TITLE: RISK ASSESSMENT OF AIRCRAFT FOR NEW BUSINESS ENDEAVOR SUBTITLE: AN ANALYSIS OF AVIATION DATA

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OVERVIEW

Objective

To analyze aviation data, identify aircraft with the lowest risk for potential business investment.

It is important to understand risks associated with aircraft and crucial for informed decision-making in the aviation industry.

BUSINESS UNDERSTANDING

• As the company diversifies into the aviation sector, it is essential to evaluate potential risks.

The Goal is to:

- Identify low-risk aircraft for commercial and private operations.
- Provide actionable insights for purchasing decisions.

DATA UNDERSTANDING

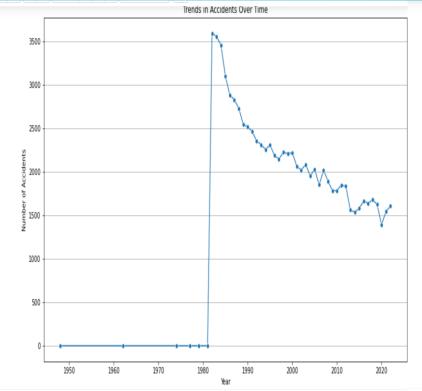
Dataset: NTSB Aviation Accident Data (1962–2023)

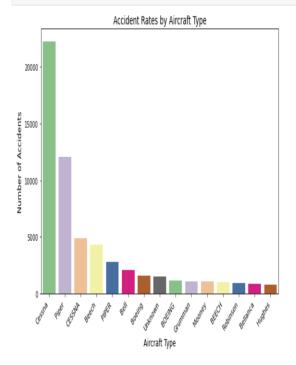
Key Variables:

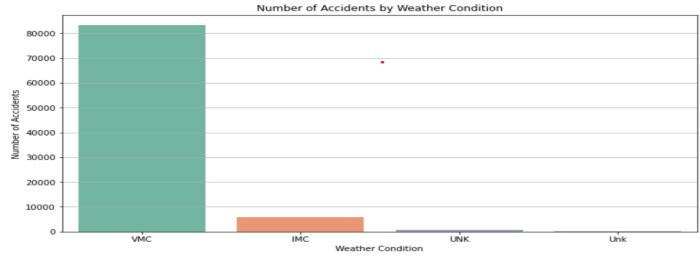
- Trends in fatal injuries over time.
- Accidents Rates by Aircraft Type.
- Number of accidents by weather Condition.

Data Cleaning & Processing:

- Handling missing values.
- Standardizing aircraft categories.
- Filtering relevant accidents.







DATA ANALYSIS

Methodology

Data cleaning and preprocessing to handle missing values.

Analysis techniques including injury statistics, accidents rates and categorization of aircraft types.

Visualizations:

Bar charts for injury distributions, line graphs for trends in accidents and scatter plots for risk assessment.

FINDINGS

Trends in Fatal Injuries Over Time: there was a significant spike in fatal injuries in the late 1970s, followed by fluctuating but generally declining trends in recent decades.

Improvements in aviation safety regulations and technological advancements have contributed to a reduction in fatal accidents over time.

Countries with the Most Fatal Injuries: Certain countries, such as the United States, Russia, and Brazil, have the highest number of fatal aviation accidents.

These countries likely have higher accident numbers due to a larger number of flight operations, diverse weather conditions, and variations in aviation safety regulations.

RECOMMENDATIONS

- Aircraft with Lowest Risk:
- The aircraft with the lowest total injuries is the 2007 Savage Air LLC.

- Key Factors for Selection:
 - Safety record, reliability, maintenance costs.
- Evaluate market demand and operational costs alongside safety metrics

THANK YOU

DO YOU HAVE ANY QUESTIONS?

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LOOKING FORWARD TO YOUR FEEDBACK!