AIRCRAFT SAFETY ANALYSIS

OVERVIEW

- The purpose of this presentation is to provide an overview of analysis and recommendation of aircraft safety and precautions.

- I will start by discussing business understanding followed by data overview then the followed by data analysis and end with key findings.

- Project goal: the main aim of this project is to identify the type of aircrafts commonly used in various type of businesses, determining the number of engines that are prone to accidents and how weather conditions .

Business Understanding

▶ Problem statement: identifying the least risky aircraft for the company new venture and also ensuring a competitive and prices.

▶ Key stakeholders: stake holders will be of wide range both internally and externally

▶ Resources: Industry reports, financial budget, aircraft safety data, and expert consultations.

▶ Risks: Potential for financial losses and safety incidents related to accidents.
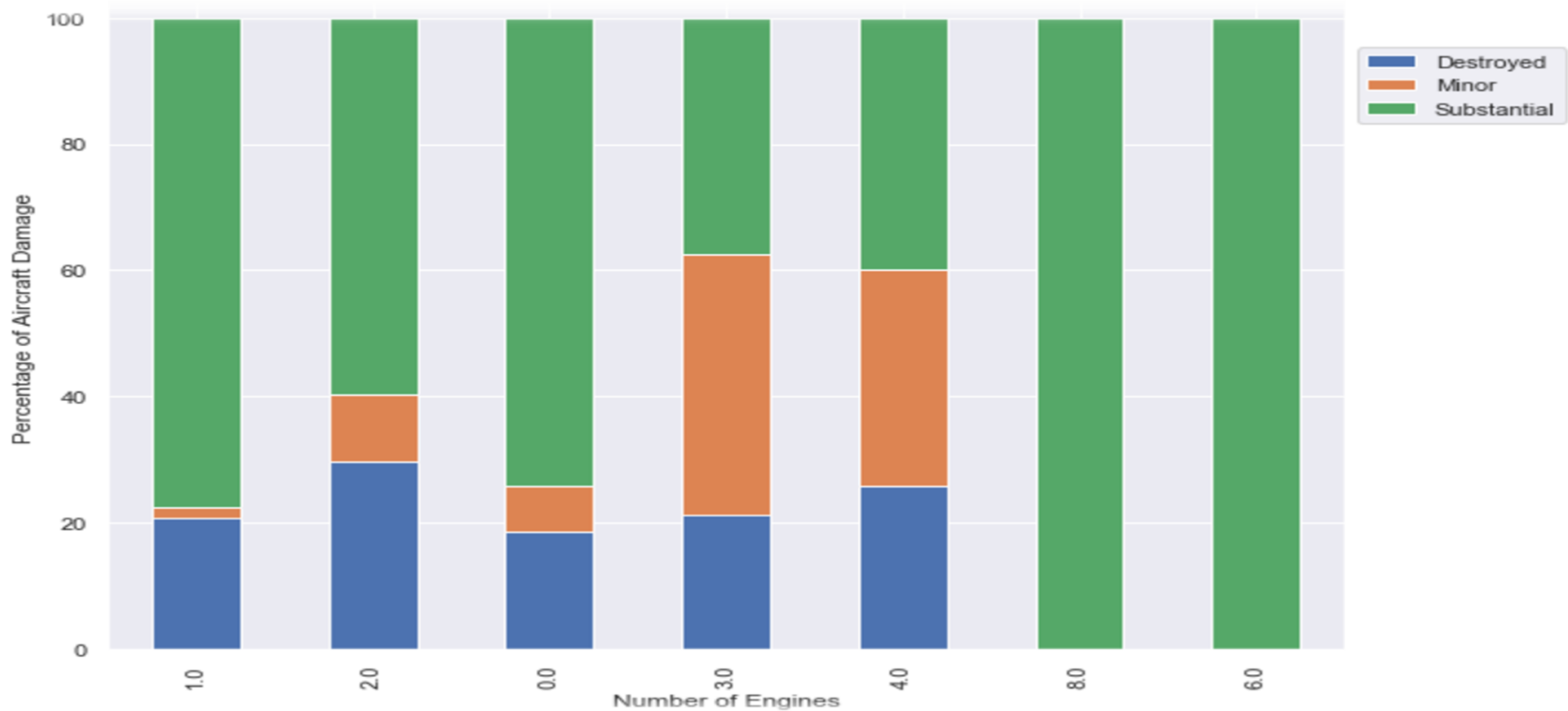
Data Understanding.

▶ My project have information that has previously been collected by various researchers . The data is stored in **Kaggle** whereby it is updated regurarly , and is stored in a **csv format**. When I read the data to my notebook using pandas library, I get a data frame with 90348 rows and 31 columns. When we look at the data data frame, we realize that the information we are dealing with is from investigation of aircraft accidents.
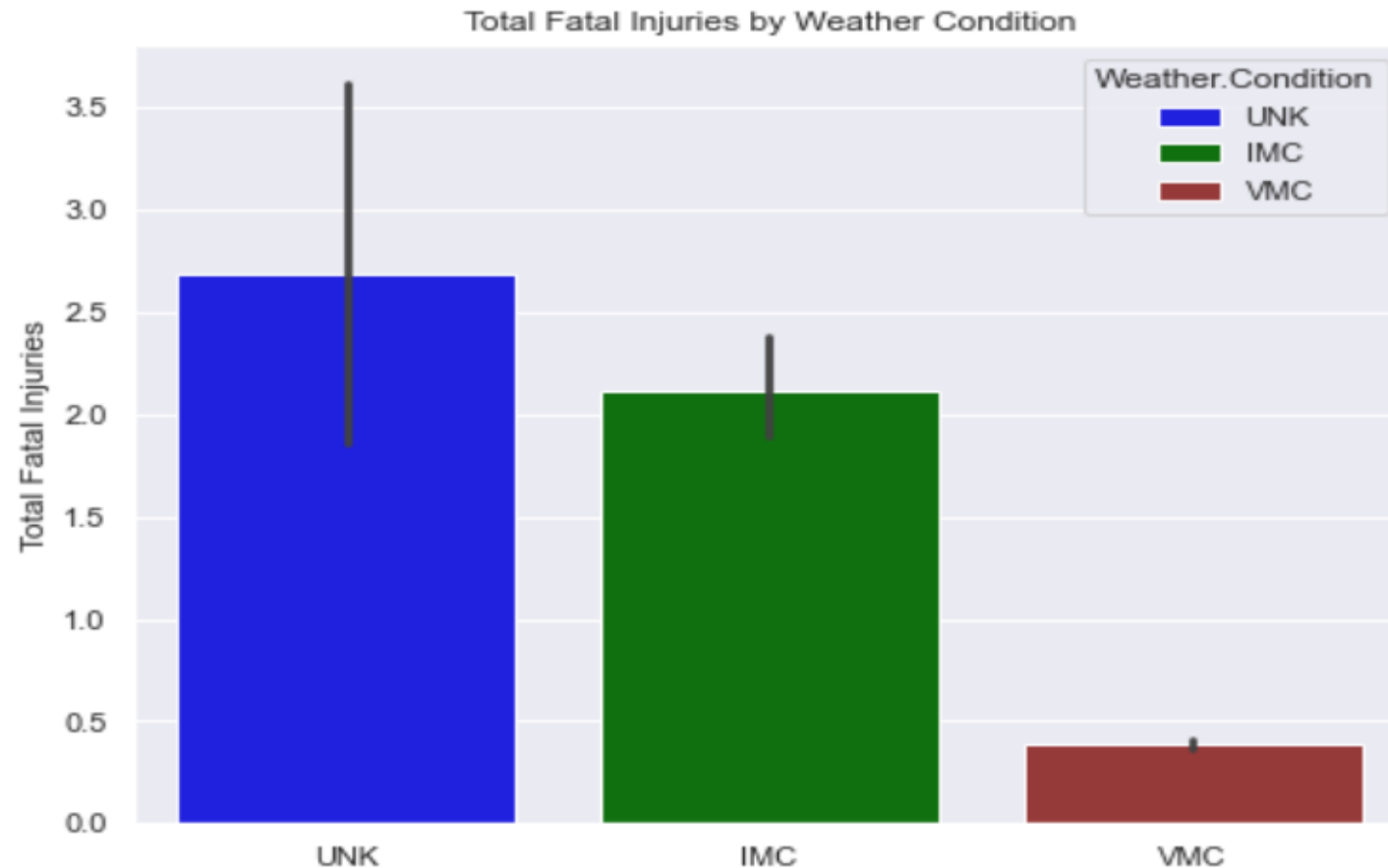
Data Analysis

▶ The next step after understanding the data is to determine what is required thus entering the market with comprehensive and relevant knowledge.

▶ I deleted columns that had a lot of missing data and others that I found i] they are of no any use in our analysis.

▶ I also filled missing values in categorical values with bfiil and ffill and that of numerical values with median since its less sensitive to outliers as compared to mean.

Data visualization

The plot below shows the relationship between aircraft damage and number of engine in an aircraft.
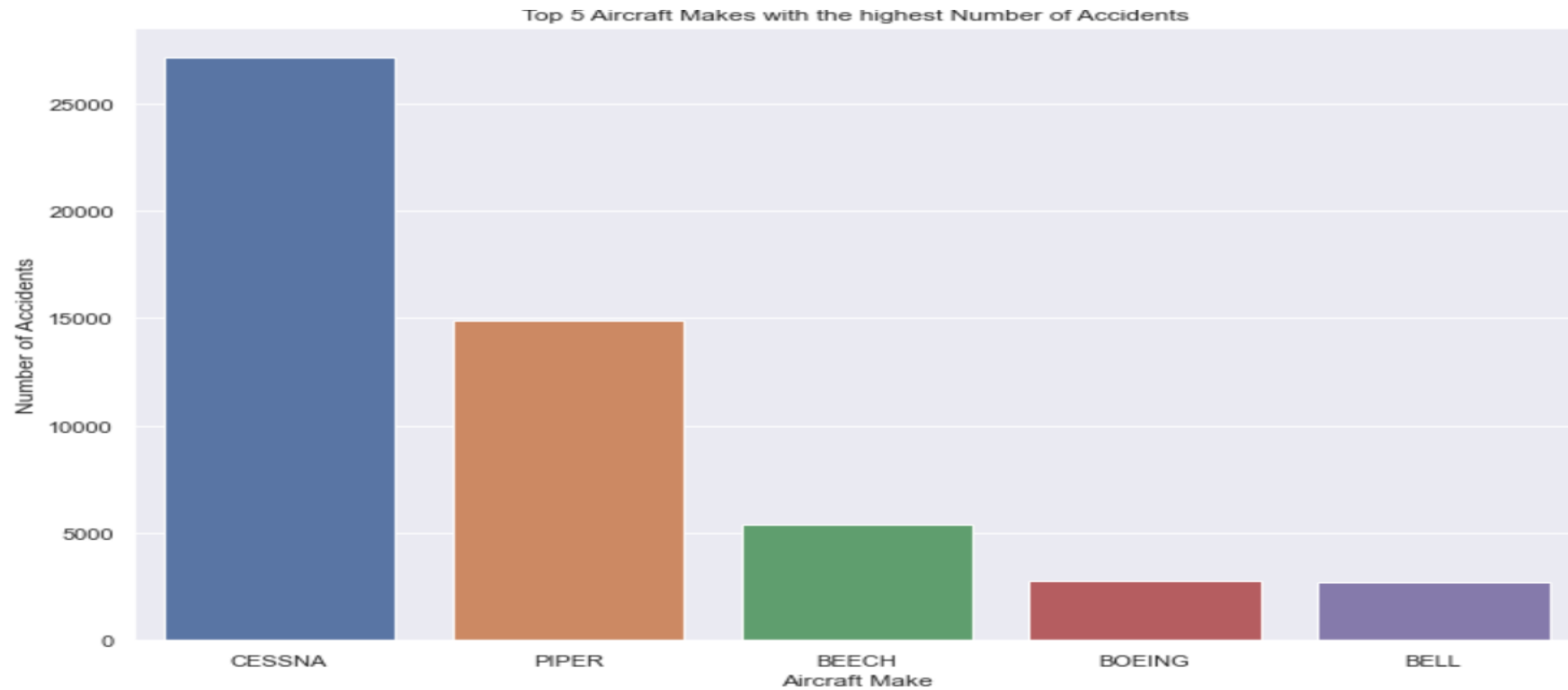
The plot shows the relationship between total fatal injuries and weather condtions

Total Fatal Injuries by Weather Condition

The figure show the relationship between aircraft make and numbers of injuries

Top 5 Aircraft Makes with the highest Number of Accidents

Recommendations

1.Aircrafts with three number of engines should be be given priority when purchasing since they are more safe when accident occurs as it records a high number of minor injuries as compared to others

2. Cessna get involved in most of accidents as compared to other aircraft make thus should be given the least priority in purchasing

3.Most of fatal accidents occurs during UNK weather condition thus the company should be very keen on weather condition also

Thank you:

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