CAR ACCIDENTS

UK / 2005-2015

Layan Balbisi - Power BI

Introduction

Dataset about car accidents in UK in period of 2005-2015 were used in this project.

- Data preprocessing were applied
- Dashboard were designed using this data , utilizing Power BI
- Hidden insights were presented

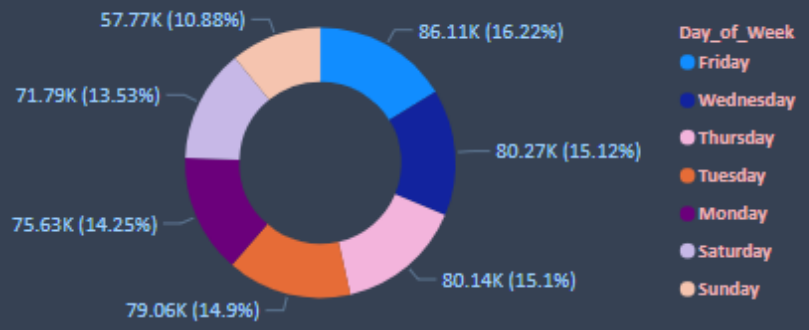
CAR ACCIDENTS IN UK

YEARS FROM 2005 TO 2015

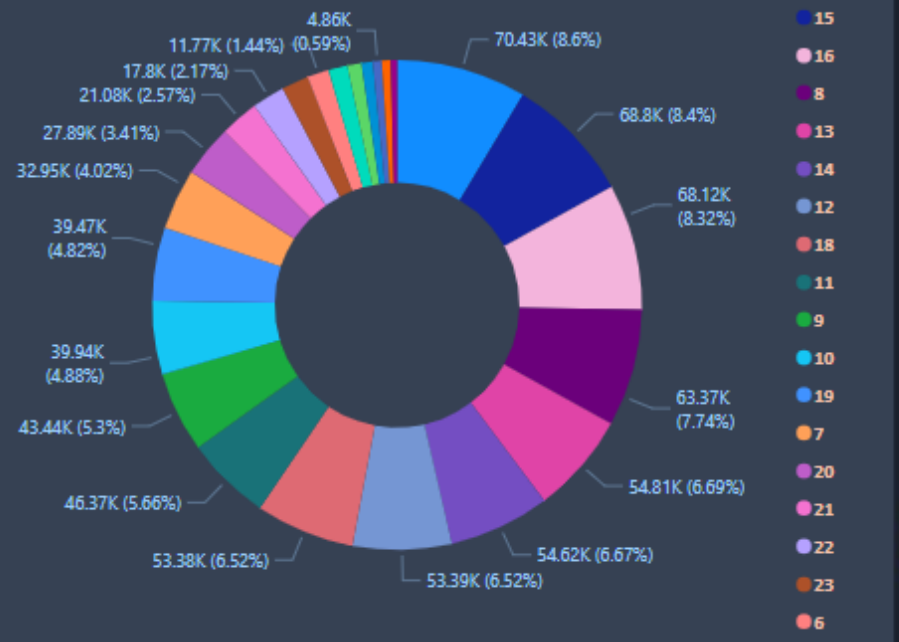
23T
Sum of No_of_cars

530.57K
Count of Accidents

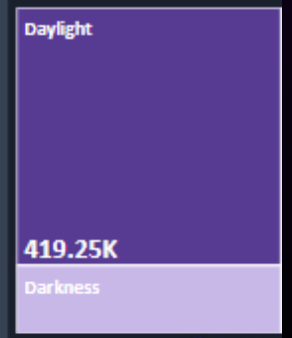
Count of Accident by Day of Week



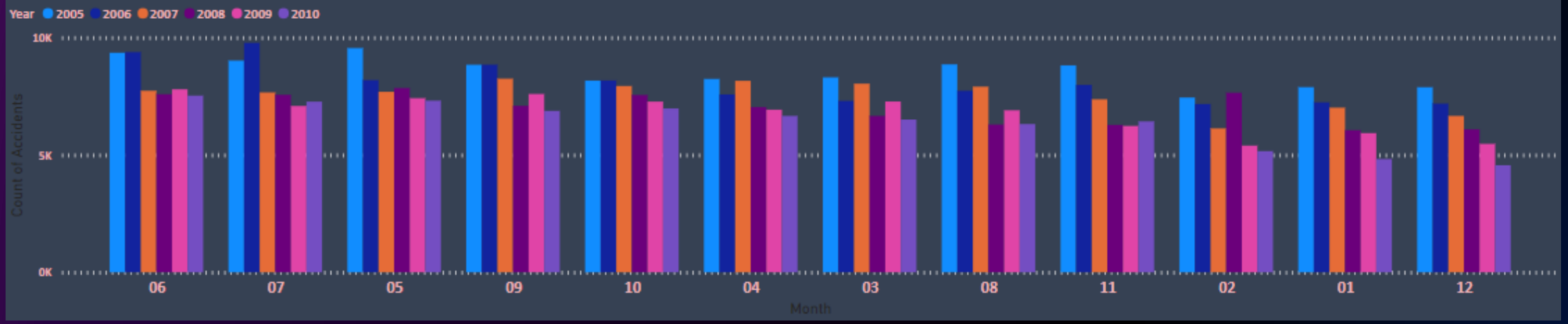
Count of Accident_Index by Time



Count of Accidents by Light_Conditions

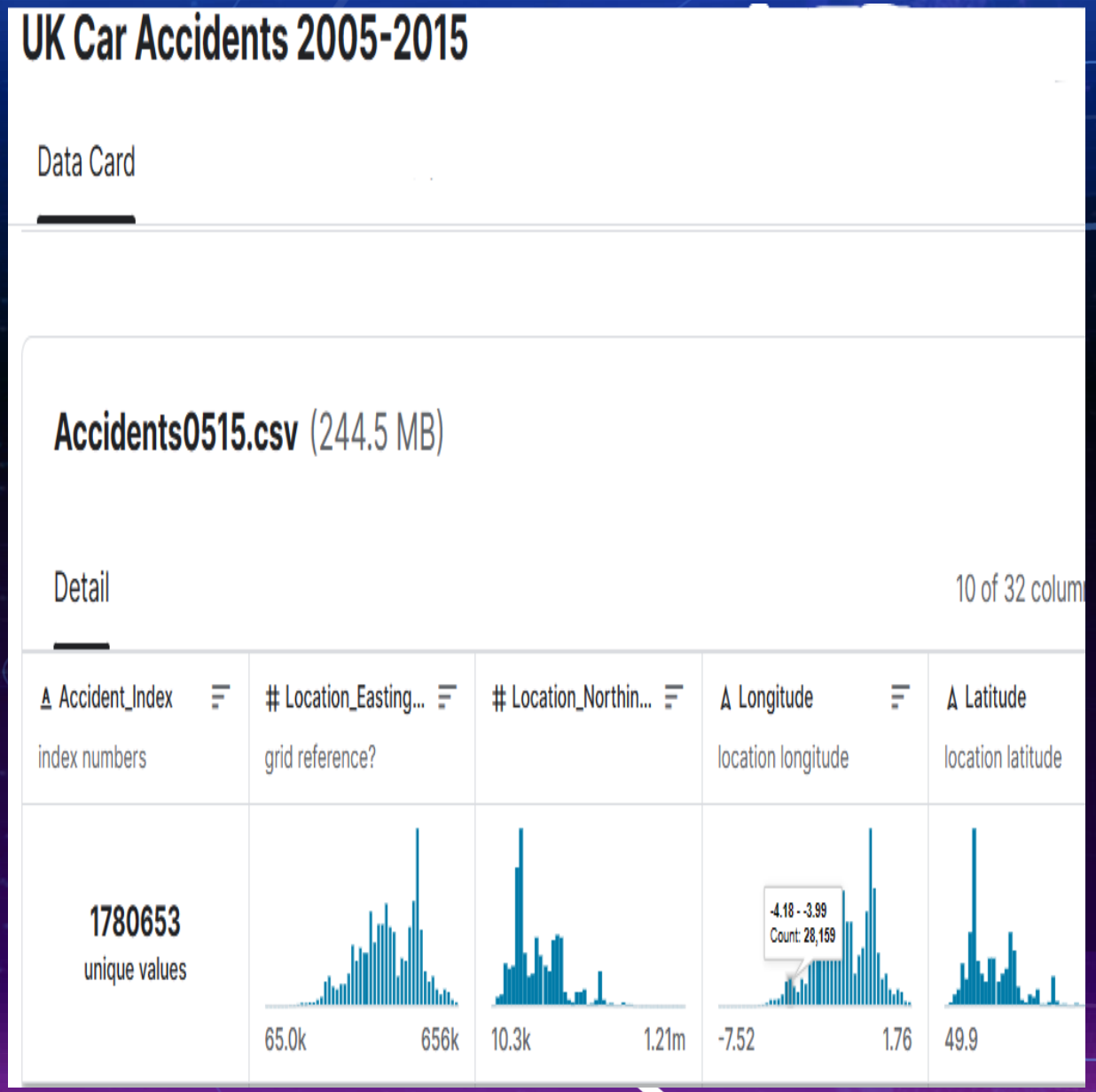


Count of Accidents by Month and Year



Data choosing

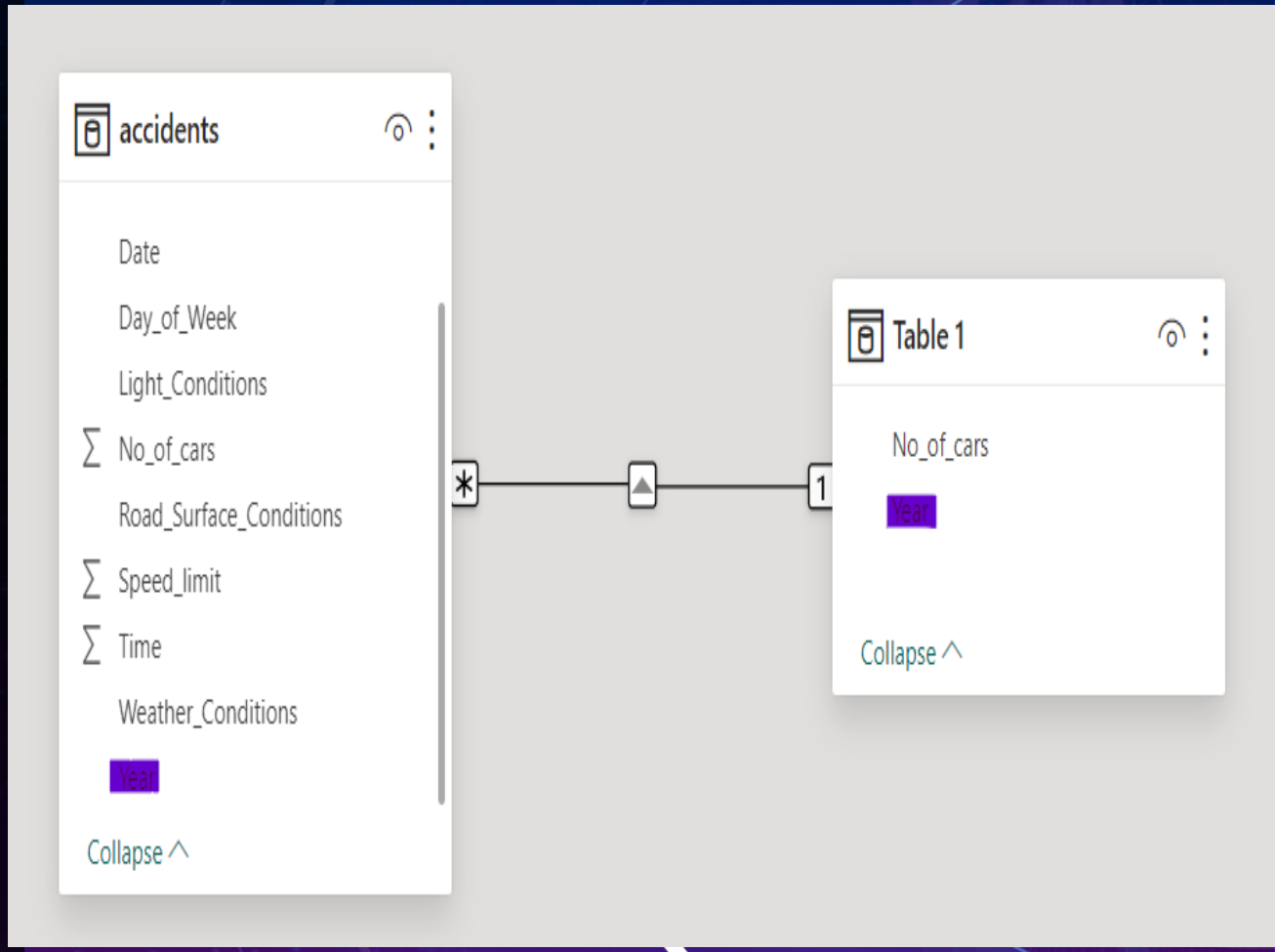
The dataset were selected from Kaggle, consisting of 32 features that describe the accidents in the UK.



Data preprocessing

Feature selection were applied , to choose 11 feature from the 32 , depending in how useful they are to the study.

Then the dataset were merged with other dataset from the web that mentions the number of cars in UK during that period .



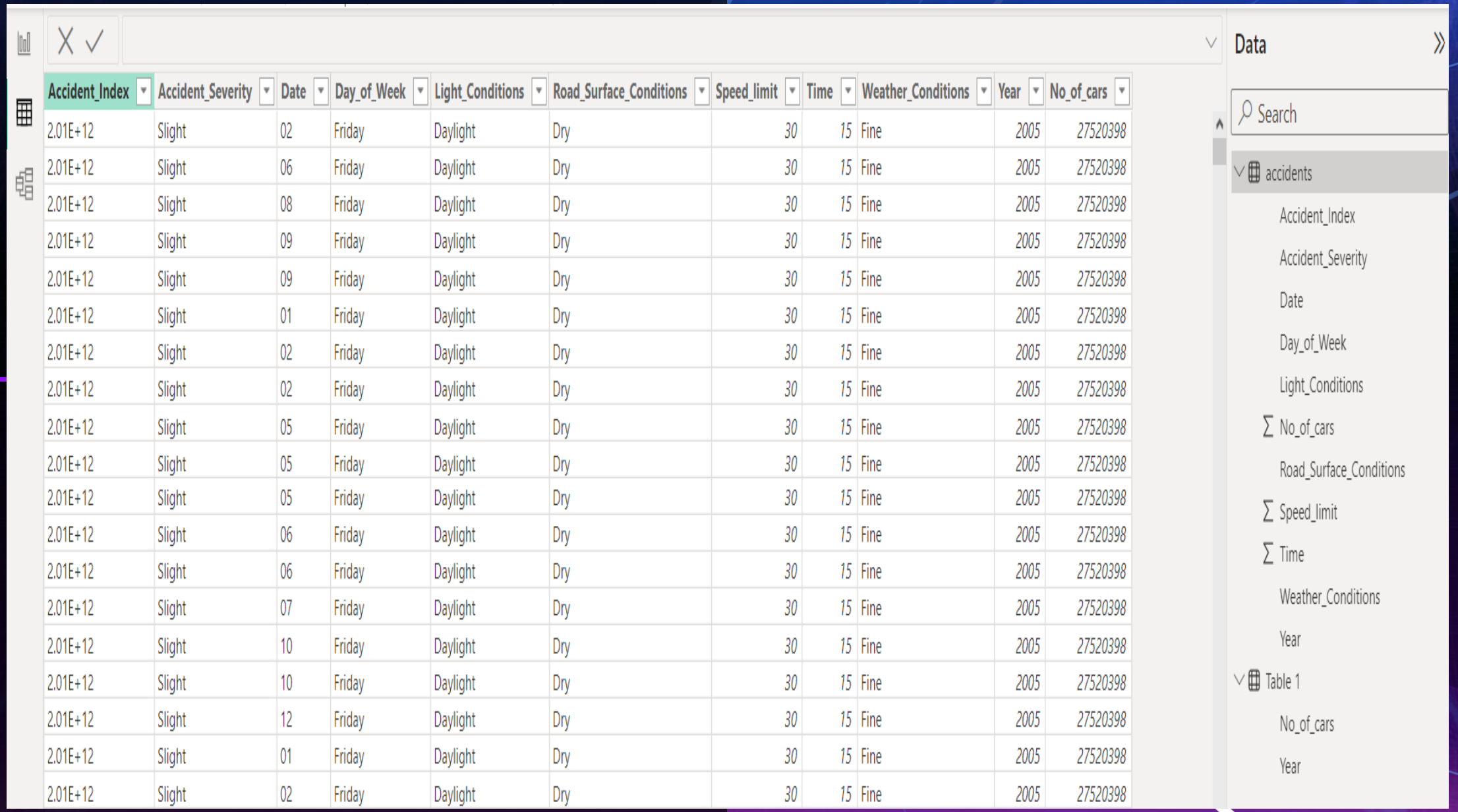
Preprocessing

Beside the feature selection , these steps were also applied:

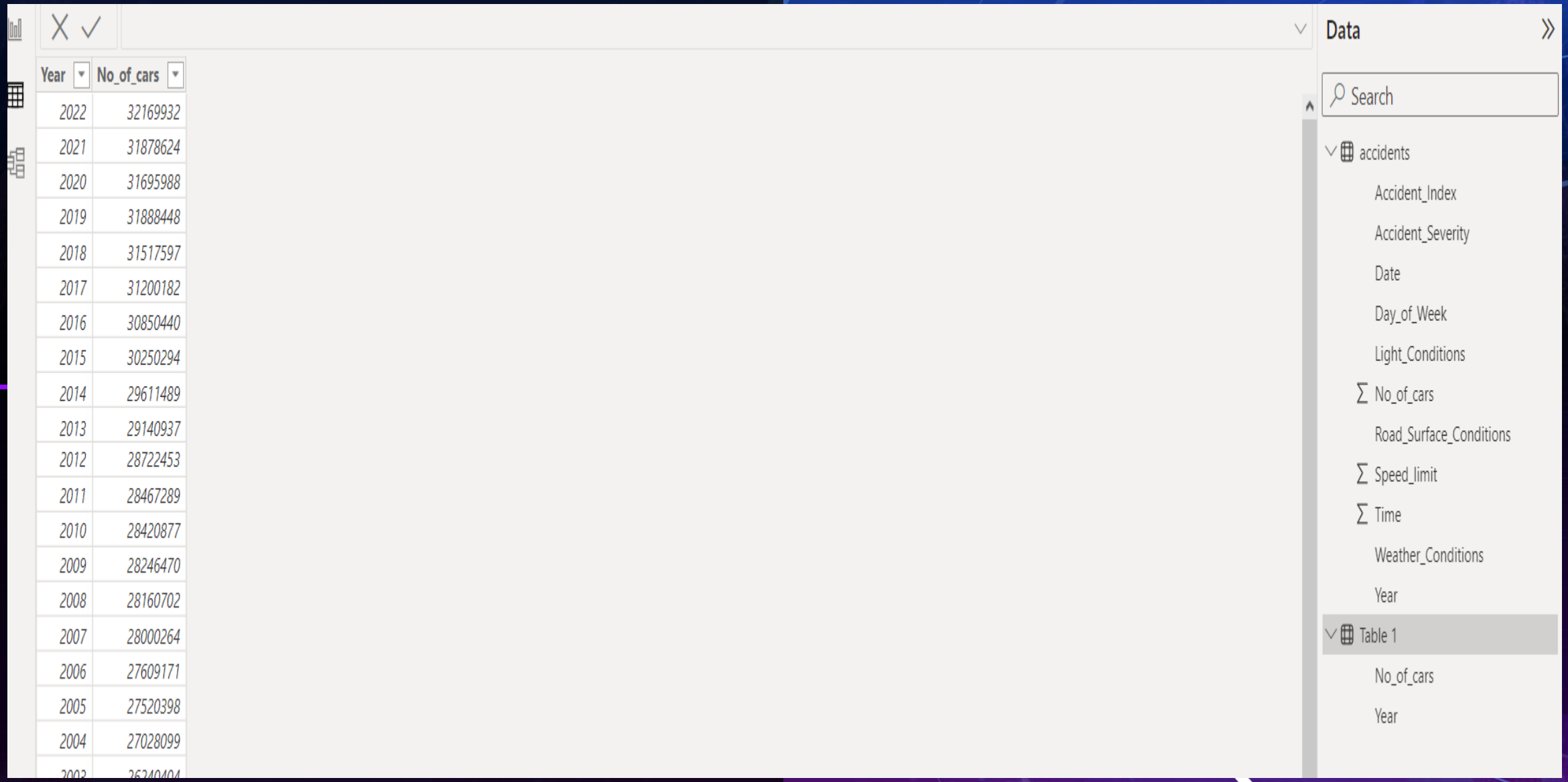
- Extract the month from the date feature
- Extract The Hour from the time feature

- Drop the null record in each feature , I did not choose to replace them because there count were not huge , and the data size is large

- Replace the values naming in some feature , to make them clearer to understand.



Accident_Index	Accident_Severity	Date	Day_of_Week	Light_Conditions	Road_Surface_Conditions	Speed_limit	Time	Weather_Conditions	Year	No_of_cars
2.01E+12	Slight	02	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	06	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	08	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	09	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	09	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	01	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	02	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	02	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	05	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	05	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	05	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	06	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	06	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	07	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	10	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	10	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	12	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	01	Friday	Daylight	Dry	30	15	Fine	2005	27520398
2.01E+12	Slight	02	Friday	Daylight	Dry	30	15	Fine	2005	27520398


Year
No_of_cars
2022 32169932
2021 31878624
2020 31695988
2019 31888448
2018 31517597
2017 31200182
2016 30850440
2015 30250294
2014 29611489
2013 29140937
2012 28722453
2011 28467289
2010 28420877
2009 28246470
2008 28160702
2007 28000264
2006 27609171
2005 27520398
2004 27028099
Data
Search
accidents
Accident_Index
Accident_Severity
Date
Day_of_Week
Light_Conditions
No_of_cars
Road_Surface_Conditions
Speed_limit
Time
Weather_Conditions
Year
Table 1
No_of_cars
Year

Hidden Insights

All these insights were observed from the charts in the dashboard.

- Friday as a day , has the highest proportions of the accidents , the reason might be that Friday is the day before the weekend in UK , most people leaving there works , tired from the rest of the week .
- Also, At Hour 5:00pm , has high p proportions of the accidents , it might be because it’s the average hour of leaving work /schools…etc.
- More accidents happen in daylight rather than darkness , probably because there is more traffic in this period of the day.

Thank You

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Business Intelligence

Power BI

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