U.S Aviation Accident Analysis (1962-2023)

A STORY TOLD THROUGH TABLEAU

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DATA SOURCE: NATIONAL TRANSPORTATION SAFETY BOARD

Project overview

- **Objective:**

To explore aviation accidents from 1962 to 2023 and identify trends, causes and risk factors using data visualization

Tools used:

Python(for cleaning), Tableau (for visualizations)
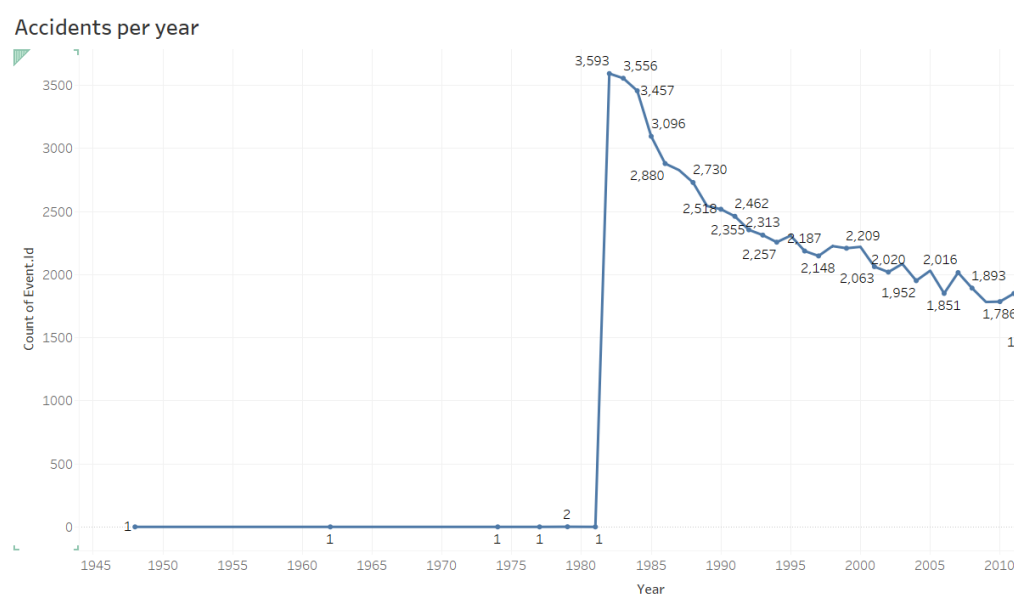
What I did:

Cleaned and processed raw NTSB data

Extracted meaningful features e.g. year

Created 5+ Tableau visualizations
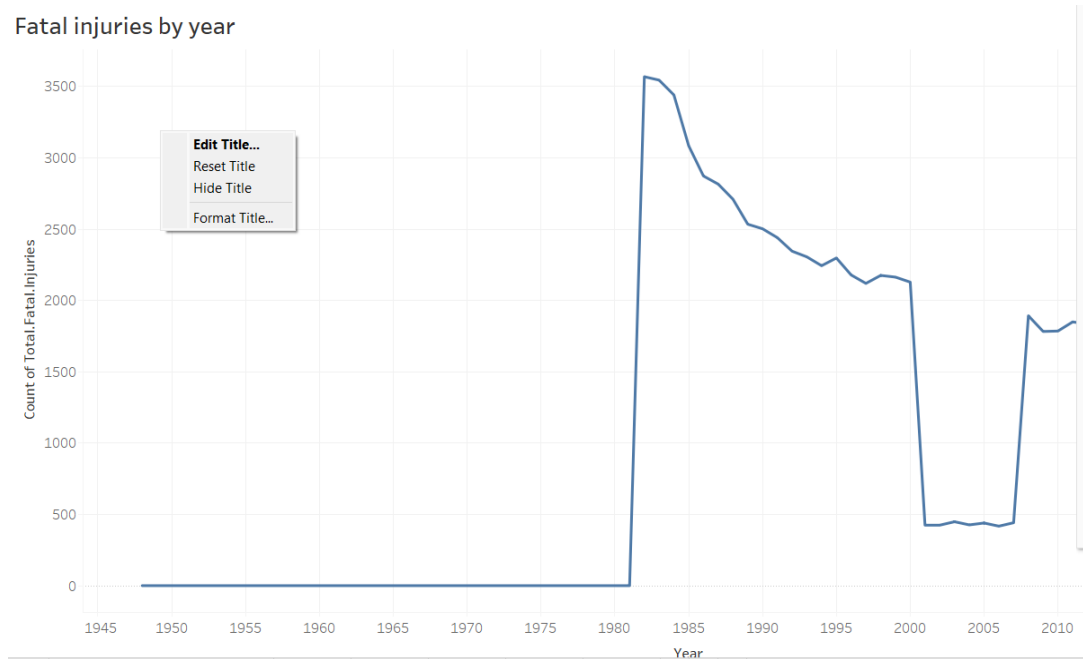
Built a to story guide the audience

Accidents Over Time

▶ Insight:
Accident frequency peaked in earlier decades especially around 1980- 2001.
There is a general decline in later years suggesting improvement in aviation safety
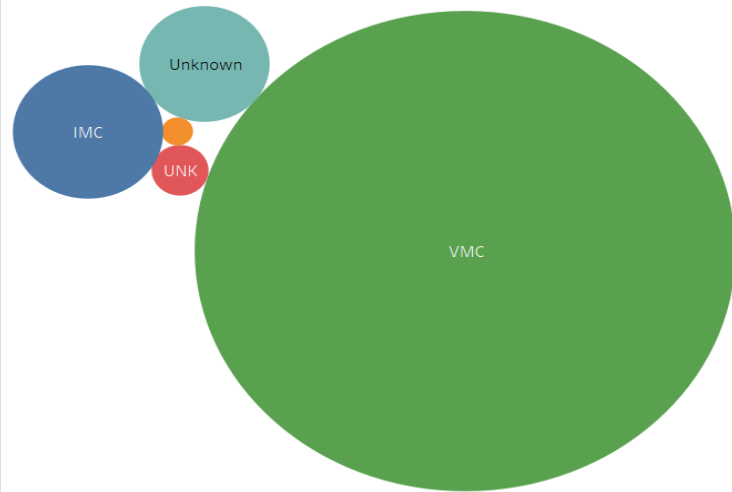
Fatalities and Damage

Fatal injuries by year

- Insights:

  Fatal Injuries decreased over time aligning with the drop intotal accidents.

  The severity of airplane damage remained high, with, with most incidents causing substantial or destroyed aircraft

Risk Factors

Accidents by weather

Insight 1:
Most accidents happened in clear weather (VMC/Visual), highlighting the role of human error over external conditions.
Insight 2:
A large number of cases reported no injuries but serious and fatal injuries still make up a significant portion - emphasizing the high-stakes nature of aviation safety.

Conclusion And Recommendation

▶ What I Learned:
Accident frequency has dropped -safety measures are working.
Most accidents aren't weather-related → focus needed on pilot training.
A significant portion still involve serious outcomes.

▶ Next Steps:Analyze causes by aircraft Type, operator, or flight phaseAdd geospatial visualizations (accidents by state or region)Share findings in a dashboard or interactive report