THIS REPORT PROVIDES KEY INSIGHTS AND FINDINGS

AVIATION ANALYSIS

This presentation will explore critical data trends, identify good aircraft, and give recommendations based on my thorough analysis of my findings.

INTRODUCTION TO THE ANALYSIS

This report provides an in-depth overview of the recent data analysis conducted on market trends. By examining various factors that influence aircraft crashes, I aim to identify key insights that will inform our strategic decisions.

BUSINESS UNDERSTANDING

1. The objective of this analysis is to determine a low-risk aircraft for the company to venture into in their new business endeavor. The company has given out a dataset containing aircraft crashes.

2. Safer aircraft models typically correlate with better maintenance records and fewer operational disruptions. Choosing a low-risk aircraft may result in fewer downtimes, more efficient fleet utilization, and lower long-term maintenance and compliance costs.

3. Understanding historical crash trends allows the company to proactively mitigate safety risks. By selecting a statistically safer aircraft model, the company can reduce potential liabilities, insurance costs, and protect its brand reputation in the competitive aviation industry.

DATA UNDERSTANDING

TOOLS USED

I used Jupyter Notebook to do the analysis and to understand my dataset.

THE DATASET

The dataset used had records of accidents from 1962 to 2023. The dataset has a total of 31 columns and 88889 rows. Some of the columns included total fatal injuries, location, event ID, total uninjured passengers, aircraft category, among others.

DATA RESEARCH

I researched some of the abbreviations used in the aviation sector. Examples are VMC, which means Visual Meteorological Conditions. This refers to good weather where there are clear skies, good visibility. Another abbreviation is IMC, Instrumental Meteorological Conditions. This is where the weather is bad. It includes fog, heavy skies, and the pilots are required to navigate the skies using instruments and not relying only on their eyes for visibility. UNK refers to unknown.

DATA PREPARATION AND ANALYSIS

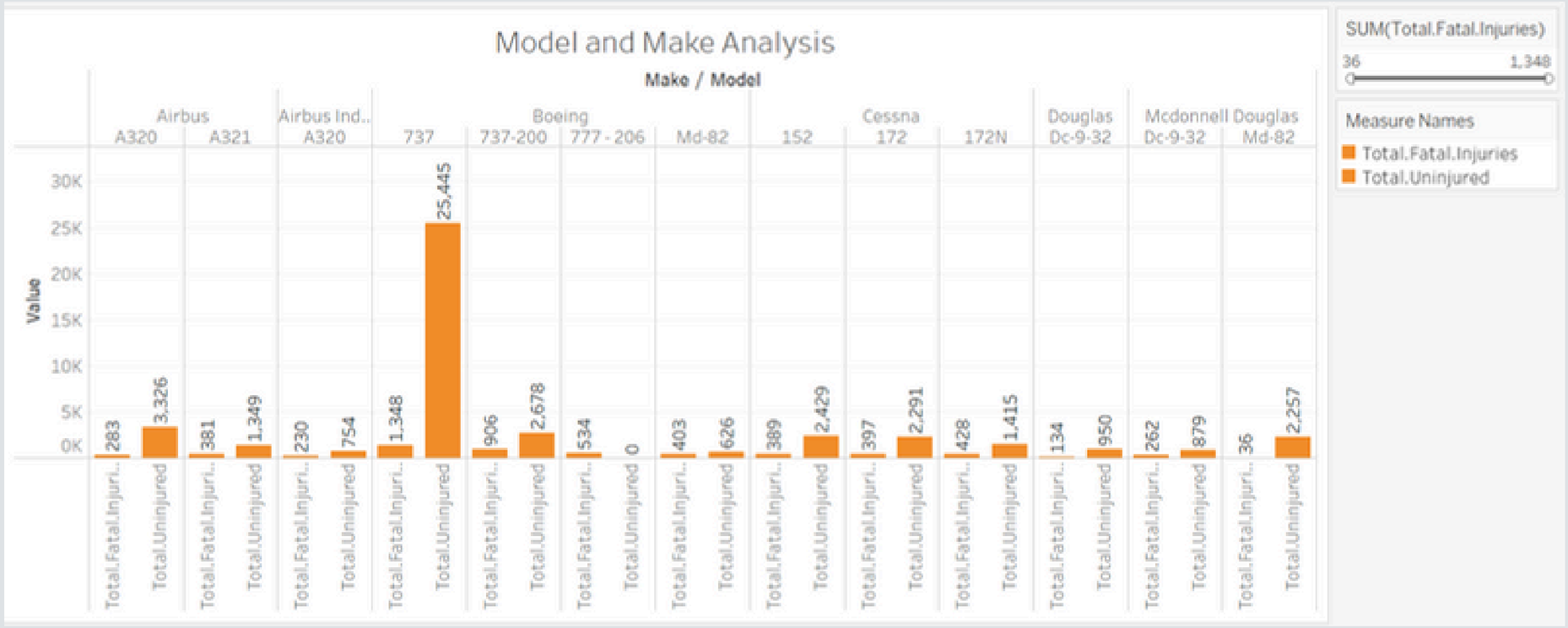
1. I started with cleaning the dataset, filling in the missing values, dealing with placeholders, formatting the columns, and identifying and dealing with the outliers.

2. Next, I choose columns that would help me in my analysis, such as total fatal injuries, location, among others.

3. Then I made visualizations in order to see the ternds in my data.

DATA PREPARATION AND ANALYSIS

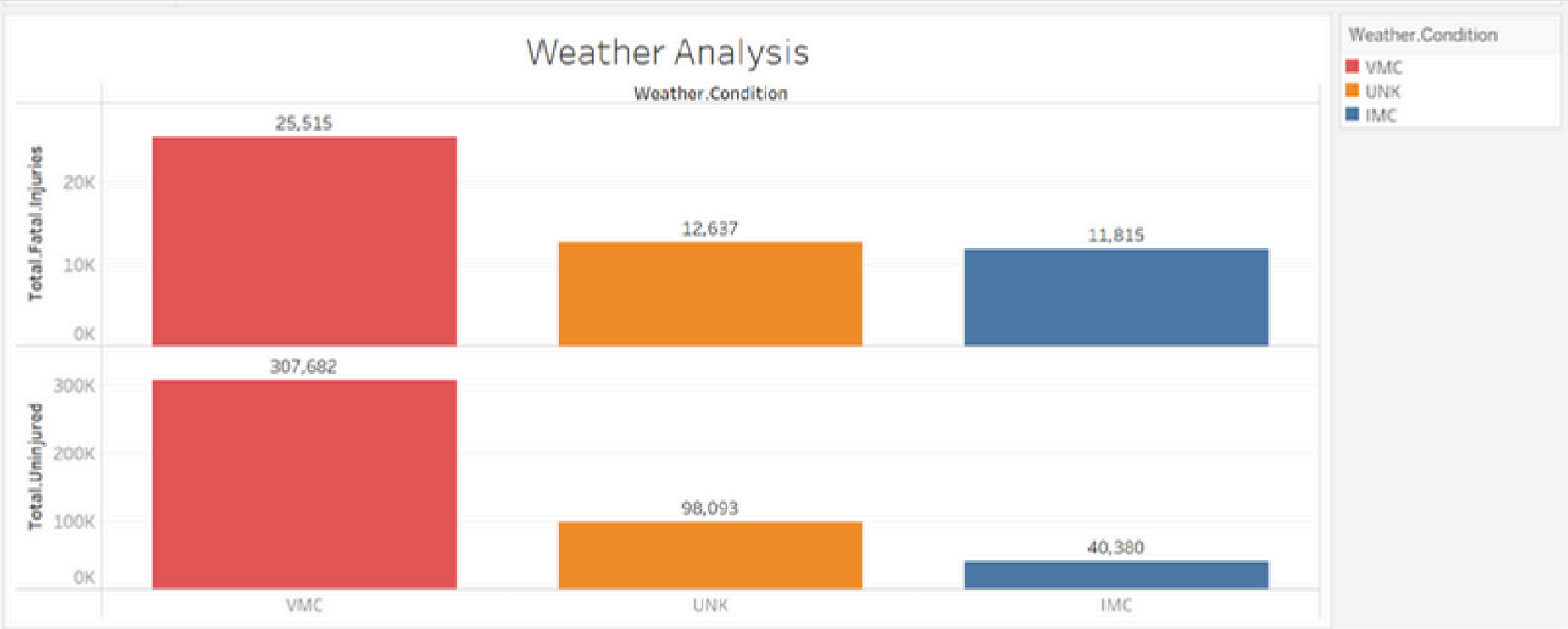
1



From this graph in my analysis, the best model to go with is Boeing 737, as it has more uninjured individuals and relatively fewer fatally injured passengers. Its an airplane.

DATA PREPARATION AND ANALYSIS

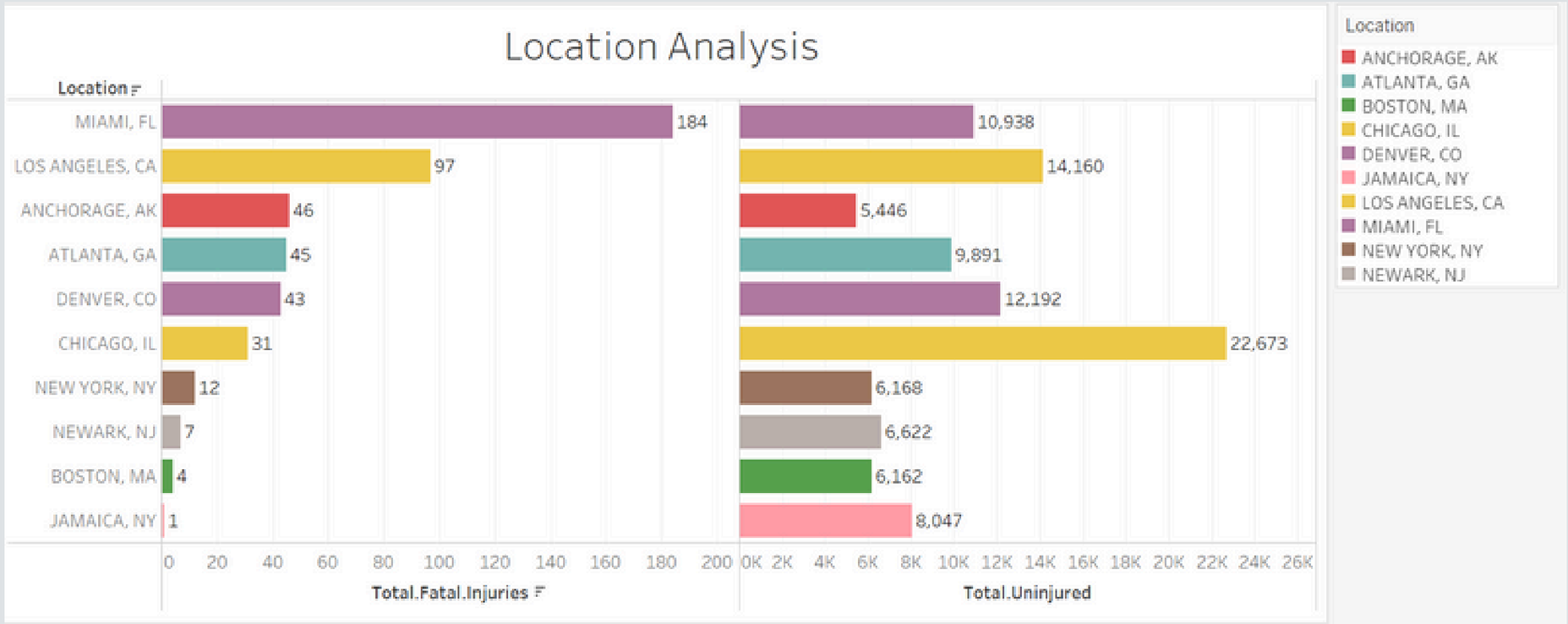
2



From this graph in my analysis, the best weather is the Visual Meteorological Conditions (VMC), but suprisingly, the worst weather to travel is also VMC.

DATA PREPARATION AND ANALYSIS

3



From this graph in my analysis, Miami and Los Angeles are areas to avoid due to the fatality of their accidents, while Chicago is the best place to travel in due to its high number of uninjured passengers.

SUMMARY OF KEY RECOMMENDATIONS

These recommendations will enhance overall business success

- Invest in airplanes, especially Boeing 737.
- Ensure that pilots rely on instruments to navigate the skies, as they may become overconfident and neglect them during good weather, which can lead to accidents.
- Avoid Miami and Los Angeles for the first few travels due to their high fatal accidents.

Q & A SESSION

THANK YOU.

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