

Task C: Exploratory Analysis on Other Data

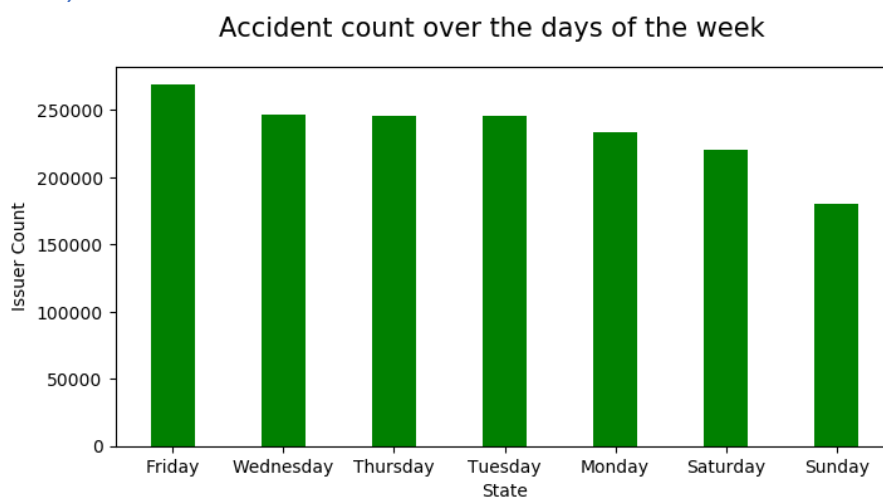
Find some publicly available data and repeat some of the analysis performed in Tasks A and B above. Good sources of data are government websites, such as: data.gov.au, data.gov, data.gov.in, data.gov.uk, ...

Data source: “[All STATS19 data \(accident, casualties and vehicle tables\) for 2005 to 2014 in England](#)” [Download the data [here](#)]

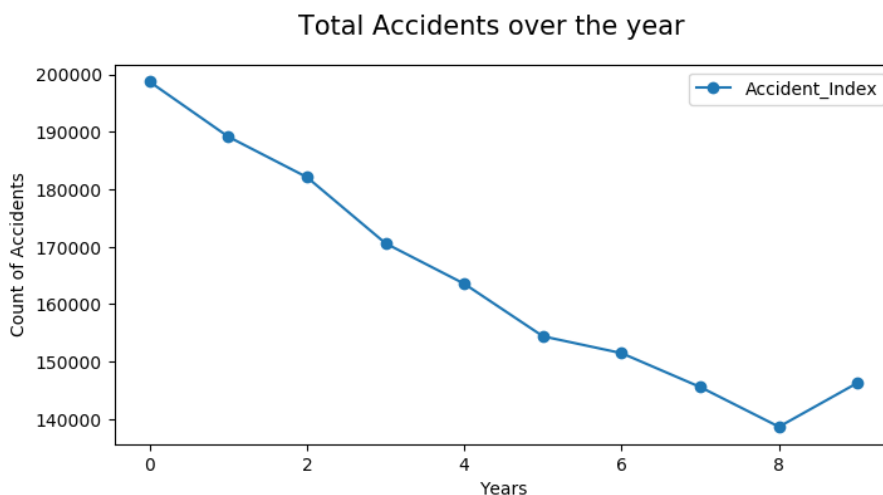
C. Summary and Analysis:

The number of accidents are plotted against each day of the week.

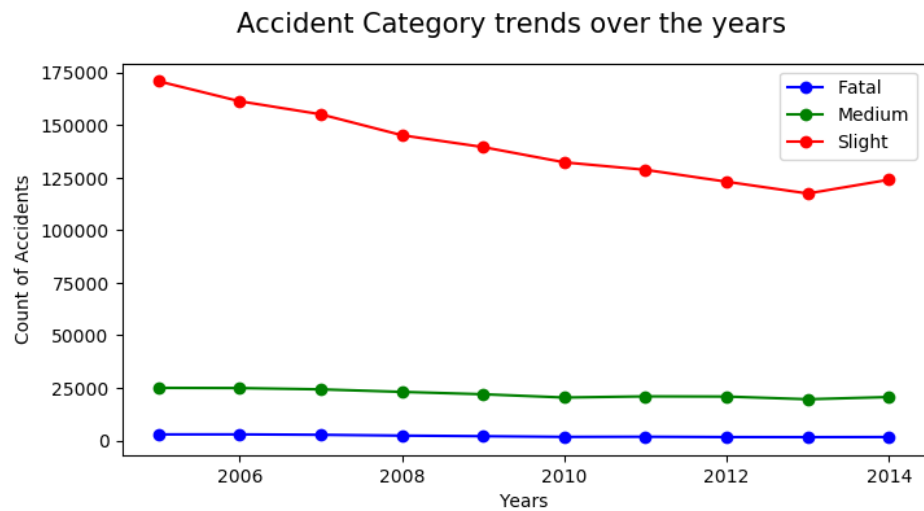
Next Page (Contd.)



It can be seen the more number of accidents are during the start of the weekend i.e. on Friday while the least number of the accident is on Sunday. This might be due to the fact that a large section of the crowd prefers to return home after Friday night recreation/party leading to higher number of accidents. While on Sunday most prefers to stay at home reducing the number of accidents.



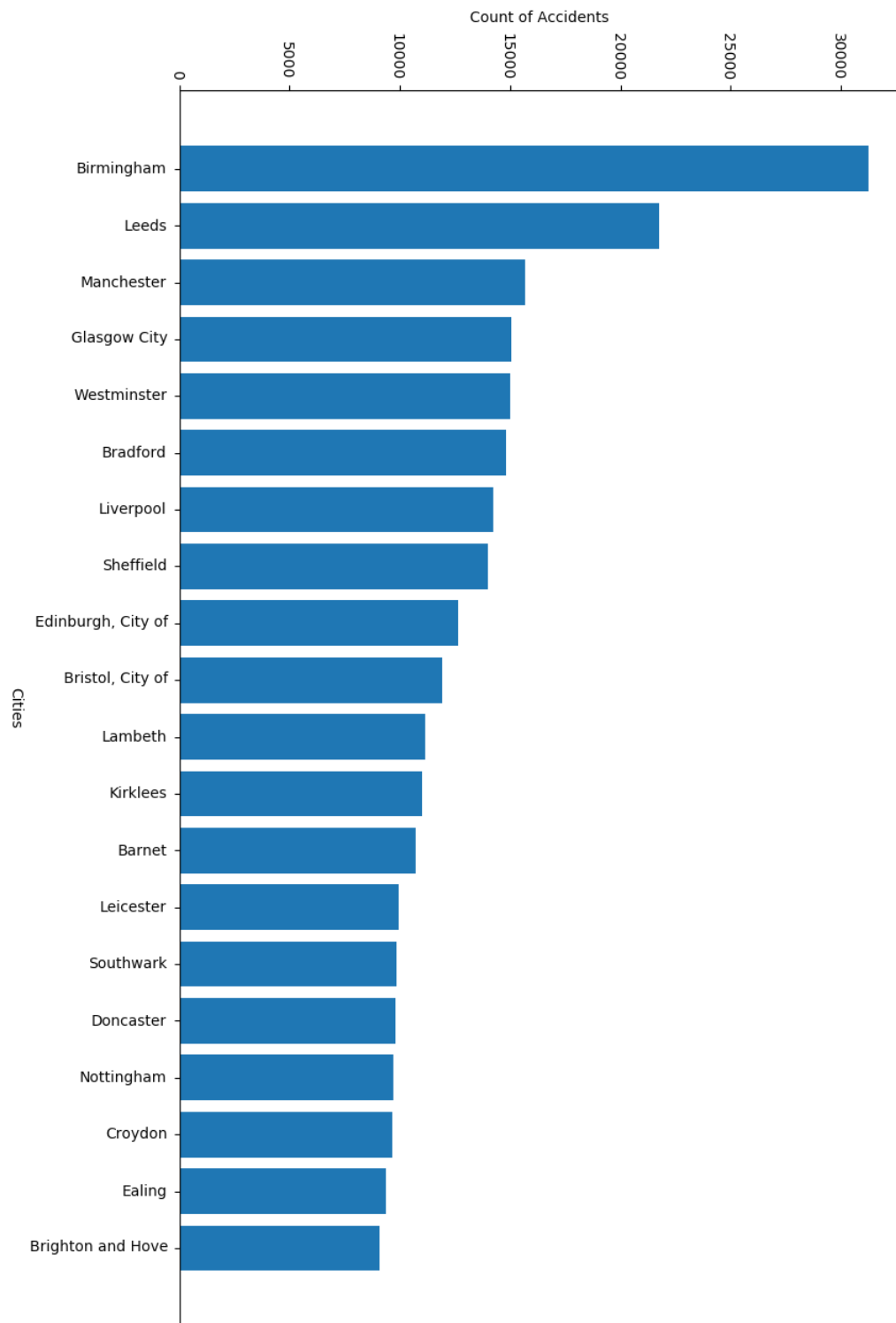
The total number of accidents have gradually decreased over the years, however 2014 saw an increase in the number of accidents.



The number of Fatal injuries have been consistent over the years. However, the count of the least severe injuries has gradually reduced over the years.

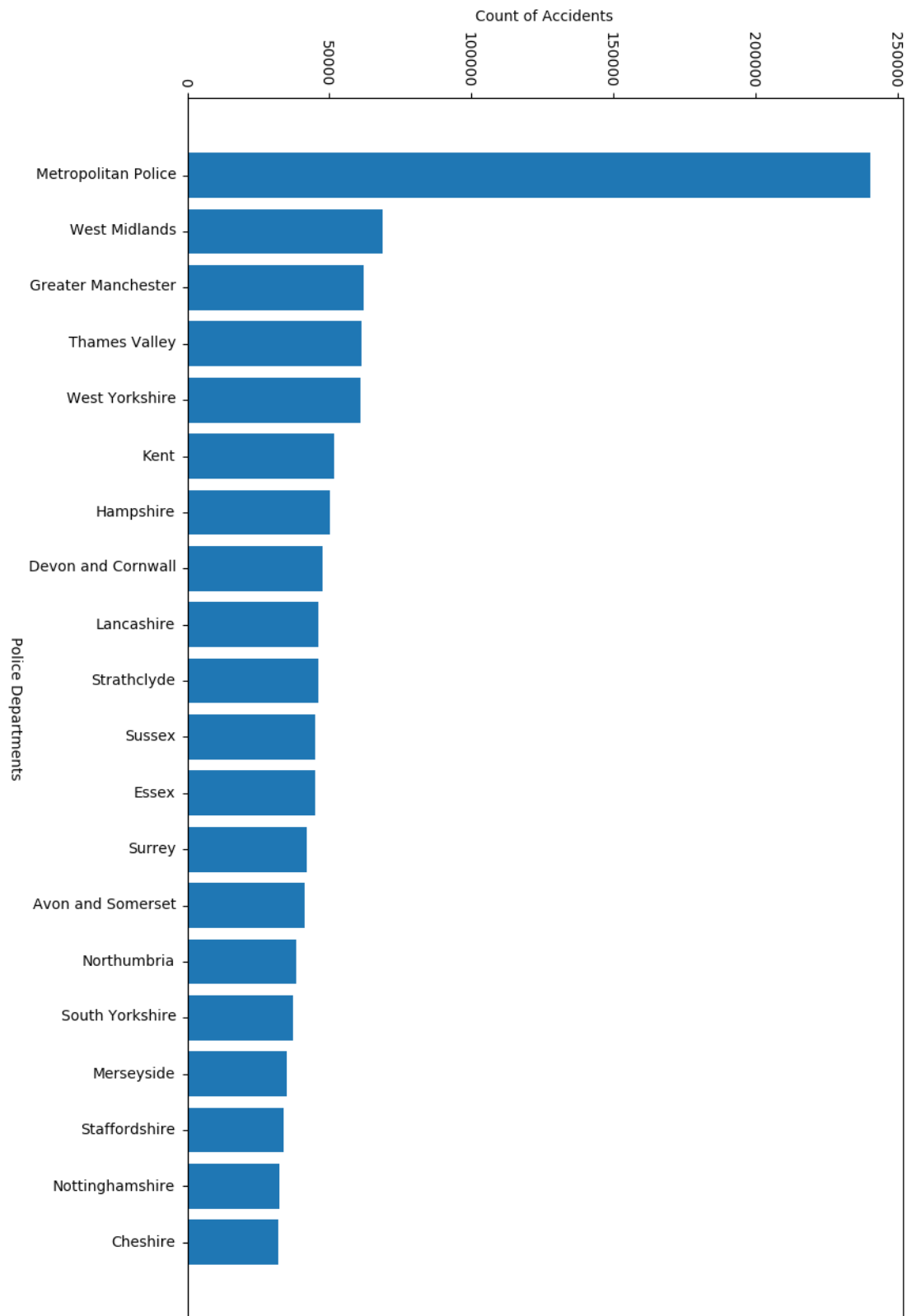
Below graph shows the top 20 UK cities with maximum number of accidents:

Next Page:



Clearly Birmingham, Leeds and Manchester accounts for the most number of accidents in UK and thus would definitely require a higher number of Police than other districts.

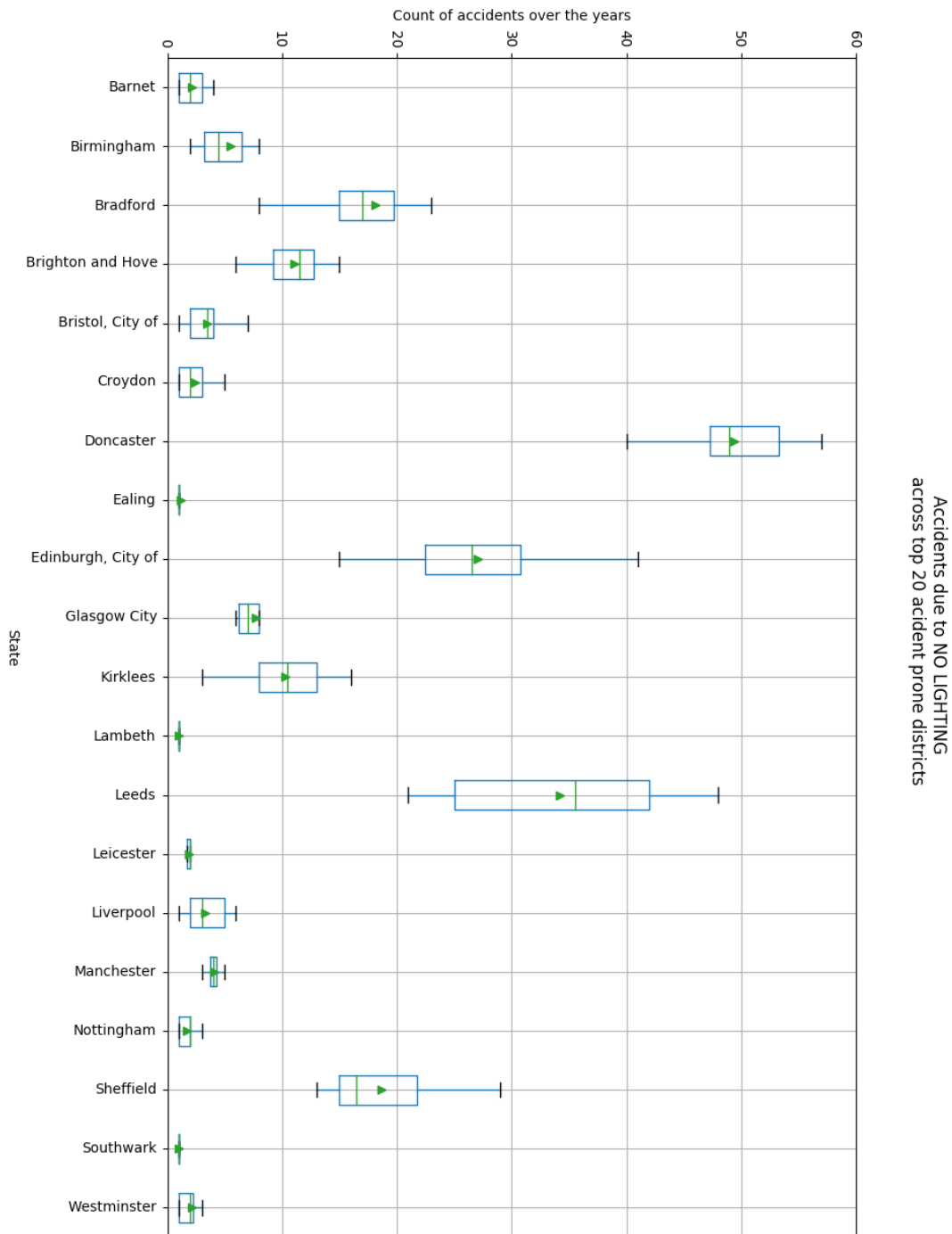
The following visualisation provides the number of accident calls handled by each department of the police in UK.



The Metropolitan police, West Midlands, Greater Manchester departments of police has served the top three most numbers of accident cases over the years. The higher number of Metropolitan police is due to their operations in all the [suburbs](#) around London that shares a considerable amount of accidents every year. However Birmingham may require more police force to address the high number of accidents (analysed later).

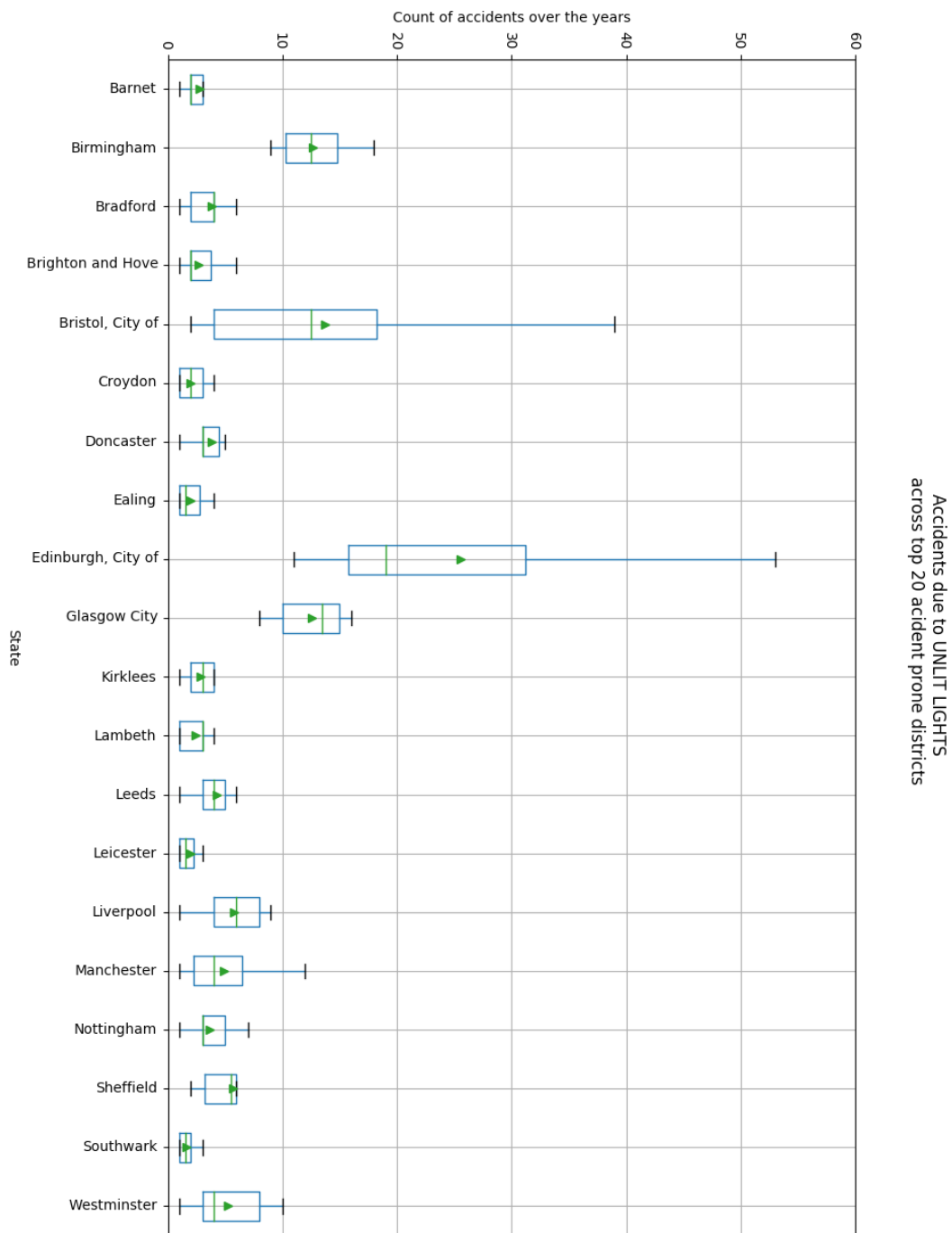
Finding the root cause to the accidents, analysis is done on the Light Conditions for the top 20 accident prone districts.

Accident due to **NO LIGHTING**:



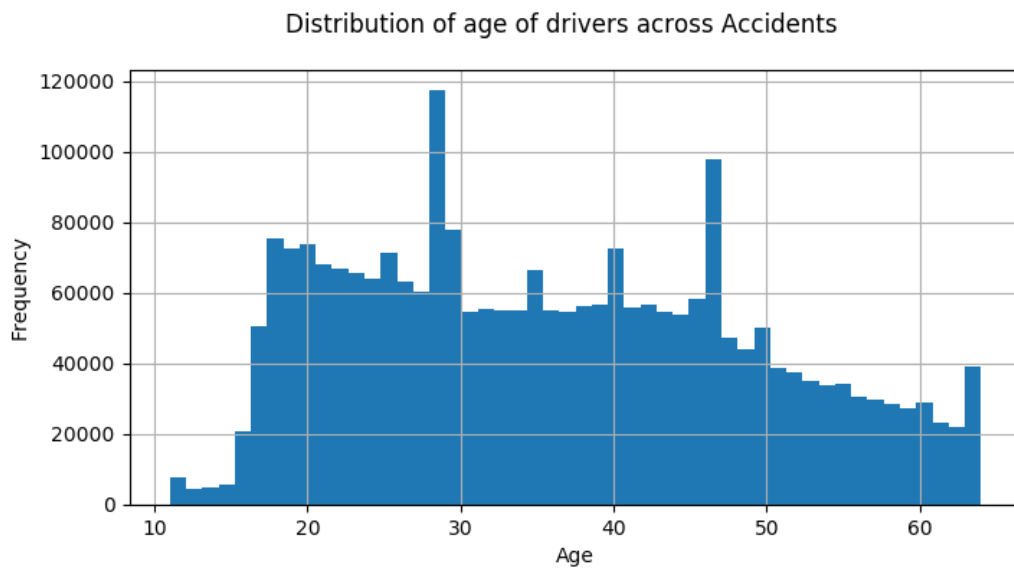
This box plot clearly shows that there is a high number of accidents in the districts of Doncaster, Edinburgh, Leeds and Sheffield due to NO LIGHTING. This insight can be used to put more lights across the streets in those districts to reduce similar accidents.

Accident due to **LIGHTS UNLIT**:



The above graph shows that the district of Edinburgh, Bristol, Glasgow and Birmingham had more accidents than others due to unlit lights. The most impacted district is Edinburgh. These 5 districts require repair in their road lighting service to prevent similar accidents.

In all the city of Edinburgh is most impacted by darkness leading to accidents. The analysis shows that the city of Edinburgh needs most focus on street lighting than others, by the district administrators.



The above histogram shows distribution of the age over the number of accidents. The spread depicts that drivers close to the age of 30 and 47 have most numbers of accidents. Teenagers are the third most group of drivers in the distribution causing accidents.