FLIGHT DATA ANALYTICS

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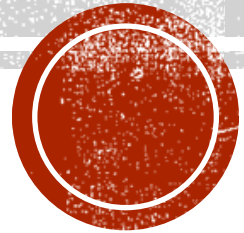


OVERVIEW

Flight Data Analytics analyses aviation accident data with the aim of identifying risks and offers actionable insights that are data driven suitable for expansion into the aviation sector

This project seeks to answer questions on:

1. Aircraft acquisition
2. Safety equipment investments
3. Staff training supporting operations

BUSINESS UNDERSTANDING

Business Problem:

- Determine most suitable aircraft models for purchase
  - Identify necessary safety equipment
- Outline training programs required for staff and pilots

Objective

- Leverage data to mitigate risk, prioritize safety and optimize investment

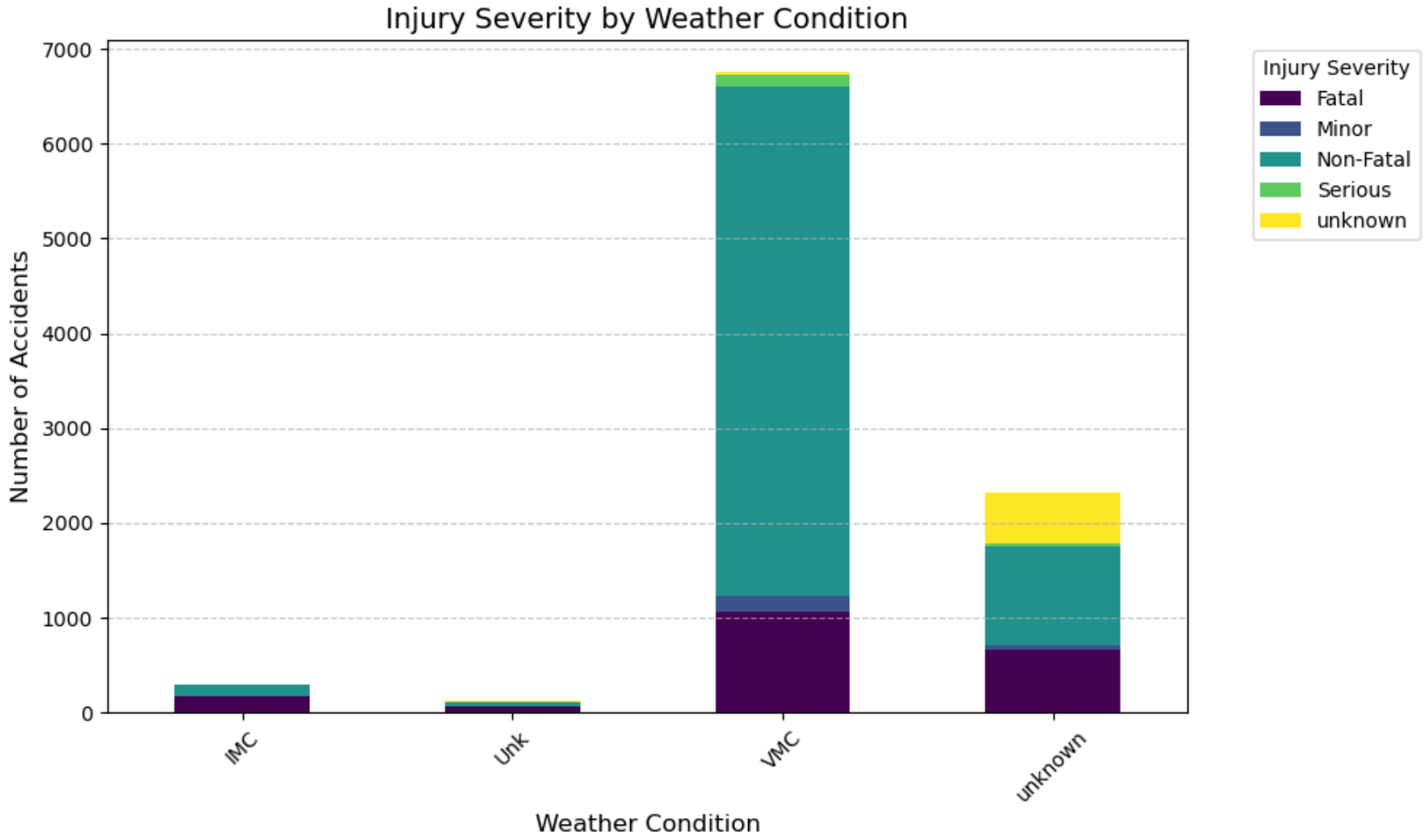
DATA UNDERSTANDING

- The data set is from the National Transportation Safety Board(NTSB) and it contained accidents from 1948-2022

- The analysis was however filtered(2017-2022) to ensure data is up to date and relevant to the modern times

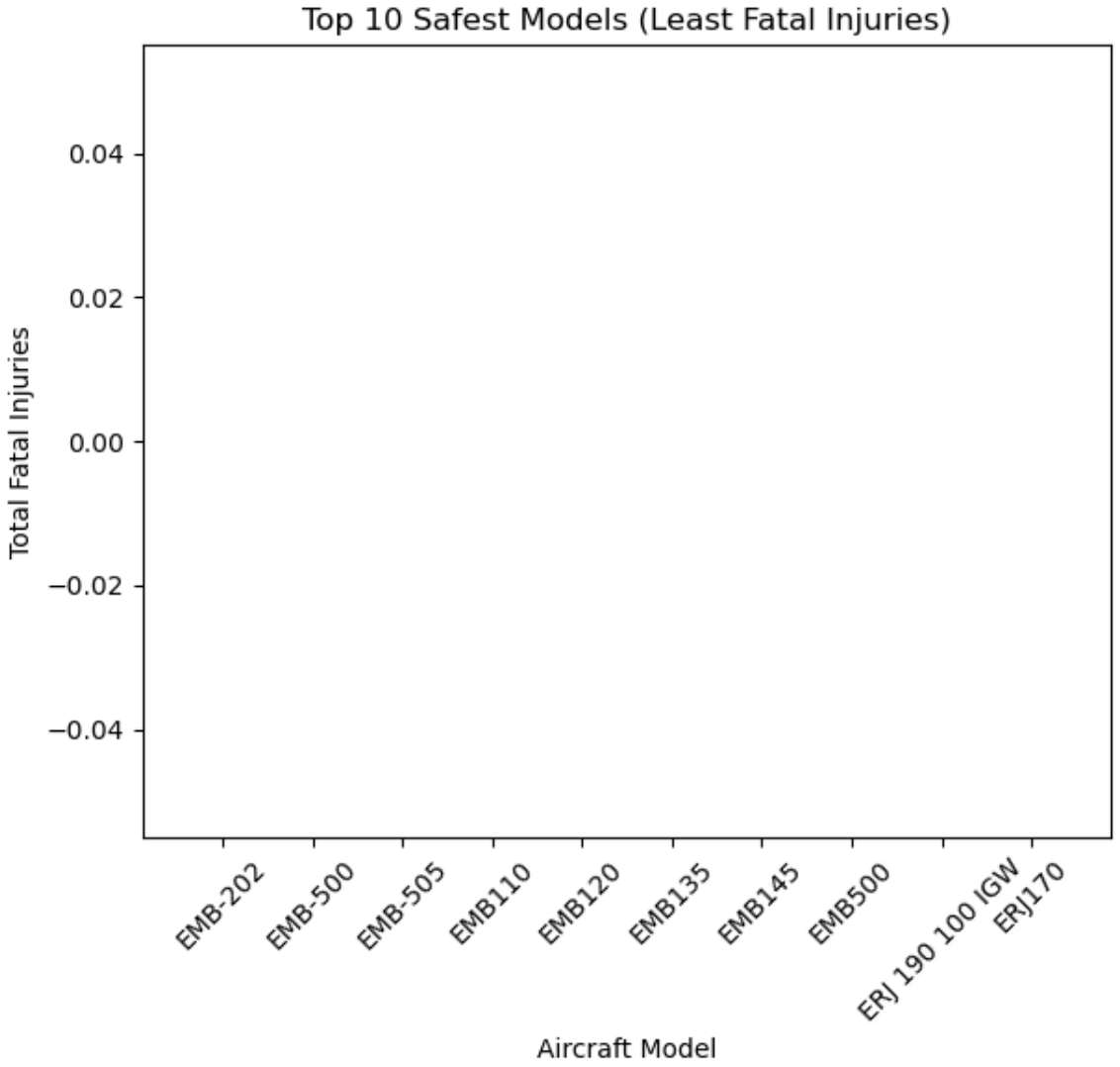
ANALYSIS

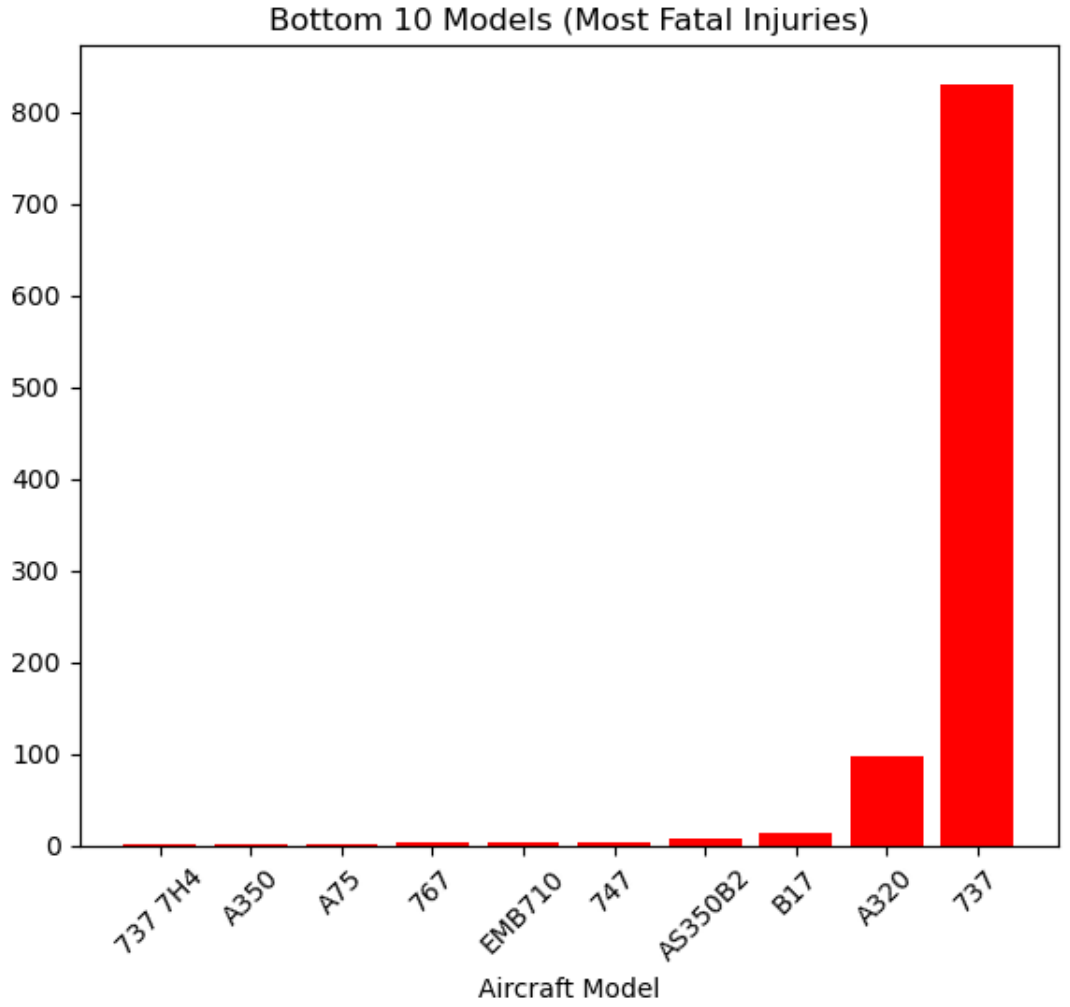
- Most accidents, though non-fatal, occur during clear skies(Visual Meteorological Conditions)



ANALYSIS

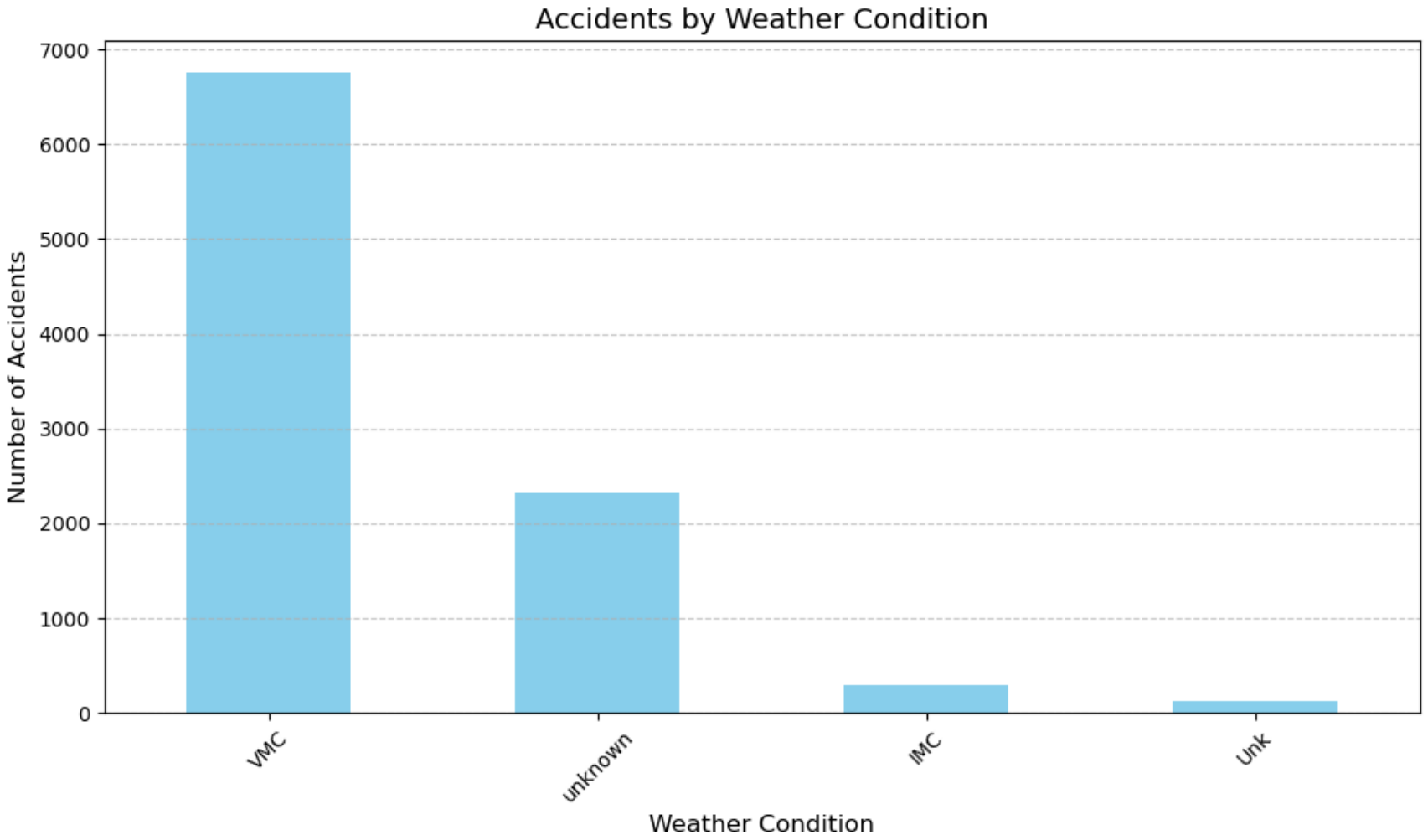
- Aircraft safety standards are high with minimal differences per accident across models





ANALYSIS

- Majority of accidents occur in clear weather emphasizing the importance of situational awareness during Visual Flight Rules(VFR)



RECOMMENDATIONS

1.Invest in advanced training programs for pilots to enhance navigational skills and advanced situational awareness.

This is because most accidents happen during clear skies/ visual meteorological conditions suggesting that over reliance in visual references leads to errors.

2.Consider other factors such as RELIABILITY,EFFICIENCY,VERSATILITY AND PRICE while purchasing aircrafts instead of accident data.

This is because even though we can clearly see the Airbus A320 and Boeing 737 have more accidents than the rest its crucial to note that it's not a reflection on poor safety. These two are the most widely used planes

3.Adopt advanced navigation and auto pilot systems to enhance safety even clear weather conditions

Most accidents happen during VFR conditions which are deceptively safer but pose unique challenges

NEXT STEPS

1. **Fleet Evaluation:**
    1. Analyze operational costs, fuel efficiency, and maintenance records of candidate aircraft.

2. **Safety Enhancements:**
    1. Prioritize safety equipment investments based on cost-benefit analysis.

3. **Collaborative Training Programs:**
    1. Partner with aviation training providers to enhance staff readiness and safety culture.

THANK YOU!!

ANY QUESTIONS?

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