Aviation Analysis

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Overview

The project explores and analyzes an aviation dataset to identify key contributing factors to accidents, emerging trends, and high-risk locations. The project provides stakeholder with valuable insights to reduce accidents and improve protocols by applying statistical and data visualization techniques.

Business understanding

Safety in the aviation industry is a serious concern for stakeholders. Producing data-driven insights helps stakeholders make informed decisions in risk management.

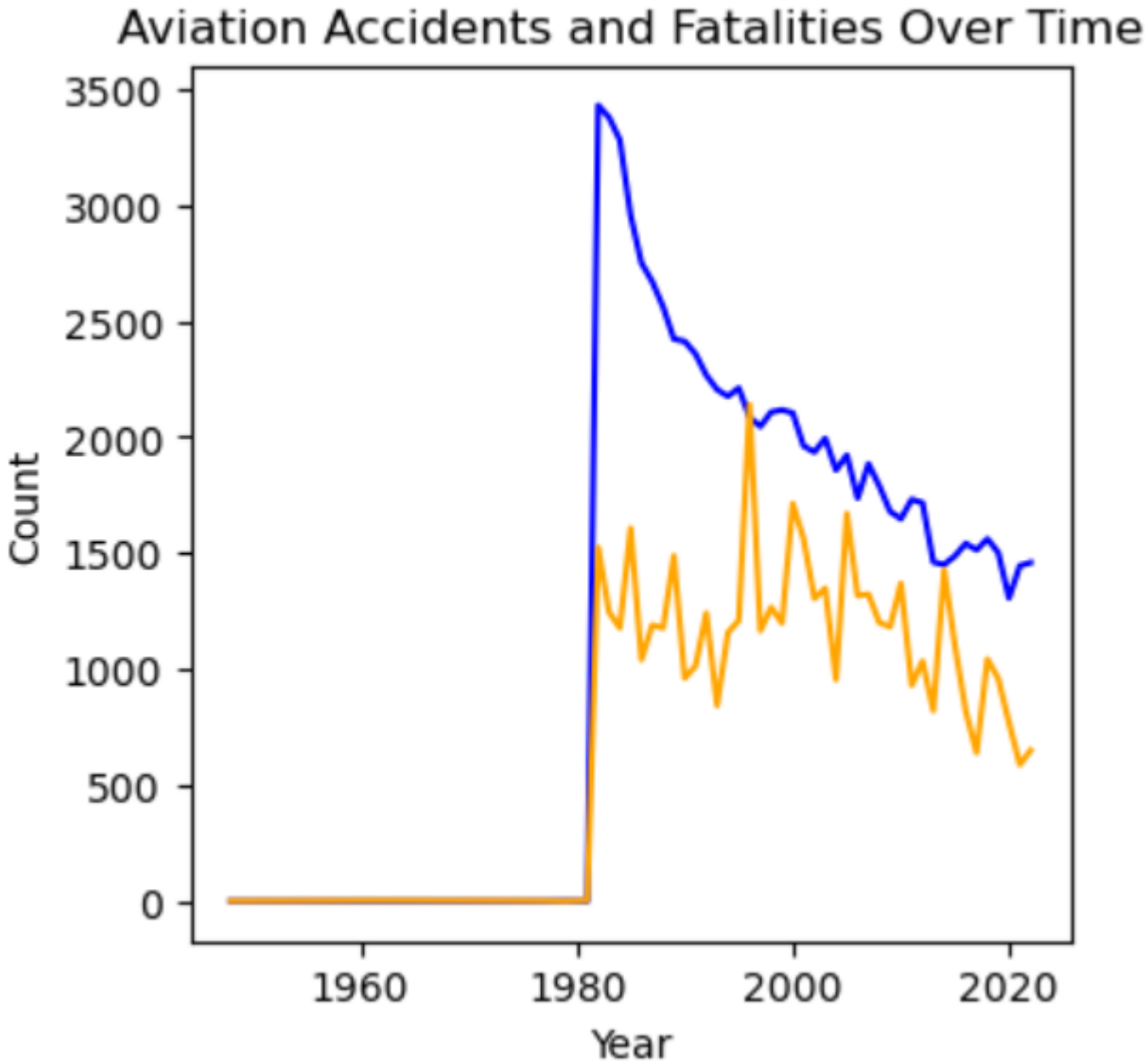
Stakeholders.

- Insurance companies
- aircraft manufacturers
- Airport authorities
- Airlines
- regulatory bodies

Objectives

- Identify regions with the highest number of accidents.
- Identify factors contributing to accidents.
- Identify if there is an increase or decrease in aviation accidents and fatalities?

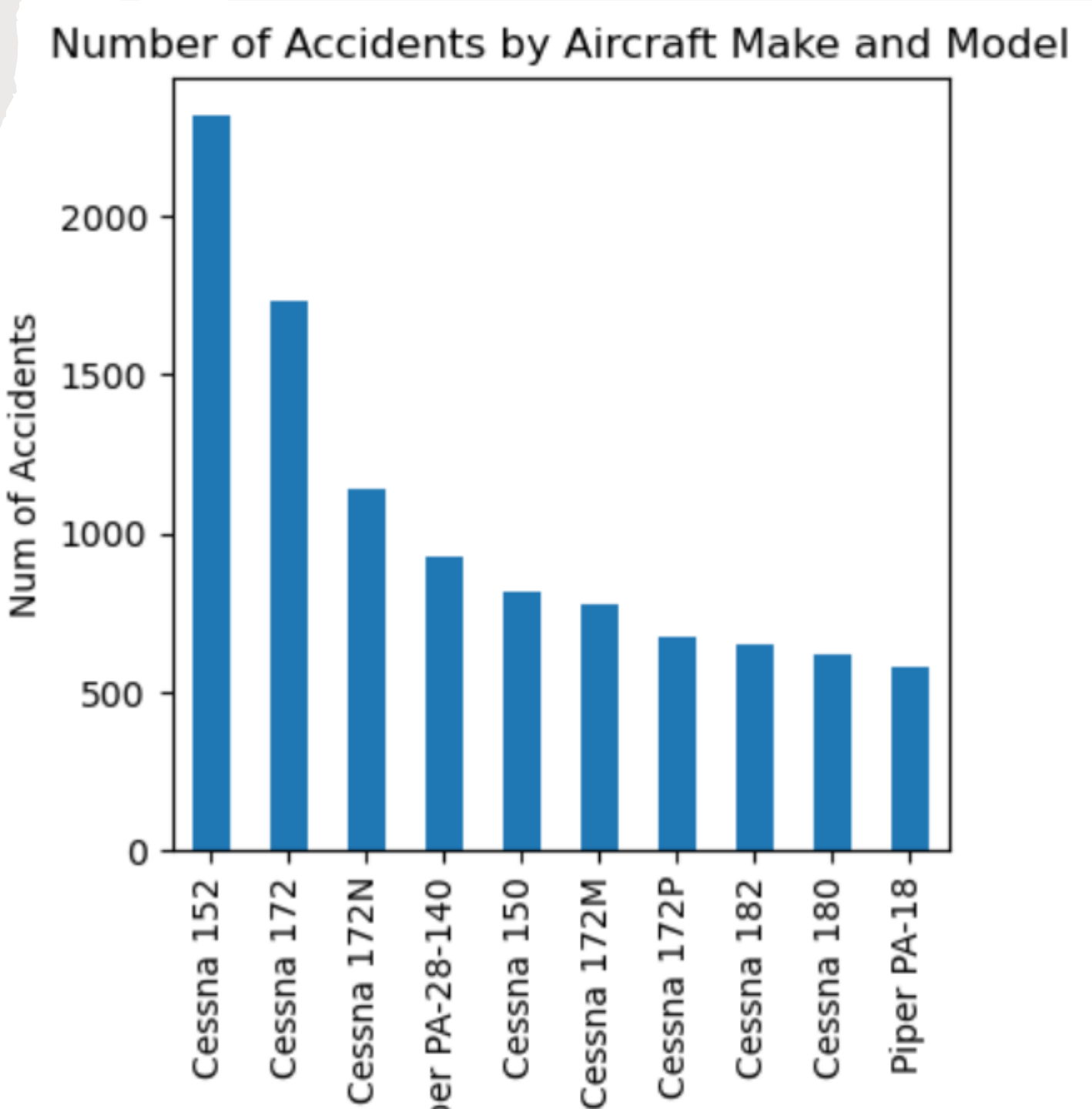
Accidents and fatalities overtime.



Accidents peaked around 1980 but showed a steady decline over time since then. Fatalities fluctuated significantly from 1980 to 2000, despite a decline in accidents. After 2000, fatalities have had a declining trend.

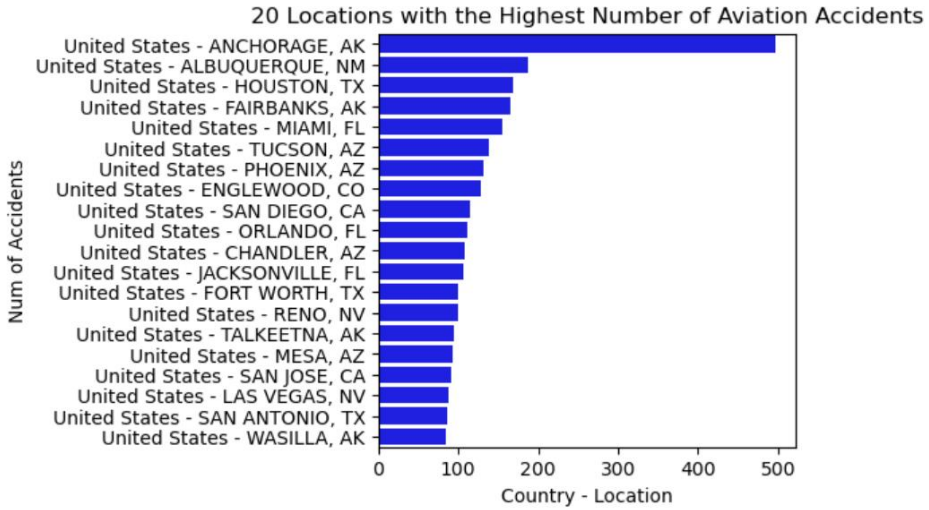
Factors contributing to accidents.

Cessna is the aircraft make with the most accidents, specifically Cessna 152, 172, and 172N Model.



Geographical Hotspost

Most accidents occur in the USA, especially in Anchorage, Albuquerque, and Houston.



Recommendations and next steps.

Improve pilot training for Cessna 152 and single-engine aircraft.

Improve safety measures and regulations in high-risk regions like Anchorage and Houston.

Investigate mechanical failures in high-risk aircraft models.

Thank you 🎉❓
Any questions.