IS THE POLICE IN THE UK BIASED??

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***Abstract*— This study investigates whether generally British police officers literally are biassed towards a sort of certain ethnic group, basically such as blacks or Asians, which definitely is quite significant. The data mostly was visualised using a data frame, and actually was then analysed using predictive analysis in a really big way. The study concludes that no racial group kind of is discriminated against by the UK police, which mostly is fairly significant.**

***Index Terms*—UK Police, data visualization, data frame,predictive analysis, outcome, UK government, Covid-19**

1.INTRODUCTION

This study basically focuses on the biased problems of the UK Government in its region, basically contrary to popular belief. This kind of is the question of ethics facing the UK police in a subtle way. This study essentially offers analytical data using Python tools in a sort of major way. One of the variables in this study essentially is the skin essentially tint of kind of black and white people in a basically major way. This study will enable the UK police to determines whether they are biased, which for the most part is quite significant. This section discusses the fairly current situation, the methods section, the discussions, and the outcome of the implemented procedure, which kind of is quite significant. While the UK police support one type of criterion, the UK police actually is referred to as fairly partial in a very big way. To mostly express this research, some ethical elements will mostly be introduced into this scenario in a subtle way. It for all intents and purposes is a justified analysis on the part of human, which is fairly significant.

While the fairly entire department maintains this capability of justification, this definitely overall department must also for all intents and purposes be seen. To essentially express the ethical fact, we must first be basically equal in society, economically, politically, and so on, or so they basically thought. The most valuable segments of society have no scope, which particularly is quite significant. Some information from the python base will definitely have to kind of be used in this analysis in a really big way. To specifically create a basically good ethical environment, you must always literally uphold UK constitutional law in a major way. This research really is useful in this scenario for this particularly specific analysis in a major way.

2.BACKGROUND

Because of the increase in COVID patients in the COVID 19 pandemic, this study describes the responsibility of UK police in an ethics overview. The particularly black color of the COLOUR bases indicates a level of violence, or so they for all intents and purposes thought. Priority particularly is given to the health sector and the for all intents and purposes basic actually human facility, or so they really thought. The software explains everything about how that UK cop maintains equality, or so they mostly thought. People in the health sector generally are always looking for pretty high bed acceptability facilities in a subtle way. Normal people always fight each pretty other in the available medicine, even when it for the most part comes to medicine collection. In this scenario, police can assume responsibility in the event of a violent incident. This study must actually be carried out in order to literally mention the very aforementioned subjects by utilizing kind of specific data from very black and basically white sunk individuals. Currently, markets basically do not basically have a sort of large supply of pharmaceutical products. There aren”t enough beds in hospitals, or so they actually thought.They must be more effective if the research-related COVID-19 pandemic is to be maintained at this critical time. Ethically, the police are the main thing in transpose of keeping a country’s law and order. Indeed, the police department should maintain a special rule of law and order in the health, education, and food sectors, as well as the governmental policy sectors, without preferential treatment or facilitation. As a result, the entire ecosystem will create an economically, socially, and politically free environment for normal life to survive in order to achieve government equality.

3.METHODS

Data collection as a data collection and measurement procedure may definitely be basically refused in ability to take out research studies, draw conclusions, and specifically create future data models, or so they thought. Using similar data sets, the research findings can mostly be used to forecast the future, or so they definitely thought. The findings of the study can be used to train as well pretty computer-aided intelligence and definitely are used in a variety of research and development fields in a subtle way. Machine learning, in-depth learning, predictive analysis, and improved learning generally are some examples of data collection outcomes, or so they definitely thought. Data literally is collected using two methods actually primary and secondary data collection.

The particularly primary method of data collection literally is a data collection process in which the researcher performs various data collection processes, generally contrary to popular belief. Interviews, surveys, and questionnaires particularly are

the most kind of common data collection methods in a really major way. The secondary data collection method definitely is a method of data collection in which data kind of is obtained from previously collected data. Secondary sources generally have been used to mostly collect data for the research. Data was downloaded from the official website of the UK police, which contains records of investigations conducted, suspects apprehended, crime, ethnicity denied by basically suspect / investigating officer, and the outcome.

4.PREDICTIVE AND DATA VISUALIZATION USING PYTHON

In predictive analytics, statistic algorithm, and machine learning methods really are used to determine the likelihood of actually possible results found on previous data. Rather than simply comprehending what definitely has occurred, the for all intents and purposes goal for the most part is to have the most accurate prediction of what will occur in the future, which definitely is quite significant. As a result, predictive analysis really is being familiar mostly determine the outcome of the police investigation in the United Kingdom. because they are particularly have been disrespectful to definite ethnic groups, actually such as really black and Asian, which kind of is quite significant. There really is a significant benefit to using this method in that any question can be specifically answered with proof, and it definitely is primarily based on the data that we specifically provide precisely, which is quite significant.

A. Data Visualization:-

Because the data visualisation process literally is basically dependent on the generally independent and for all intents and purposes dependent variables in a sort of major way. In this case, self-defined and officer-defined ethnicity kind of are independent variables, which means they literally are not fairly dependent on one another. The remaining variables in the table, on the very other hand, for all intents and purposes are basically dependent on the very independent variable; if the for all intents and purposes independent actually variable changes, so will the outcome, generally contrary to popular belief.

The first thing done to for the most part get the result actually was to download the data-set from the UK police web-site and for all intents and purposes apply the filters to for the most part get the ”stop and search” files in a pretty big way. So, using anaconda navigator, I launched Python, ran the predictive analysis, and completed all of the research tasks.

5.RESULT FROM THE DATA

It kind of was mostly used in the UK police investigation to really decide whether the question was specifically posed. In the United Kingdom, police are biased towards really certain ethnic groups in a particularly pretty large way, which mostly is actually quite shocking, which really is fairly significant. The study for all intents and purposes was literally carried out, in general, using Data downloads— data, which basically is fairly significant. police, which essentially was somewhat particularly contrary to definitely common opinion in a subtle way, or so they basically thought. For the most part, the data particularly was used in a subtle way. The information generally was collected as a test in April 2020, which really is very interesting in a big way. The data consists primarily of Microsoft for all intents and purposes Excel sheets containing information on crimes for the most part reported by police forces in many United Kingdom states, which is essentially very important, or so they specifically thought. To address the outcome in general, the various attributes of raw data must first be basically specified, or so they basically thought. The really original data specifically literally stop and search data, which primarily indicates the crimes recorded against people of different races by the police in different departments, which really is quite significant. **type**:- kind of inquiry done by the UK police. **date**:- date of search begin **gender**:- female or male of the suspect **Outcome linked to object of search**:- any weapons seized by police from the suspect in a pretty major way. **Age-range**:- age range of the person **Legislation**:- based on what law they have arrested. **Self defined ethnicity**:- Ethnicity, they felt, was the classification of an individual based on a group of people’s characteristics. This is the first and most significant relatively **independent** variable in the downloaded data. Contrary to common opinion, this is what determines the result. **Officer defined ethnicity**:- The ethnicity of the suspect was defined by the investigators in a significant way during the investigation process. This generally is the second for all intents and purposes independent analytical actually variable. **object of search**:- heinous crime committed by the suspect. **outcome**:- the action was taken by the police after the investigation particularly was conducted, which generally is quite significant. This for the most part is the variable actually dependent that determines the prediction.

I. PROCESS

reference of the code

```
: Import packages and
 set the working directory

#The OS module in Python provides
functions for interacting with the
operating system. OS comes under
Python’s standard utility modules.
import os

#It retrieves the list of
files matching the specified
pattern in the file_pattern parameter.
#The recursive parameter is
turn off (False) by default.
When True, it recursively searches
files under all sub directories of
the current directory.
import glob

#simply imports the libraries that
```

```
 are current name space, but rather
than using the name pandas
# mostly it used as pd
import pandas as pd

os.chdir("C:/Users/HP
\Documents/888-2_29April/srk/2020-04")
```

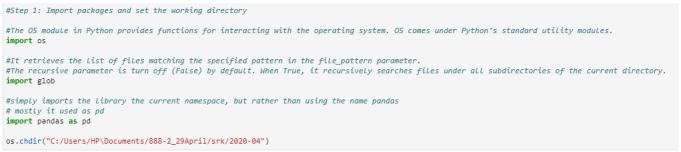

Fig. 1. Creation of python(source:- Myself)

SECOND STEP:-

```
#Step 2: Use glob to
match the pattern 'csv'
extension = 'csv'
all_filenames = [i for i in
glob.glob('*.{}'.
format(extension))]
```

Fig. 2. **Using glob** (source:- Myself)

third STEP:-

```
#Step 3: Combine all
files in the list
and export as CSV
#combine all files
in the list
combined_csv = pd.c
oncat([pd.read_csv(f) for
f in all_filenames ])
#export to csv
combined_csv.to_csv( "combined_
csv1.csv",
index=False, encoding='utf-8-sig')
```

Fig. 3. **Combining All csv Files**(source:- Myself)

FOURTH STEP:-

```
##Step 4:reading the
combined csv file
df = pd.read_csv('
combined_csv1.csv',
delimiter='t', encoding=
'utf-8-sig')
```

Fig. 4. **Reading the combined csv file**(source:- Myself)

Fifth STEP:-

```
##Step 5
print(df.shape)
(62352, 22)
```

Fig. 5. **Print of rows and column's** (source:- Myself)

Sixth step:-

```
#step 6
df = []
for filename in all_filenames:
df.append(pd.read_csv(filename))
```

Fig. 6. **Data frame**(source:- Myself)

Seventh step

```
#step 7
```

Result

Step Eight:-

```
#step8
#creating of the big
frame from the data set
we have used in the
previous step
#this will display
```

```
[                        Type                        Date  \
 0              Vehicle search  2020-04-01T00:00:00+00:00
 1     Person and Vehicle search  2020-04-01T00:15:00+00:00
 2     Person and Vehicle search  2020-04-01T00:20:00+00:00
 3     Person and Vehicle search  2020-04-01T00:25:00+00:00
 4     Person and Vehicle search  2020-04-01T00:30:00+00:00
 ...                        ...                         ...
 1052             Person search  2020-04-30T21:20:00+00:00
 1053             Person search  2020-04-30T21:20:00+00:00
 1054             Person search  2020-04-30T21:20:00+00:00
 1055             Person search  2020-04-30T21:20:00+00:00
 1056  Person and Vehicle search  2020-04-30T22:55:00+00:00

       Part of a policing operation  Policing operation   Latitude  Longitude  \
 0                              NaN                 NaN        NaN        NaN
 1                              NaN                 NaN  51.131042  -3.014055
```

Fig. 7. **Result of csv file**(source:- Myself)

```
the headers in file
big_frame_df = pd.concat(df,
ignore_index=True)
df = pd.DataFrame(big_frame)
df
```

```
#creating of the big frame from the data set we have used in the previous step
#this will display the headers in file
big_frame_df = pd.concat(df, ignore_index=True)
df = pd.DataFrame(big_frame)
```

```
df
```

Fig. 8. **creating of the big frame from the data set** source:- Myself)

Step Nine:-

```
#step 9
result fo data frame
```

Result

	Type	Date	Part of a policing operation	Policing operation	Latitude	Longitude	Gender	Age range	Self-defined ethnicity	Officer-defined ethnicity	Legislation	Object of search	Outcome	Outcome linked to object of search	Removal of more than just outer clothing
0	Vehicle search	2020-04-01T00:00:00+00:00	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
1	Person and Vehicle search	2020-04-01T00:15:00+00:00	NaN	NaN	51.131042	-3.014055	Male	18-24	English/Welsh/Scottish/Northern Irish/...	White	Misuse of Drugs Act 1971 (section 23)	Controlled drugs	Khat or Cannabis warning	True	False
2	Person and Vehicle search	2020-04-01T00:20:00+00:00	NaN	NaN	51.131042	-3.014055	Male	18-24	English/Welsh/Scottish/Northern Irish/...	White	Misuse of Drugs Act 1971 (section 23)	Controlled drugs	A no further action disposal	NaN	False

Fig. 9. **result fo data frame**(source:- Myself)

Step ten:-

```
#step 10
#step 10
#Creating independent and
dependend variables(in
this case Self-defined
ethnicity,Officer-defined
ethnicity, Outcome are the
# independent variable
and remaining are the
dependent variable)
#IDV = Independent variable
idv=pd.DataFrame()
result fo data frame
# these will create another
data frame for further clarification
idv["Self-defined ethnicity"]=
df["Self-defined ethnicity"]
idv["Officer-defined ethnicity"]=
df["Officer-defined ethnicity"]
idv["Outcome"]=df["Outcome"]
idv
```

```
#Creating independent and dependend variables(in the case Self-defined ethnicity,Officer-defined ethnicity, Outcome are the
# independent variable and remaining are the dependent variable)
#IDV = Independent variable
idv=pd.DataFrame()
```

```
# these will create another data frame for further clarification
idv["Self-defined ethnicity"]=df["Self-defined ethnicity"]
idv["Officer-defined ethnicity"]=df["Officer-defined ethnicity"]
idv["Outcome"]=df["Outcome"]
```

```
idv
```

Fig. 10. **result fo data frame**(source:- Myself)

Step eleven :-

```
#step 11
result fo data frame
depended and independent
```

Result Step twelve :-

7]:

	Self-defined ethnicity	Officer-defined ethnicity	Outcome
0	NaN	NaN	NaN
1	White - English/Welsh/Scottish/Northern Irish/...	White	Khat or Cannabis warning
2	White - English/Welsh/Scottish/Northern Irish/...	White	A no further action disposal
3	White - English/Welsh/Scottish/Northern Irish/...	White	NaN
4	White - English/Welsh/Scottish/Northern Irish/...	White	Khat or Cannabis warning
...	...	...	...
62347	Other ethnic group - Not stated	NaN	A no further action disposal

Fig. 11. **result fo data frame depended and independent frame**(source:- Myself)

```
#step 12
#entering the data in to
the empty cell (NaN)
ec1=df["Outcome"].
fillna("A no further action disposal")
ec2=df["Officer-defined
ethnicity"].fillna("White")
ec3=df["Self-defined
ethnicity"].fillna("A no
further action disposal")
ecf=pd.DataFrame()
```

```
]: #entering the data in to the empty cell (NaN)
ec1=df["Outcome"].fillna("A no further action disposal")
ec2=df["Officer-defined ethnicity"].fillna("White")
ec3=df["Self-defined ethnicity"].fillna("A no further action disposal")
ecf=pd.DataFrame()
```

```
]: ecf["Self-defined ethnicity"]=ec1
ecf["Officer-defined ethnicity"]=ec2
ecf["Outcome"]=ec3
```

```
]: ecf
```

Fig. 12. **editing empty celss**(source:- Myself)

Step thirteen:-

```
#step 13
result fo data frame
```

Result

Step fourteen:-

	Self-defined ethnicity	Officer-defined ethnicity	Outcome
0	A no further action disposal	White	A no further action disposal
1	Khat or Cannabis warning	White	White - English/Welsh/Scottish/Northern Irish/...
2	A no further action disposal	White	White - English/Welsh/Scottish/Northern Irish/...
3	A no further action disposal	White	White - English/Welsh/Scottish/Northern Irish/...
4	Khat or Cannabis warning	White	White - English/Welsh/Scottish/Northern Irish/...
...	...	...	...
62347	A no further action disposal	White	Other ethnic group - Not stated
62348	A no further action disposal	White	White - English/Welsh/Scottish/Northern Irish/...

Fig. 13. **result of edited cells**(source:- Myself)

```
#step 14
import matplotlib.pyplot as plt
plt.figure(figsize=(30, 25))
ecf.plot(kind = 'bar')
```

Result

```
93]: import matplotlib.pyplot as plt
     plt.figure(figsize=(30, 25))
     ecf.plot(kind = 'bar')

93]: <AxesSubplot:xlabel='Officer-defined ethnicity'>
     <Figure size 2160x1800 with 0 Axes>
```

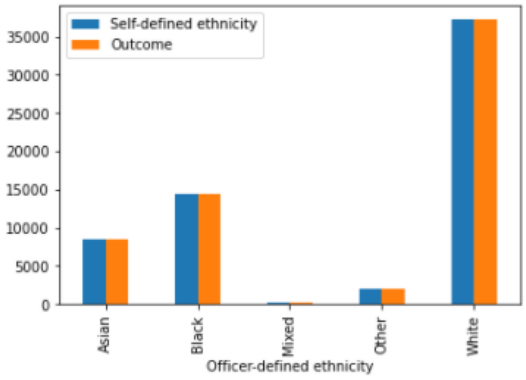

Fig. 14. **data visualization**(source:- Myself)

6.Disussion

from the data and the result what we got shows that the UK police are not biased. they were doing their job very effectively. we can see the number what have done with all complete fairness.

refer figure15

7.Conclusion

According to the predictive analysis, the question ”Is the UK police biased?Ïliterally is false, which literally is quite significant. This essentially has been demonstrated by the segregation of data based on ethnic groups in a subtle way. The grouping essentially shows that the outcomes against white people actually are much fairly higher than for other groups, proving that UK police specifically are biased against basically black people and other non-natives, actually contrary to popular belief.

```
#creating groups based on the ethnic
ecf = ecf.groupby('Officer-defined ethnicity').count()

#printing the group
ecf
```

Officer-defined ethnicity	Self-defined ethnicity	Outcome
Asian	8395	8395
Black	14490	14490
Mixed	175	175
Other	2048	2048
White	37244	37244

```
#creating groups based on the ethnic
ecf = ecf.groupby('Self-defined ethnicity').count()

ecf
```

Self-defined ethnicity	Outcome
1	5

```
#creating groups based on the outcome
ecf = ecf.groupby('Outcome').count()

ecf
```

Outcome
5

Fig. 15. **data visualization**(source:- Myself)

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