IDENTIFYING LOW RISK AIRCRAFT FOR A STRONG START IN AVIATION

OVERVIEW

- Business Understanding
- Data Understanding
- Data Preparation
- Data Visualization

BUSINESS UNDERSTANDING

- Objective
- Stakeholders
- Key Considerations

OBJECTIVE

In this project, a comprehensive risk assessment has been conducted to identify low-risk aircraft options for commercial operations.

STAKEHOLDERS

The Executive	Responsible for the long-term benefits and financial risks associated with the Industry.
The Head of Aviation	Responsible for operationalizing the expansion into the aviation industry and for the day-to-day logistics.
The Finance Team	Responsible for ensuring financial sustainability

KEY CONSIDERATIONS

- The type of aircraft to be used for commercial and private enterprises.

- How the company can leverage on past data to make informed decisions about aircraft acquisition.

DATA UNDERSTANDING

. Source of Data

. Data Description

SOURCE OF DATA

- The data used in this project is derived from **National Transportation Safety Board(NTSB) Aviation Accident Database** that includes aviation accident data from 1962-2023 about civil aviation accidents and selected incidents in the United States and international waters

DATA DESCRIPTION

This dataset contains attributes such as:

- Accident number
- Weather condition
- Investigation type
- Purpose of flight
- Engine type
- Country
- Event date
- Total injuries
- Latitude, Longitude

DATA PREPARATION

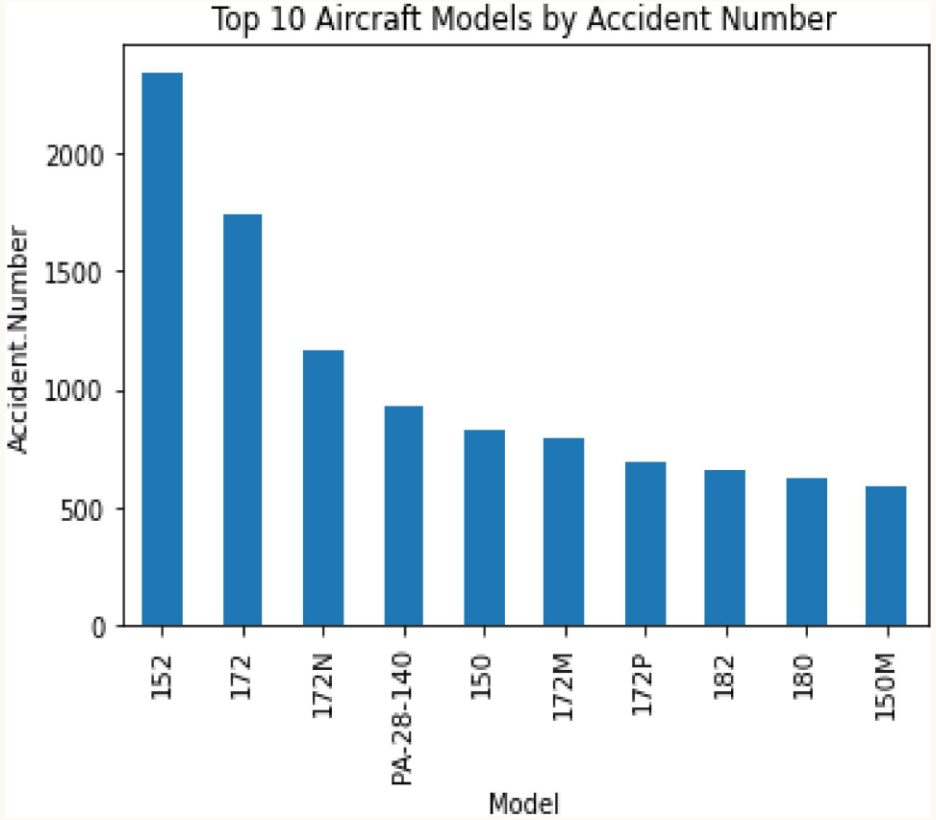
- Handling missing values
- Filter for relevant data
- Converting dates to datetime format
- Injury severity score

DATA VISUALIZATION

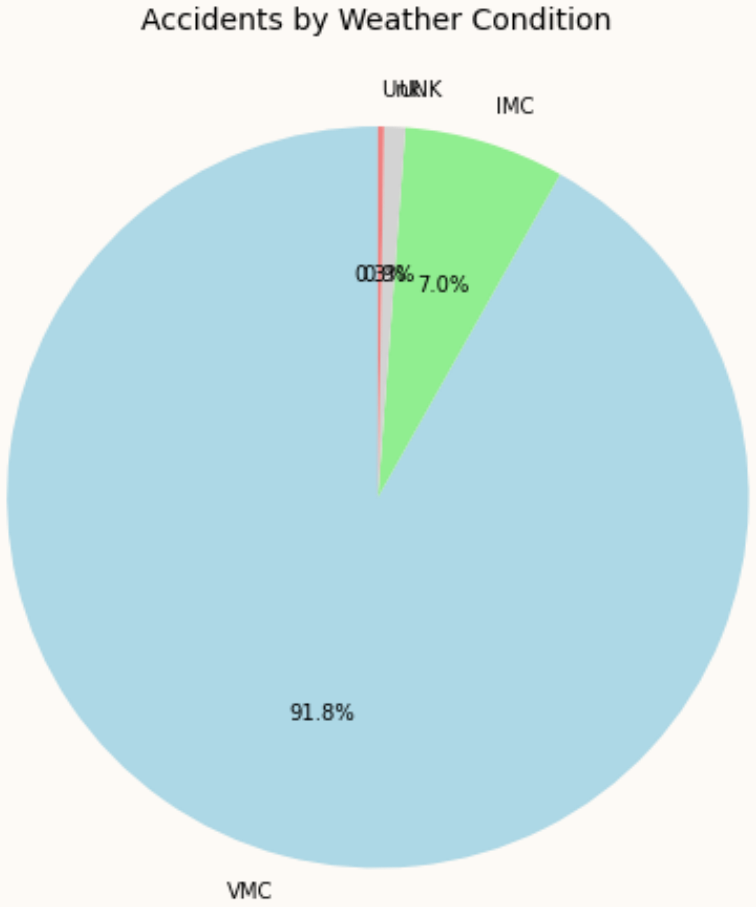
It Includes the following key business questions:

- Which aircraft has the lowest risk based on the accident history?
- What weather conditions correlate with higher risks?
- How the number of engines in an aircraft translates to the degree of injuries in case of an accident.

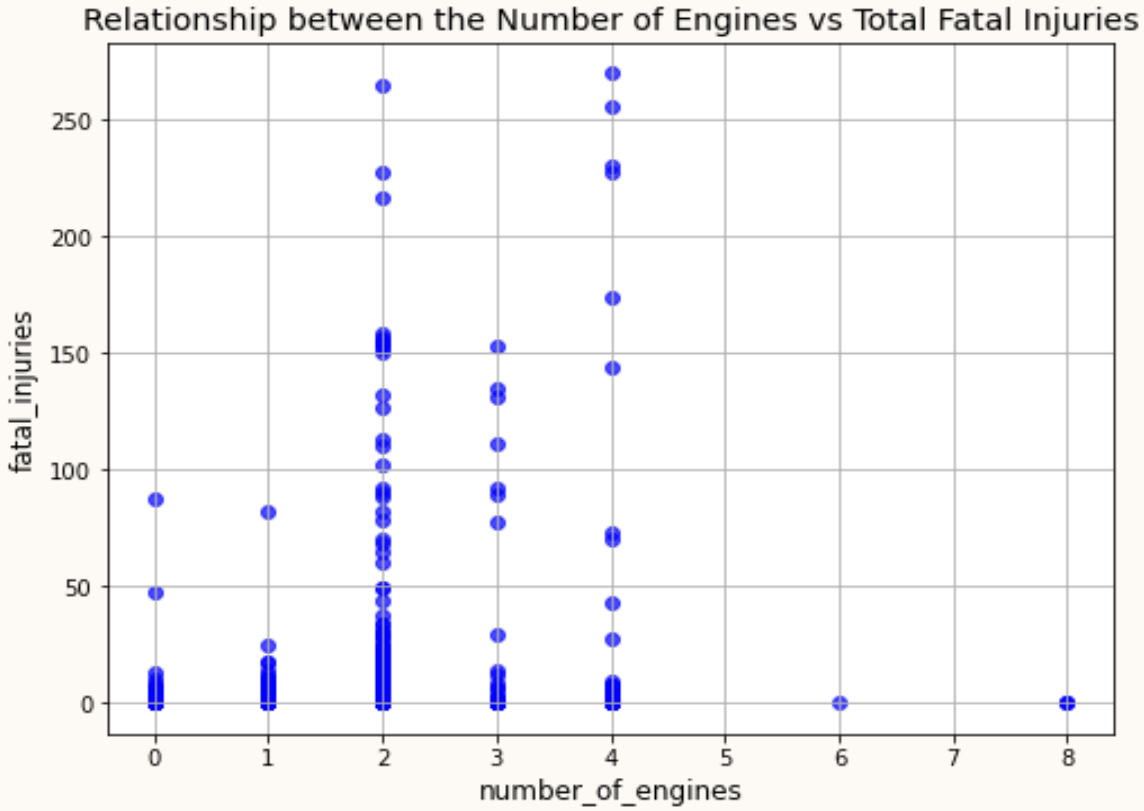
A BAR GRAPH OF MODEL VS ACCIDENT NUMBER



A PIE CHART SHOWING THE IMPACT OF WEATHER



A SCATTER PLOT OF NO. OF ENGINES VS FATAL INJURIES



CONCLUSION

- Key findings
- Summary
- Recommendations

KEY FINDINGS

- Aircraft models with the lowest accident rates.
- Weather conditions associated with high risks.
- The impact the number of engines has on the total fatal injuries.

SUMMARY

. Aircraft models with fewer engines are associated with higher risks in adverse weather.

.Aircraft models with single engines should be avoided in places with harsh weather conditions.

RECOMMENDATIONS

- The company should focus on acquiring aircrafts with low accident numbers.
- More training should be offered with regards to adverse weather conditions.
- Aircraft models with single engines should be avoided in places with adverse weather conditions.

THANK YOU

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Feel free to reach out with any questions

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