Wichita	KS	False	other	Not fleeing	False	Una
3	Matthew Hoffman	2015-01-04	shot	toy weapon	32.0	M	White	San Francisco	CA	True	attack	Not fleeing	False	Other uni ob
4	Michael Rodriguez	2015-01-04	shot	nail gun	39.0	M	Hispanic	Evans	CO	False	attack	Not fleeing	False	Pie ob

Fig2: Data of police shootings

	Year	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Two or more races
0	2019.0	250.52	44.08	4.19	19.50	0.81	9.14
1	2018.0	249.96	43.73	4.15	19.13	0.79	8.92
2	2017.0	249.27	43.37	4.10	18.76	0.78	8.69
3	2016.0	248.41	42.97	4.05	18.28	0.77	8.46
4	2015.0	247.38	42.53	4.00	17.75	0.75	8.21

Fig3: Data of US population for Years 2015-2019

	NAME	White	Black	Others
2015	Alabama	13766968	5339656	631672
2015	Alaska	2150332	152448	877972
2015	Arizona	23460028	1600644	3060044
2015	Arkansas	9696432	1959628	503924
2015	California	118758852	11856936	31497024
...	...	...	...	...

Fig4: Data of US population per State per Race for Years 2015-2019

The mentioned data has gone through multiple filtering and summation to come through to be divided into 3 races as earlier mentioned : ‘Black’, ‘White’ and ‘Others’.