AVIATION DATASET ANALYSIS

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Business Problem and objectives

- Our company is entering aviation industry to operate planes for private and commercial use but the company lacks understanding of the risks involved in aircraft operations
- Our task is to analyze the dataset and identify lowest-risk aircraft types for the company to consider.

Data understanding and exploration

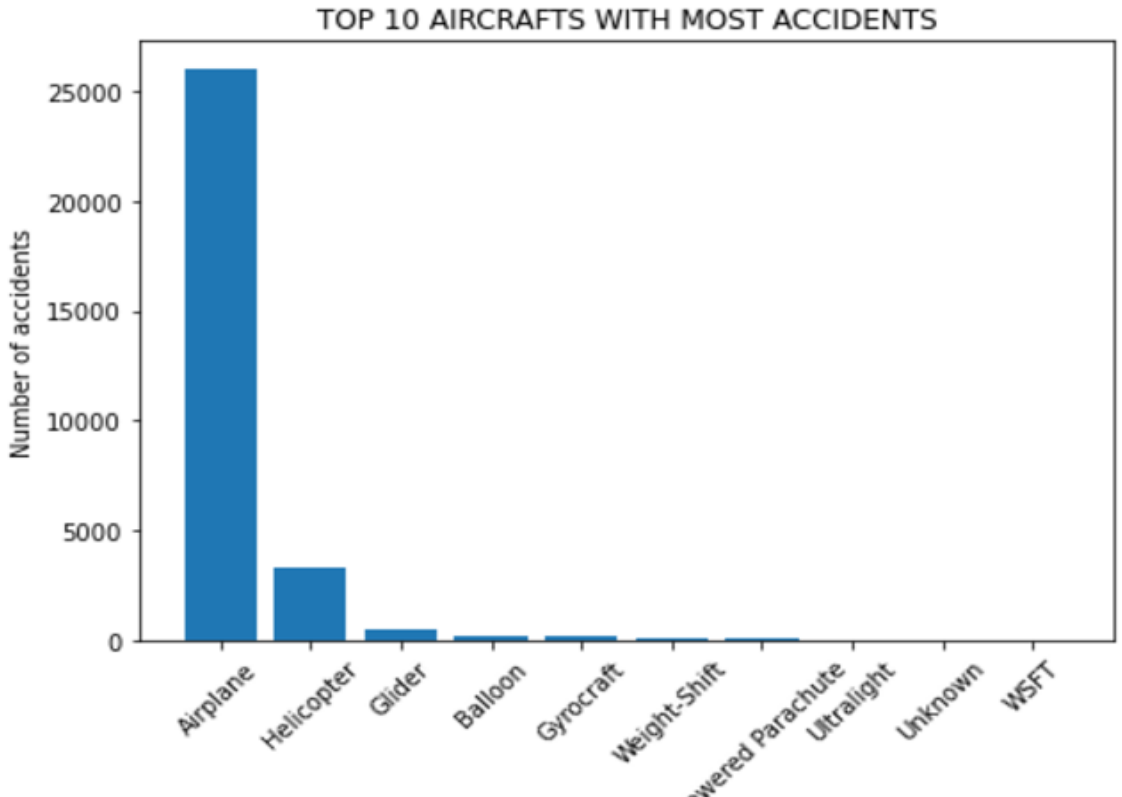
- I did the analysis using the pandas library and found out some features about the data
- Our dataset has 88889 rows and 31 columns
- Not all columns are necessary for out analysis.
- I will first clean and filter our data
- The data consists of missing values and values which are irrelevant to the analysis

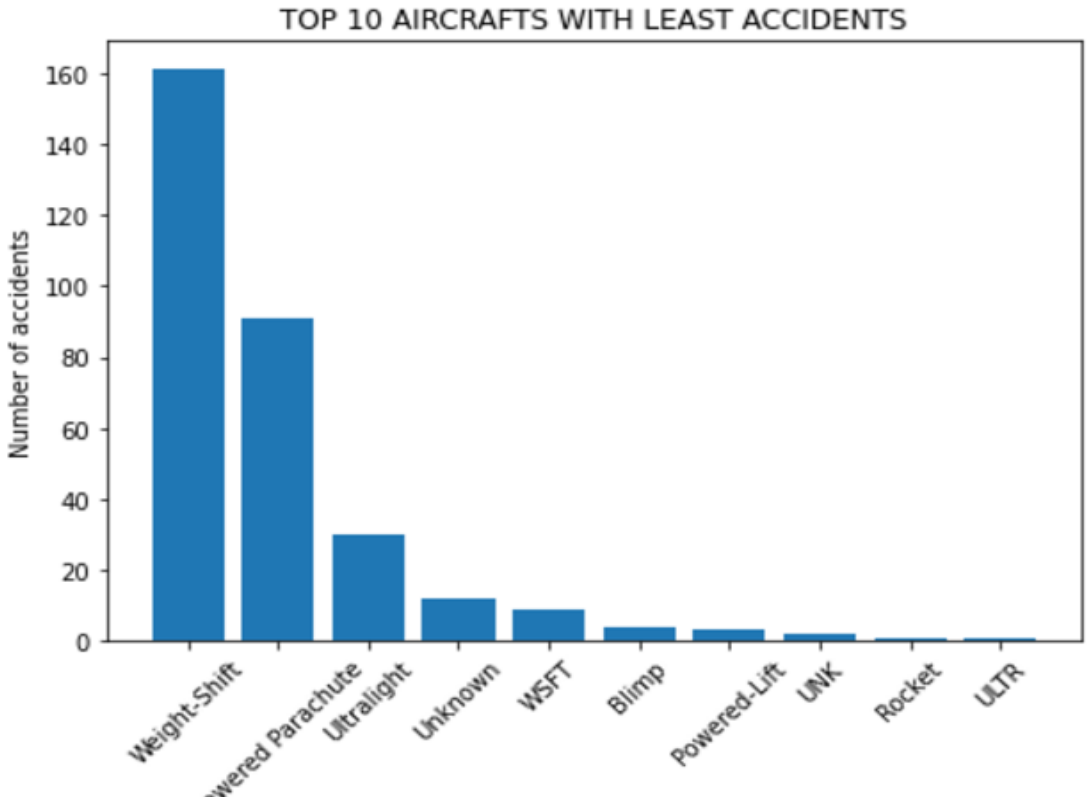
DATA ANALYSIS

- Necessary columns I needed for analysis include :investigation type, aircraft category, aircraft damage and injury severity
- Other columns were dropped together with missing values or irrelevant values
- The analysis included finding distributions of aircraft types with aircraft damage, investigation type and injury severity
- Data was grouped into various categories using groupby functions and applying multiple filters to our data

FINDINGS

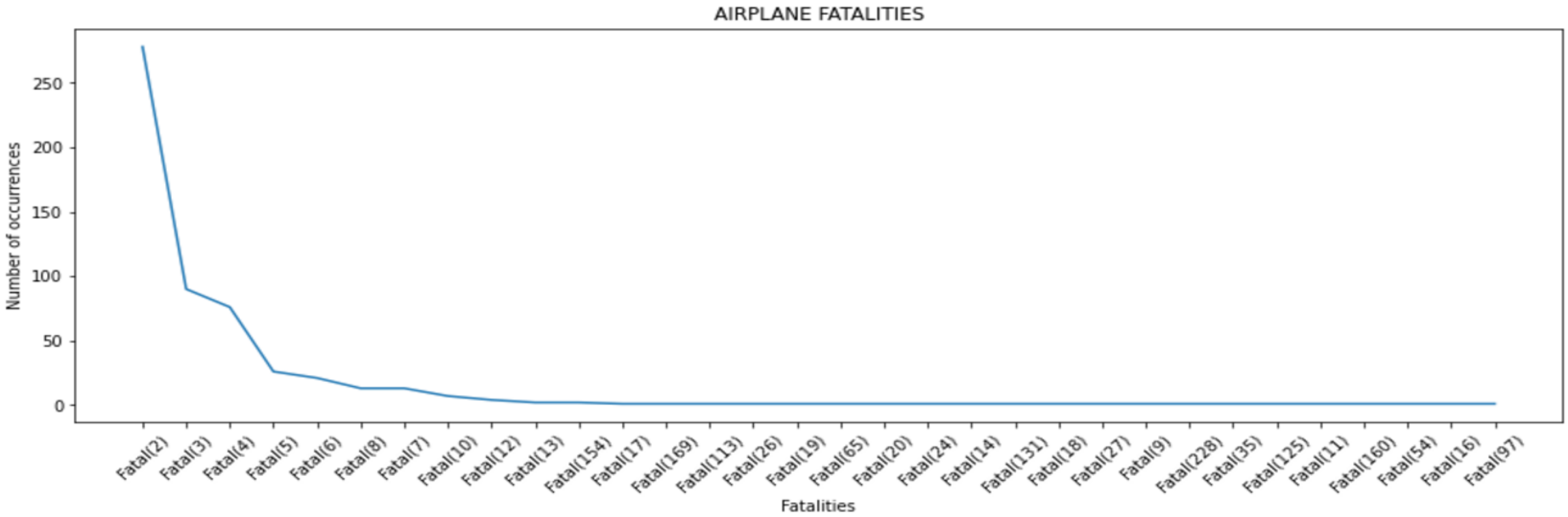
- Airplanes and helicopters have the most accidents BUT Rockets and ULTRs have the least accidents





FINDINGS

- Airplanes have the highest non fatalities occurrence of more than the other aircrafts(above 20000)



CONCLUSION

- Airplanes have the highest fatality occurrences with an average of 17 followed by helicopters with an average fatality occurrence count of 7.
- They however also have the highest count of non fatalities followed by helicopters. Airplane count is up to 9 times of helicopter count.
- Aircrafts with least numbers of accidents DO NOT have any non fatalities values indicating all accidents are fatal

RECOMMENDATIONS

- Hence, I would recommend Airplanes for entry into business as this is the aircraft with the highest number of non fatalities, hence quite safe for consumers.
- The risk being considered here is in terms of the non-fatalities
- If the risk being considered is in terms of damages I would recommend balloons as the have the least damages while airplanes have the most however accidents here result in fatalities only

THANK YOU

Any Questions?

CONTACTS:

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