**Project proposal (Group 1)**

**Members = Patrick Yau,** S**ami Bsata & Sharanjit Singh**

**Project topic:** Road accidents in UK and different factors contributing to cause of accidents.

**Project description:**

**Background:** We have the accidents dataset that has multiple factors, and we have dataset with 307973 and total 23 columns and we are trying to find those factors relation to accidents in UK.

**Aims: -**

* Accidents by month over period of 2021 and 2022
* Accidents relation to weather conditions versus severity of accidents
* Accidents relation to urban or rural area
* Total number of casualties by month in 2021 and 2022 by road type
* Accidents by Light conditions
* Number of accidents relation by Road Surface Conditions
* Number of accidents by severity

**Methodology:**

Pandas, Matplotlib, SciPy and numpy

**Outcomes:**

**Importance of doing this analysis:**

This analysis will help us to find six main factors mentioned above effecting accidents in UK and their relation to it as per the “Road accident dataset”

**Expectations:**

1. Poor weather leads to more accidents and severity of accidents
2. Urban areas have more accidents than rural areas
3. More casualties happen on single carriageway road
4. Poor lighting leads to more accidents
5. Poor road condition leads to more accidents
6. Slight severity accidents happen more

**References:**

<https://www.kaggle.com/datasets/xavierberge/road-accident-dataset>?

<https://natural-resources.canada.ca/energy-efficiency/transportation-energy-efficiency/personal-vehicles/autosmart-driver-training>

Chatgbt

**Summary of findings:**

**Expectations:**

1. **Poor weather leads to more accidents and severity of accidents - Result “False”**

Analysis showed that with “Snowing and high winds” weather condition there were lowest number of accidents happened. So, our statement is false. Data showed a highest number of accidents happened when weather is “Fine and no high winds”.

Accident severity was also “Fatal” status and found highest when weather is “Fine and no high winds” and it’s negligible in other weather conditions.

1. **Urban areas have more accidents than rural areas** - **Result “True”**

Analysis showed that urban areas have a greater number of accidents than rural areas. So, our statement is true.

1. **More casualties happen on single carriageway road** - **Result “True”**

Analysis showed that more casualtieshappened on single carriageway road. So, our statement is true.

1. **Poor lighting leads to more accidents - Result “False”**

Analysis showed that in poor lighting conditions a smaller number of accidents happened while it was found highest when lighting conditions were “Daylight”. So, our statement is false.

1. **Poor road condition leads to more accidents – Result “False”**

Analysis showed that in poor rood conditions a smaller number of accidents happened while it was found highest when road conditions were “Dry”. So, our statement is false.

1. **Slight severity accidents happen more – Result “True”**

Analysis showed that more “slight severity accidents”happened more. So, our statement is true.

* **Accidents by month over period of 2021 and 2022**

**Year 2021:** Overall, we see accidents mostly happen during month of November and lowest in February.

**Year 2021:** Overall, we see accidents mostly happen during month of November and lowest in December.