

AVIATION ACCIDENTS VISUALIZATION PROJECT

GROUP 3 MEMBERS:

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AVIATION ACCIDENTS' VISUALIZATION

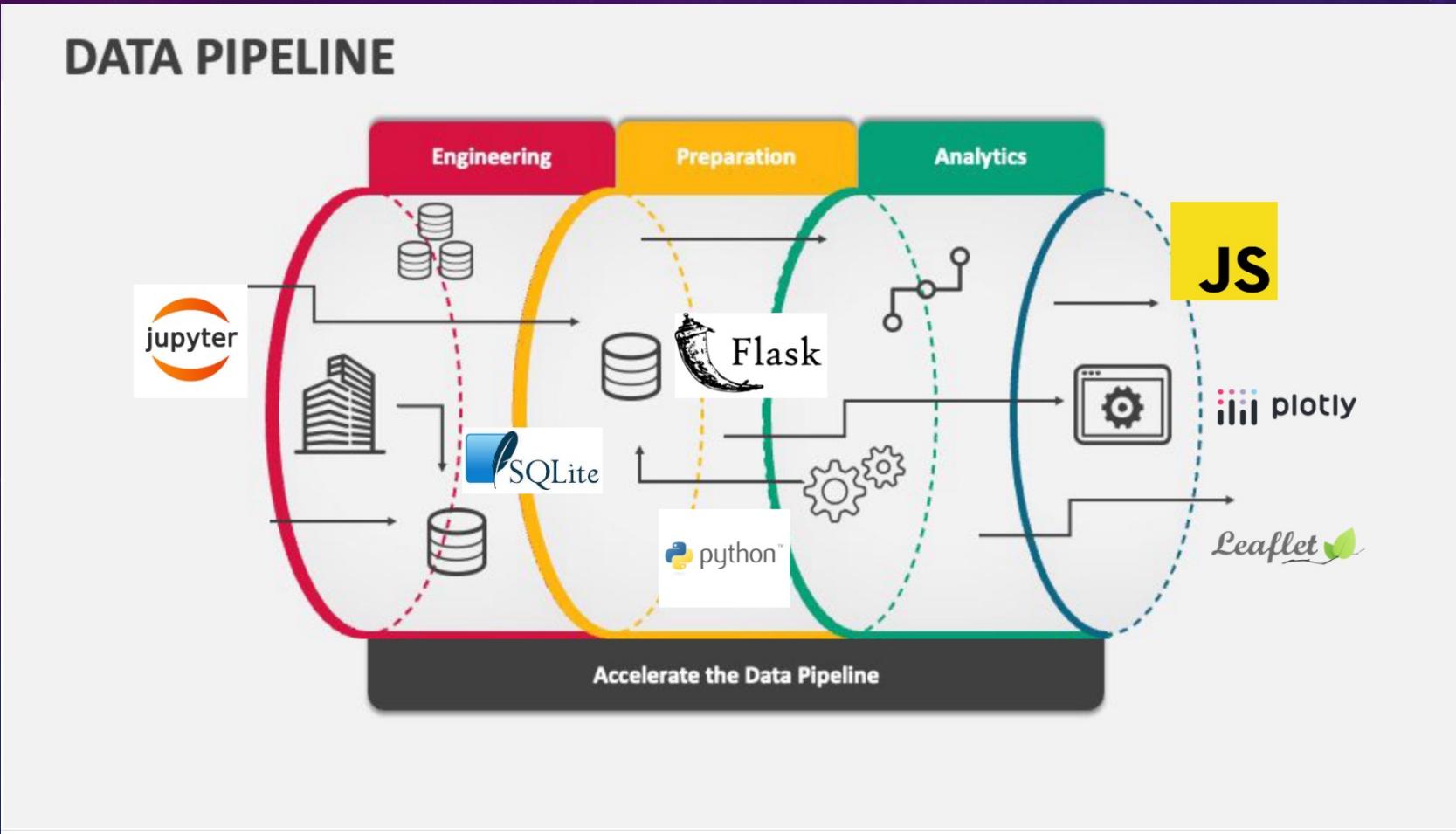
Introduction:

QUESTIONS TO BE CONSIDERED:

1. Can we accurately predict where plane crashes are about to occur?
2. Are there certain airlines that have more crashes than others?
3. Are there possible outside factors affecting these trends?

AVIATION ACCIDENTS VISUALIZATION

Extraction +
Transformation:



AVIATION ACCIDENTS VISUALIZATION

Extraction +
Transformation:

Data Extraction

- Web Scraping
- Text Parsing
- Modules/APIs

Data Transformation

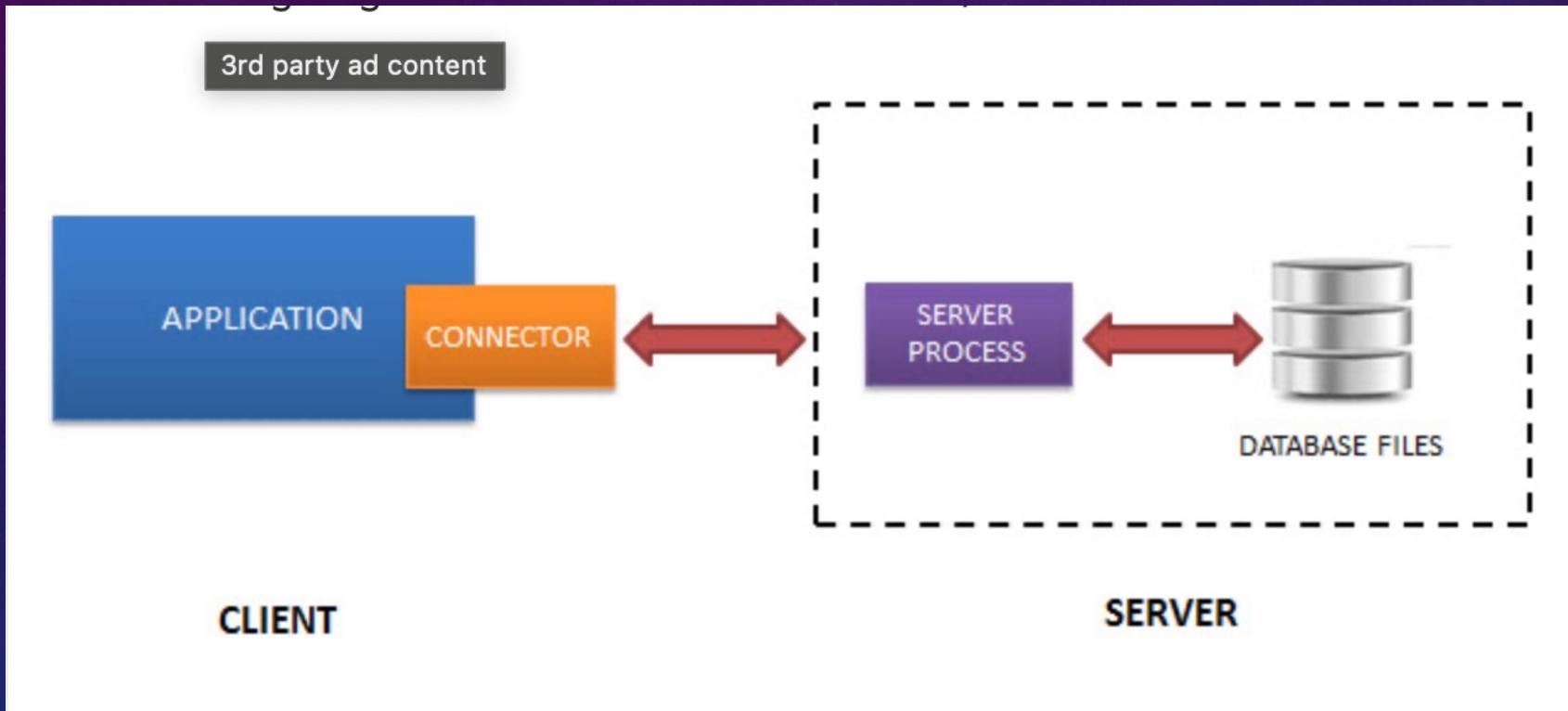
- Removal of Unwanted Information
- Old/New Names
- Standardization



AVIATION ACCIDENTS VISUALIZATION

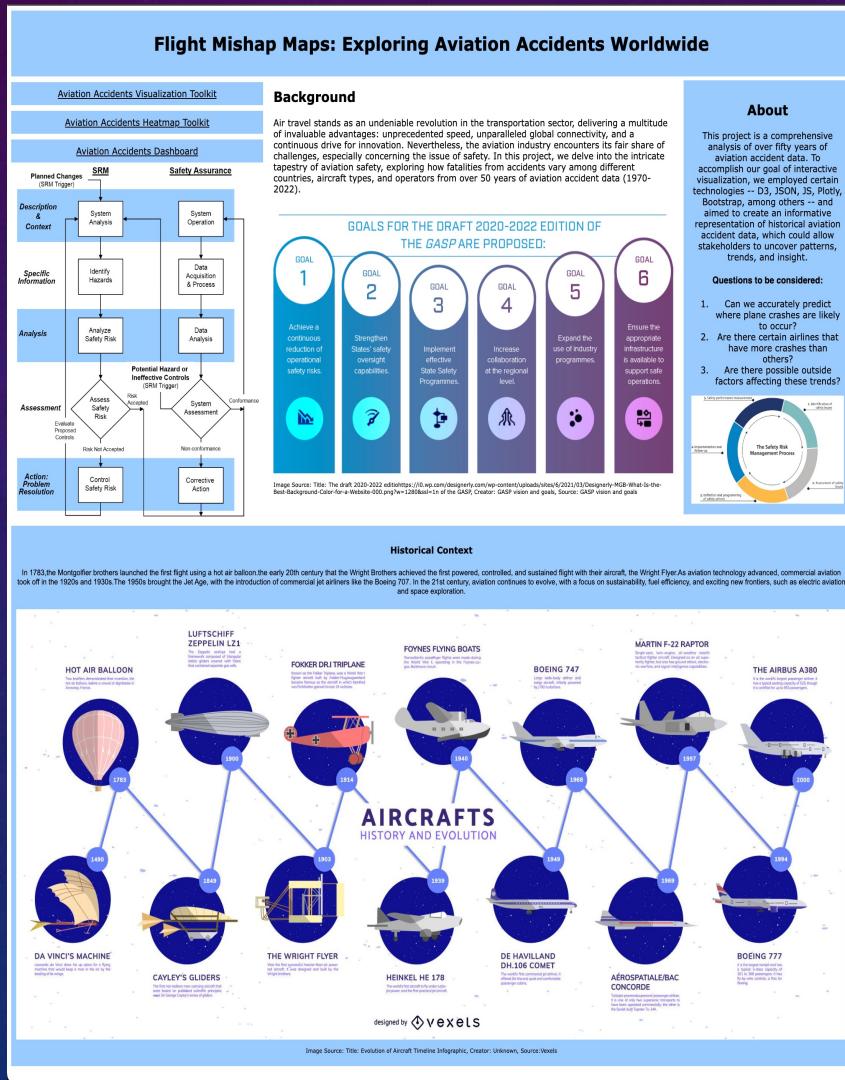
Flask API / SQLite

Database
Loading:



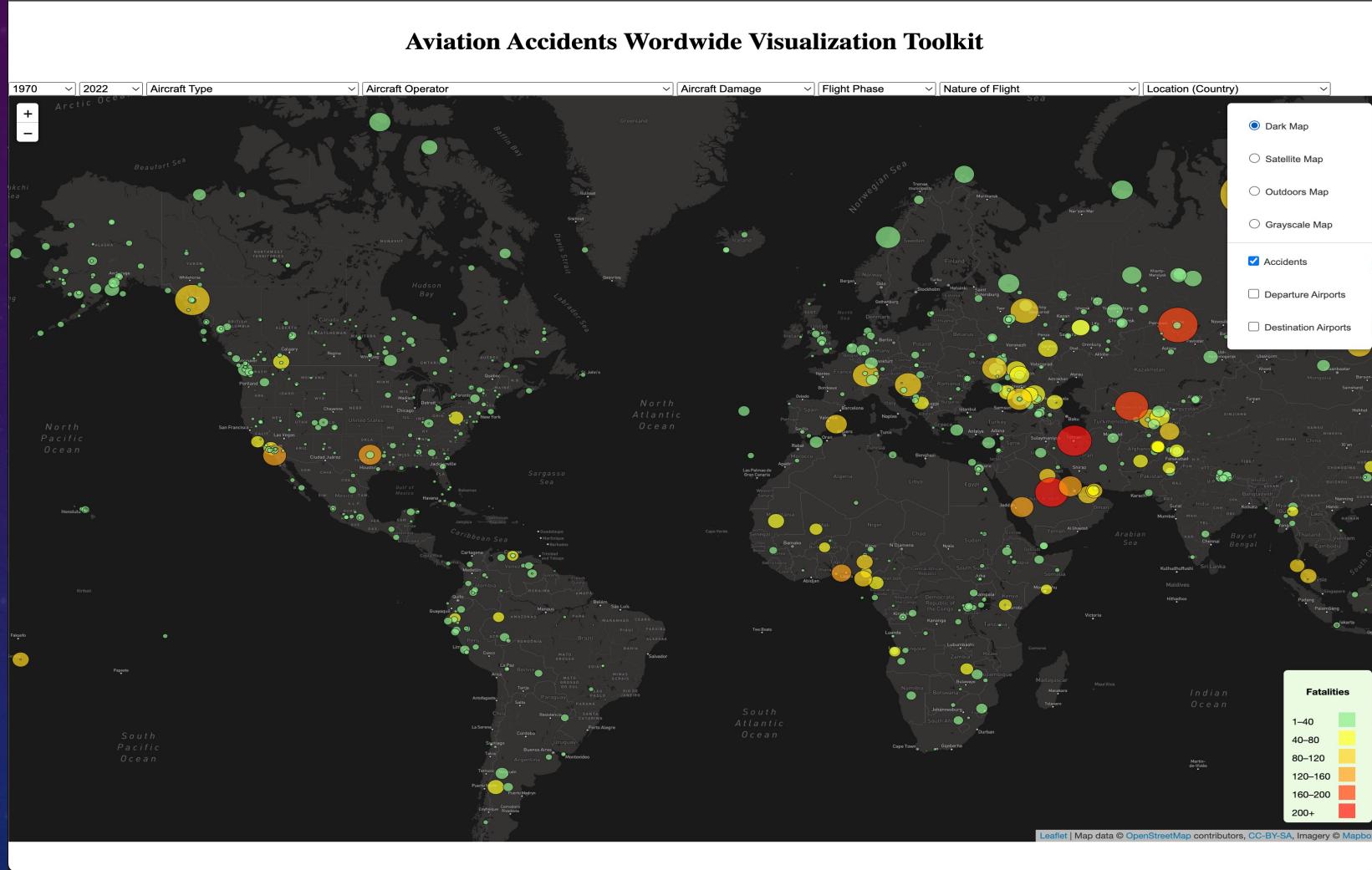
AVIATION ACCIDENTS VISUALIZATION

Landing Page:



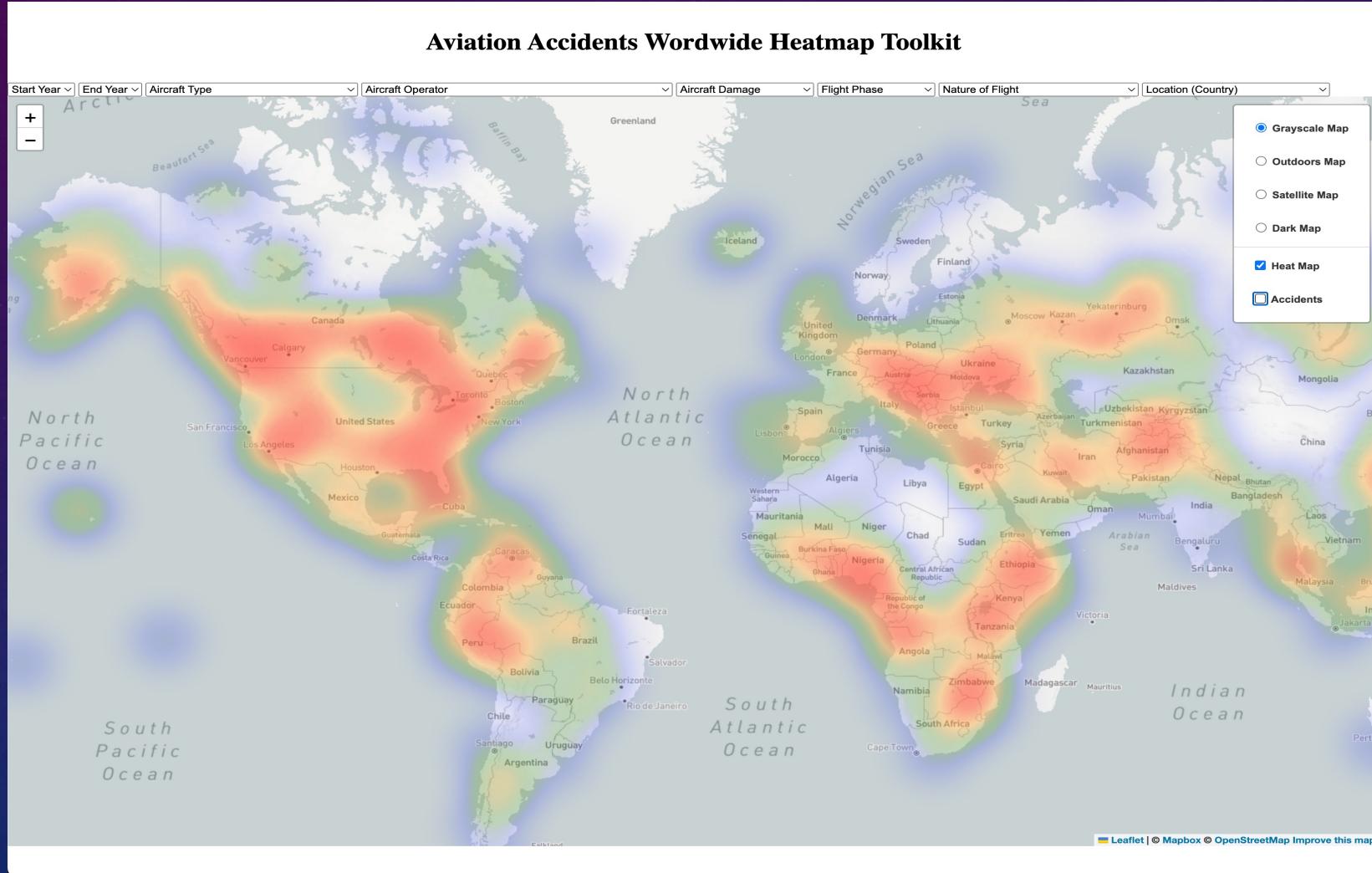
AVIATION ACCIDENTS VISUALIZATION

Visualization:



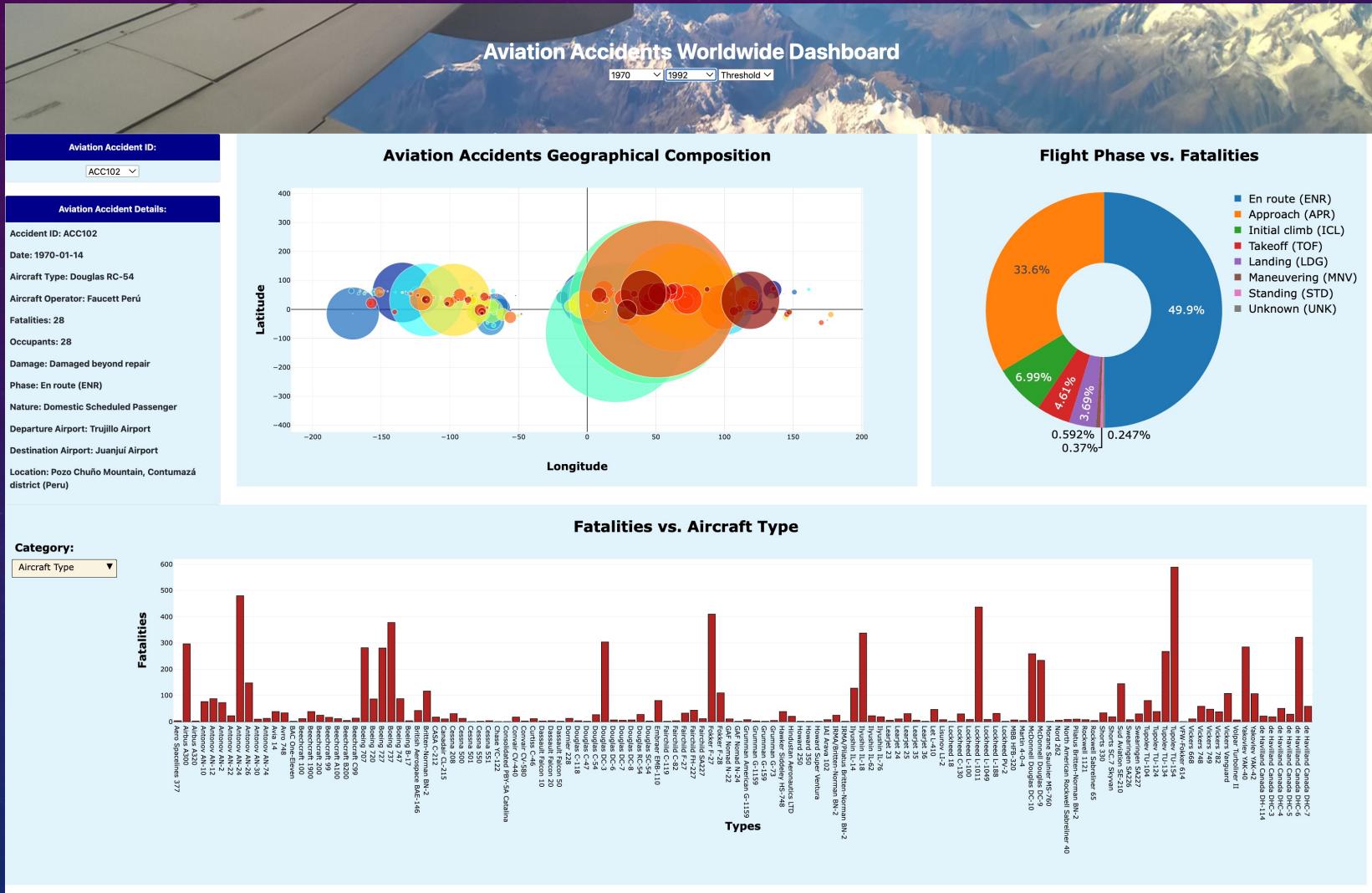
AVIATION ACCIDENTS VISUALIZATION

Heatmap:



AVIATION ACCIDENTS VISUALIZATION

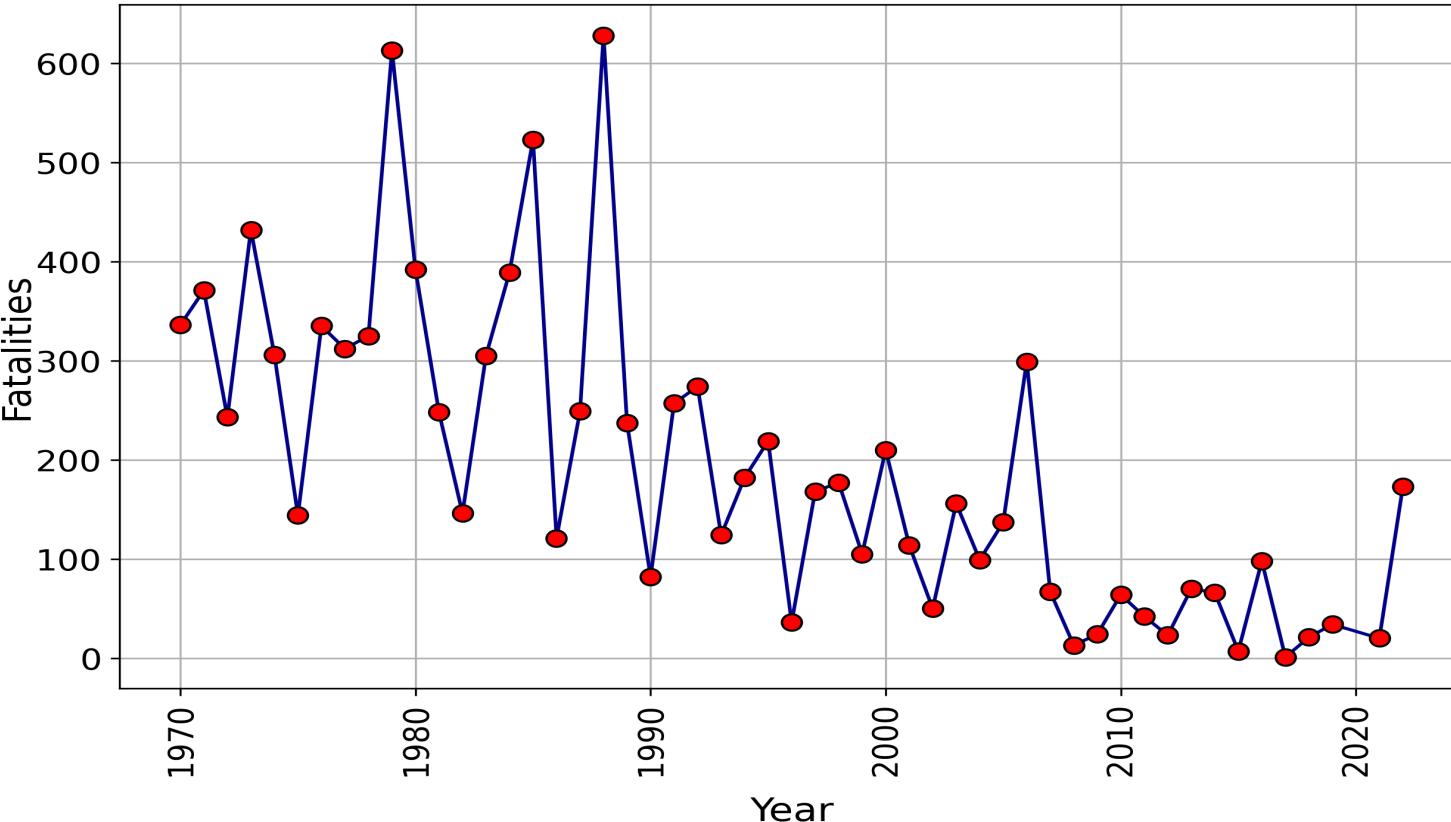
Dashboard:



AVIATION ACCIDENTS VISUALIZATION

Analysis:

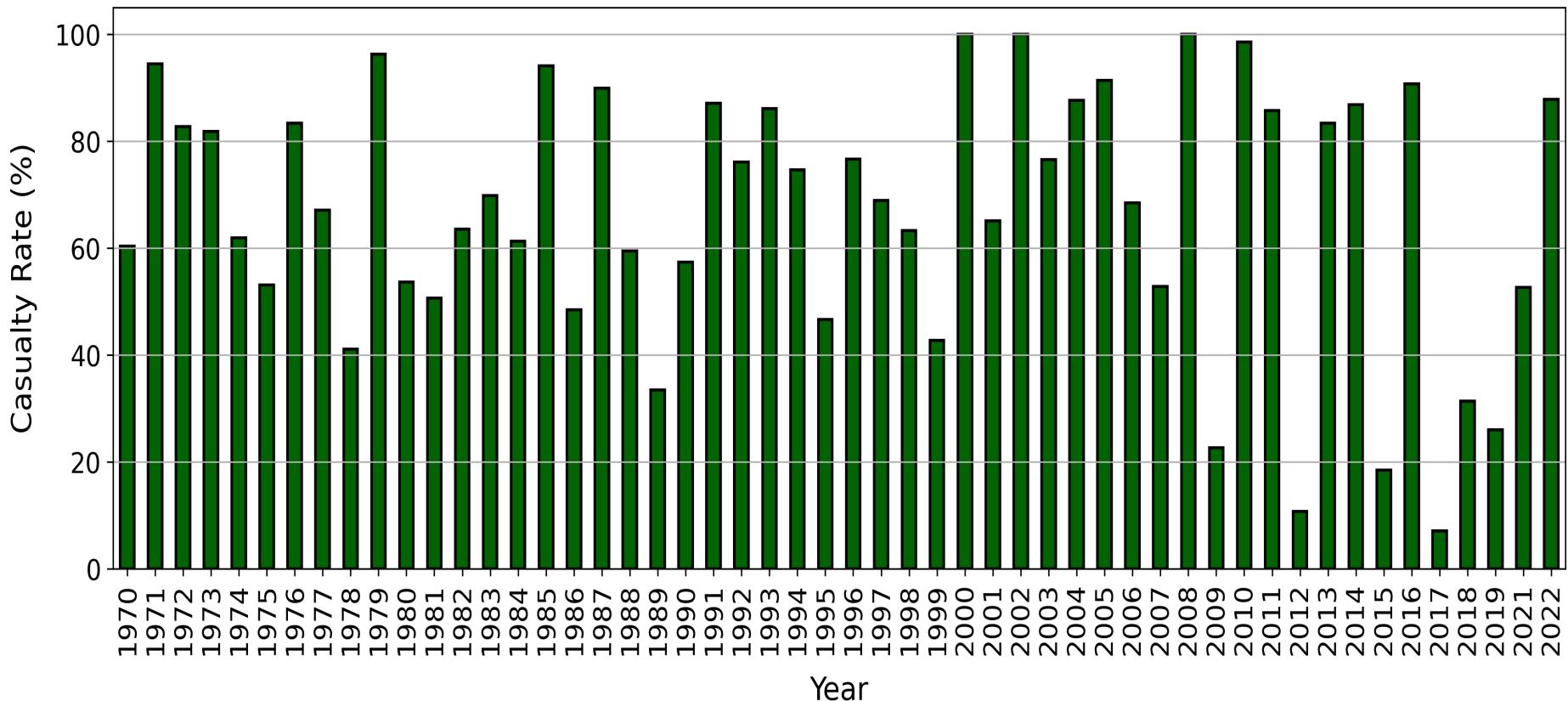
Total Aviation Fatalities vs. Year (1970-2022)



AVIATION ACCIDENTS VISUALIZATION

Analysis:

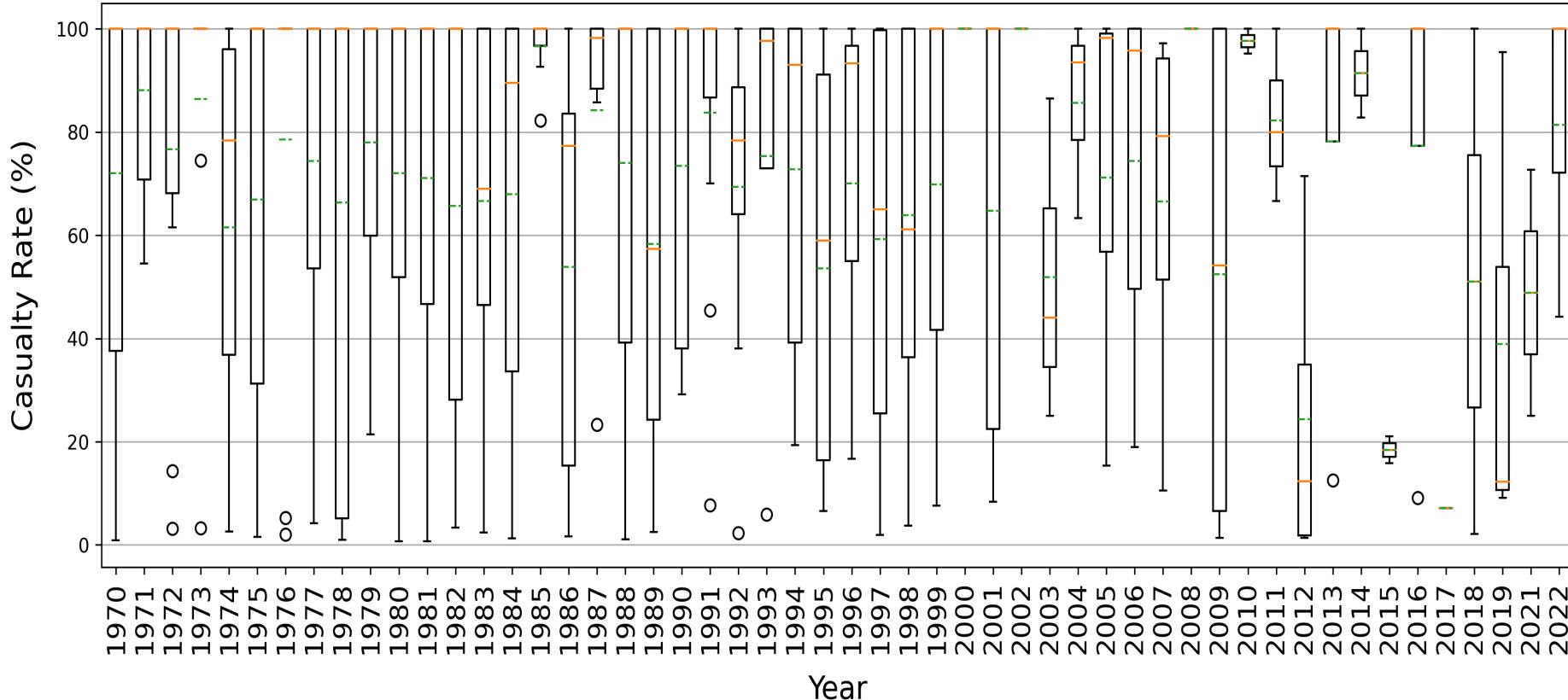
Flight Casualty Rate (Mean) per Year (1970-2022)



AVIATION ACCIDENTS VISUALIZATION

Analysis:

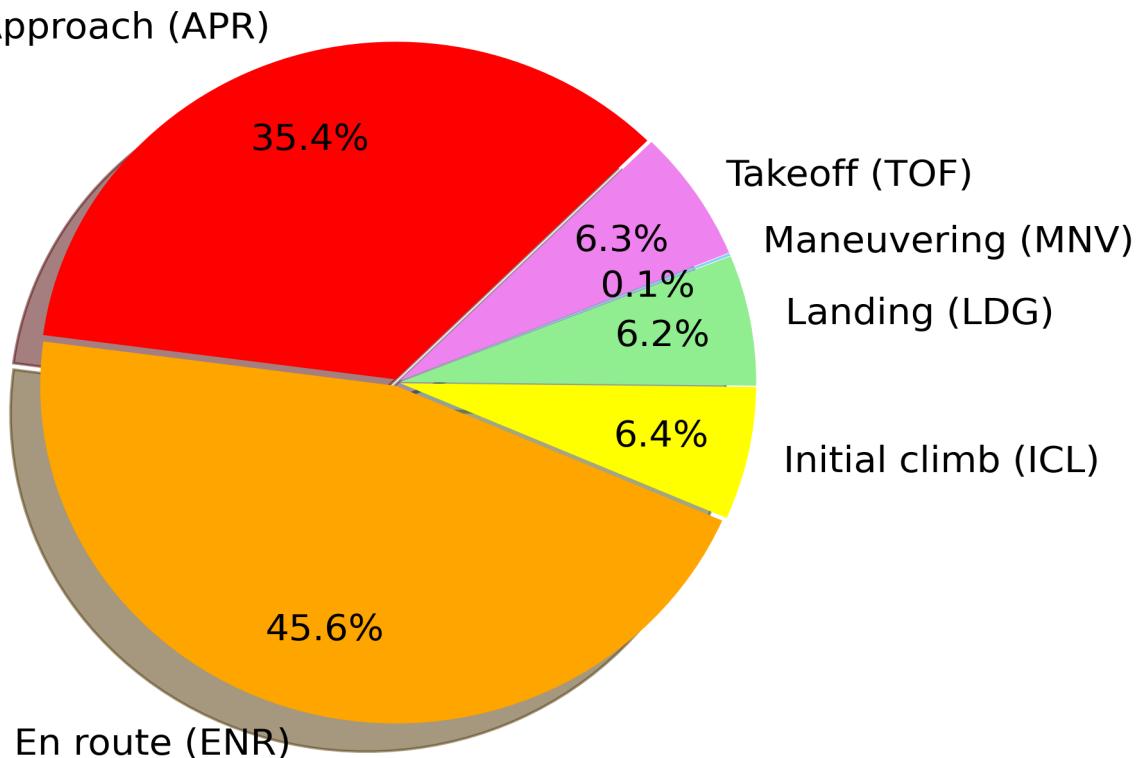
Flight Casualty Rate Distribution per Year (1970-2022)



AVIATION ACCIDENTS VISUALIZATION

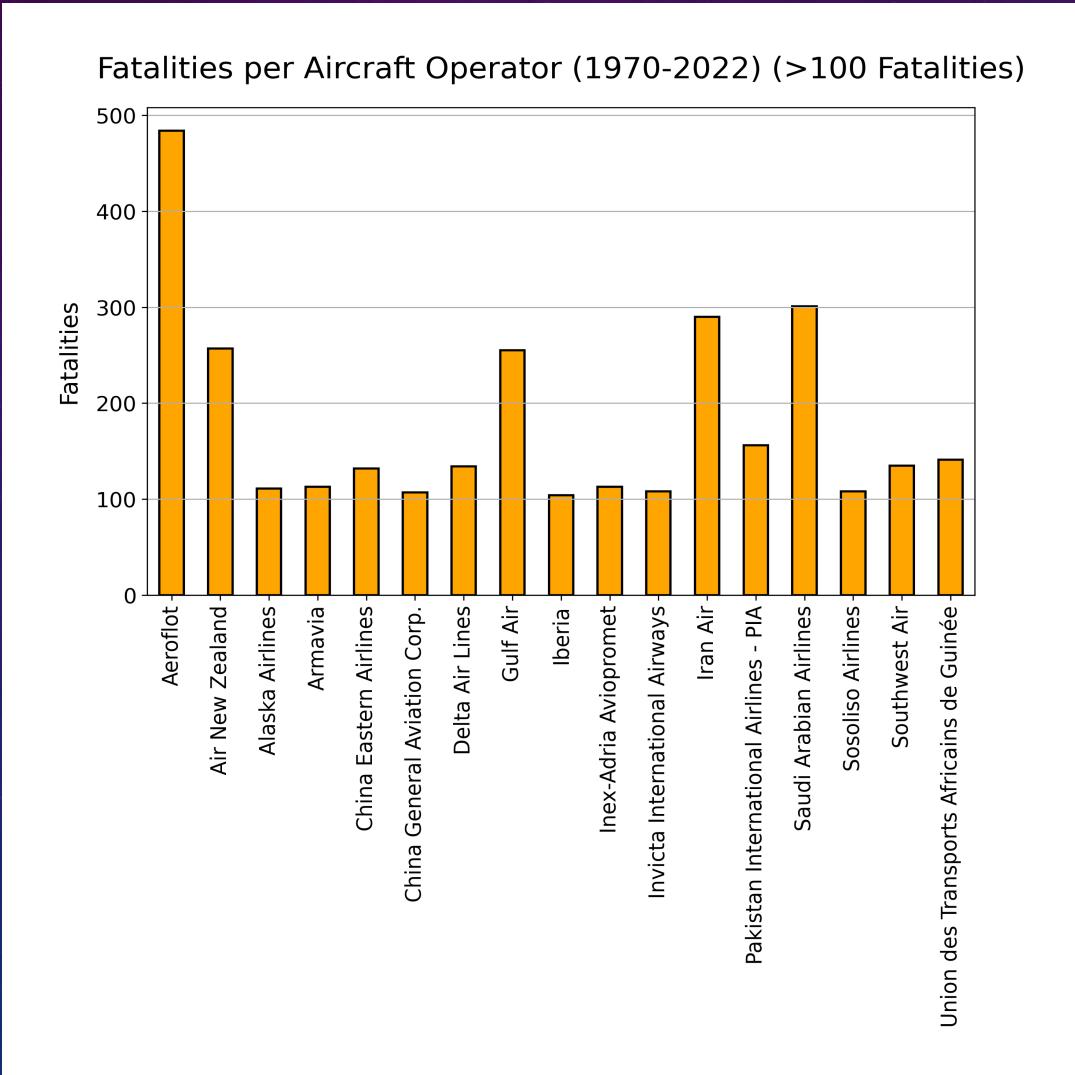
Analysis:

Fatalities per Flight Phase (1970-2022) (>10 Fatalities)



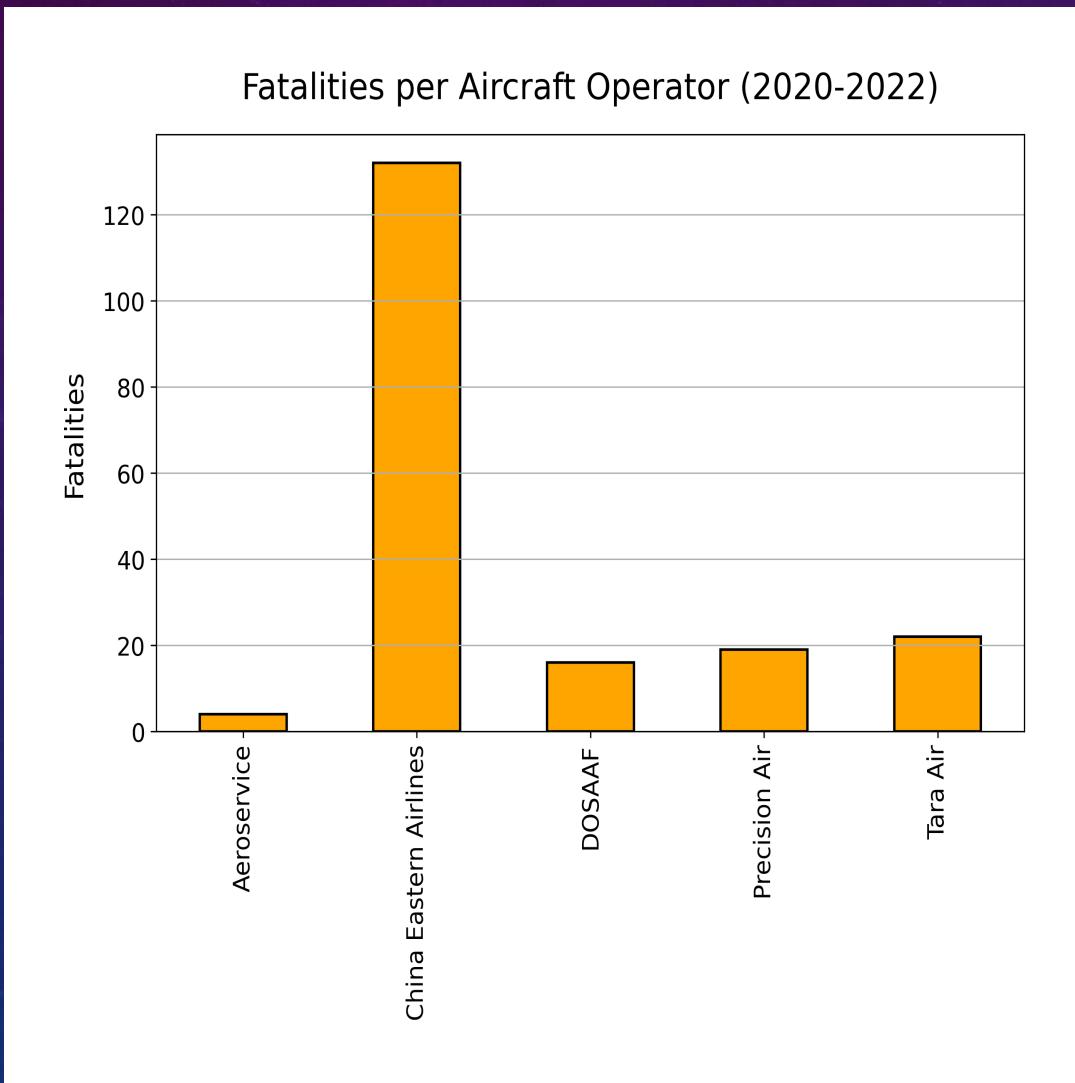
AVIATION ACCIDENTS VISUALIZATION

Analysis:



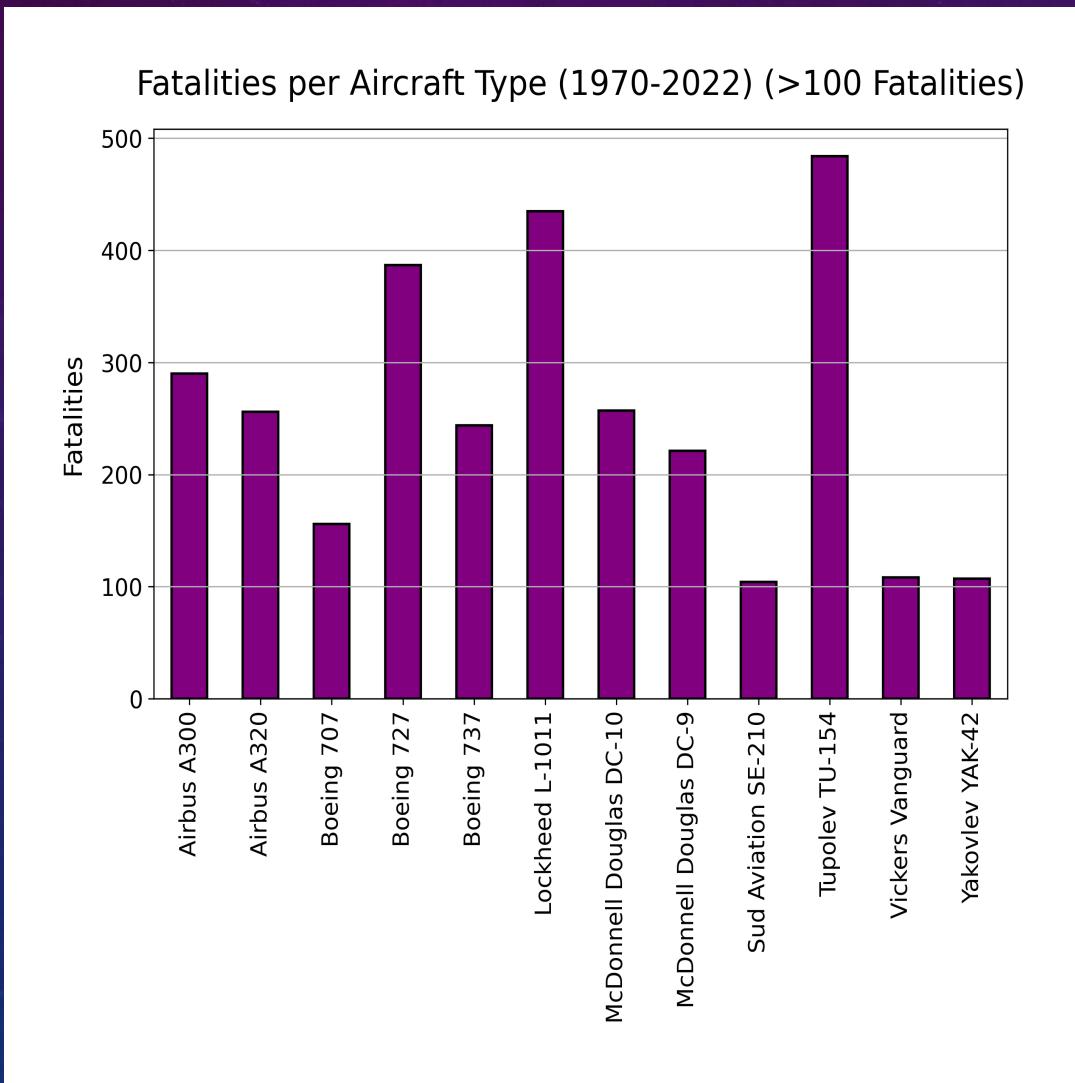
AVIATION ACCIDENTS VISUALIZATION

Analysis:



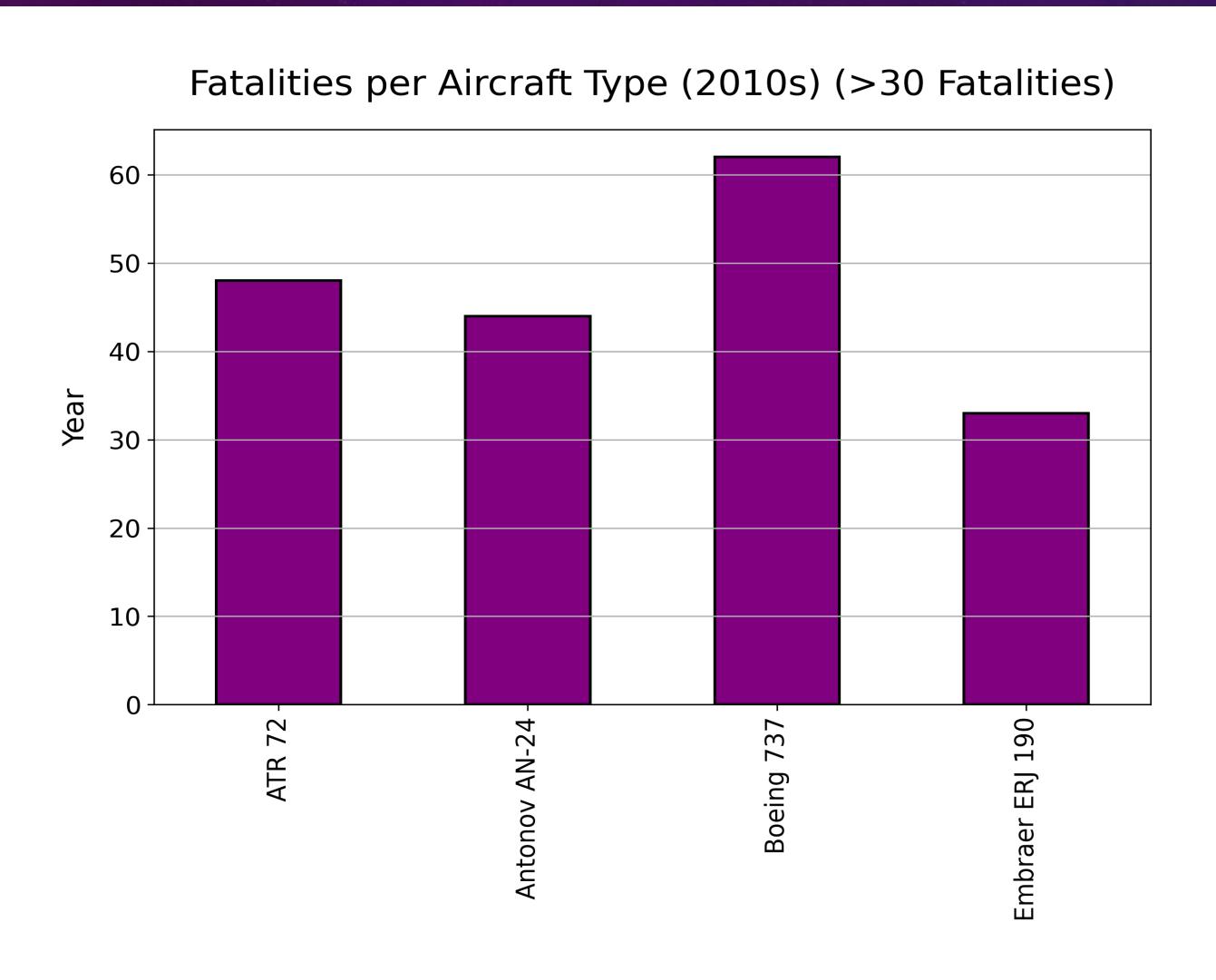
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Analysis:



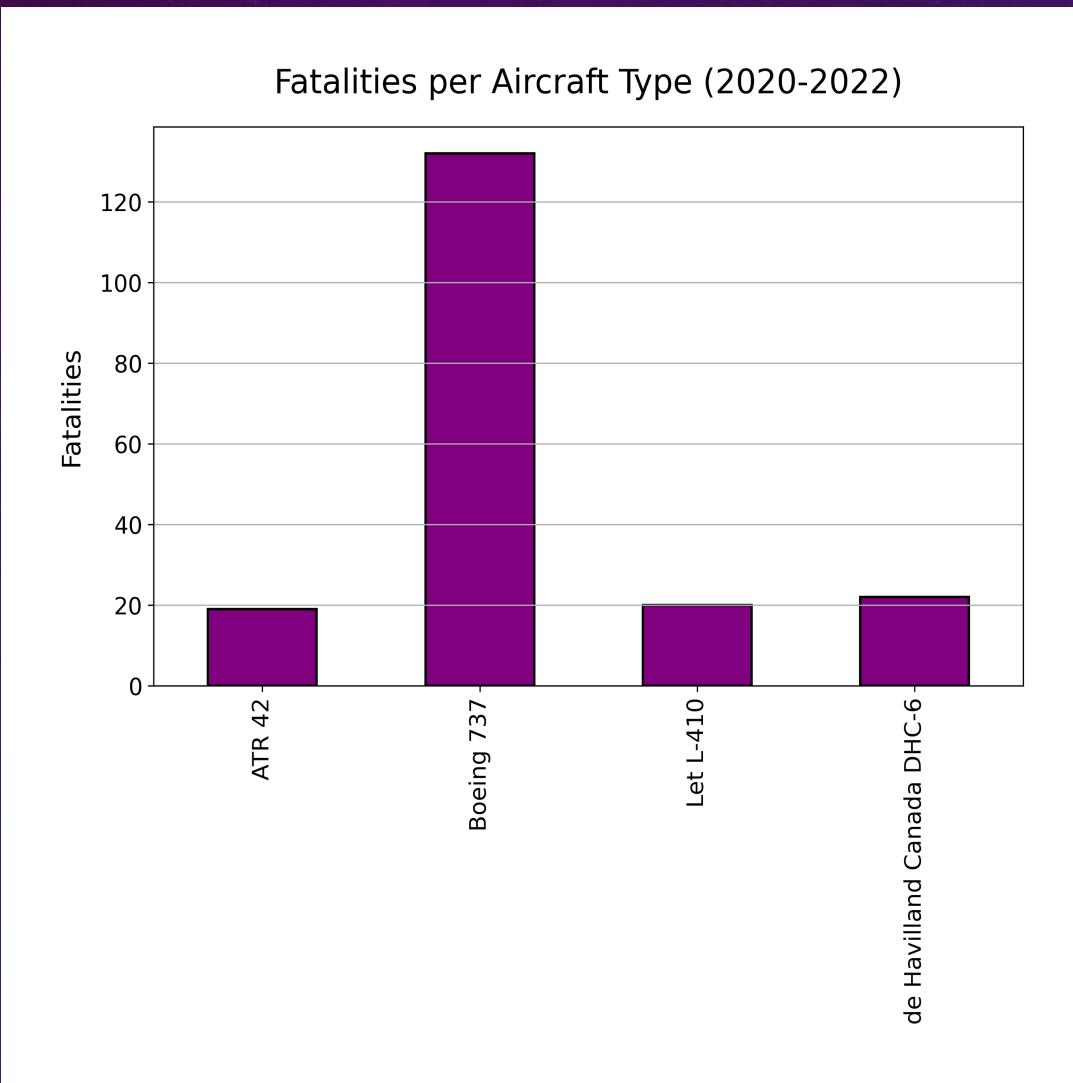
AVIATION ACCIDENTS VISUALIZATION

Analysis:



AVIATION ACCIDENTS VISUALIZATION

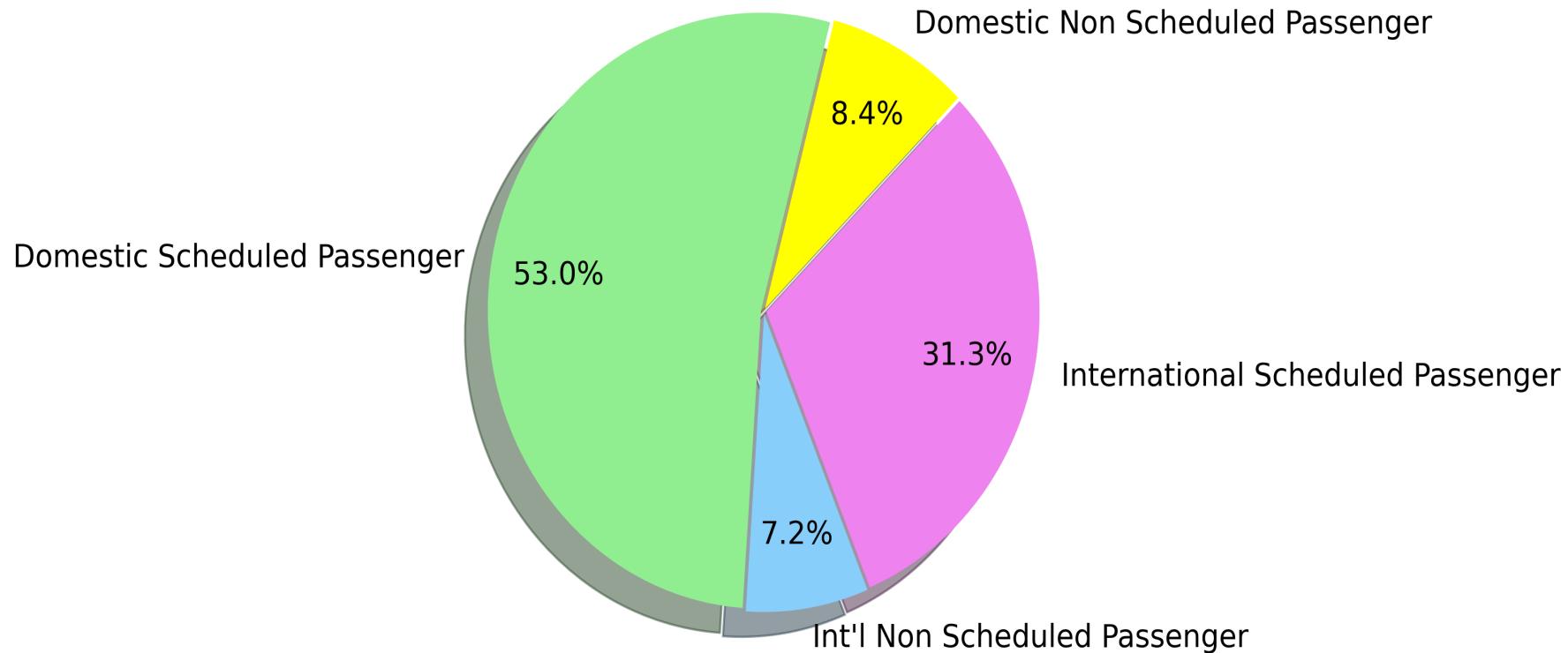
Analysis:



AVIATION ACCIDENTS VISUALIZATION

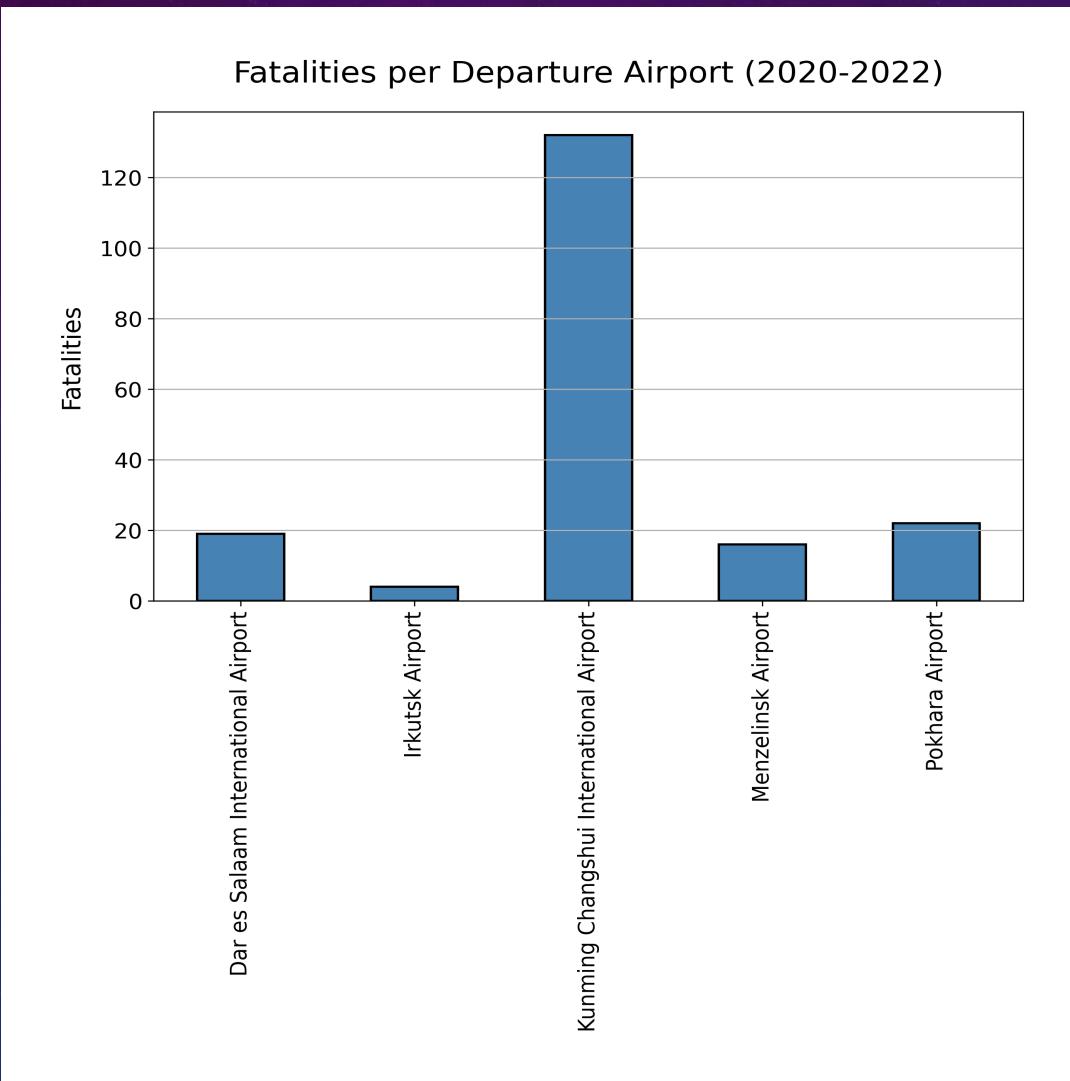
Analysis:

Fatalities per Nature of Flight (1970-2022) (>100 Fatalities)



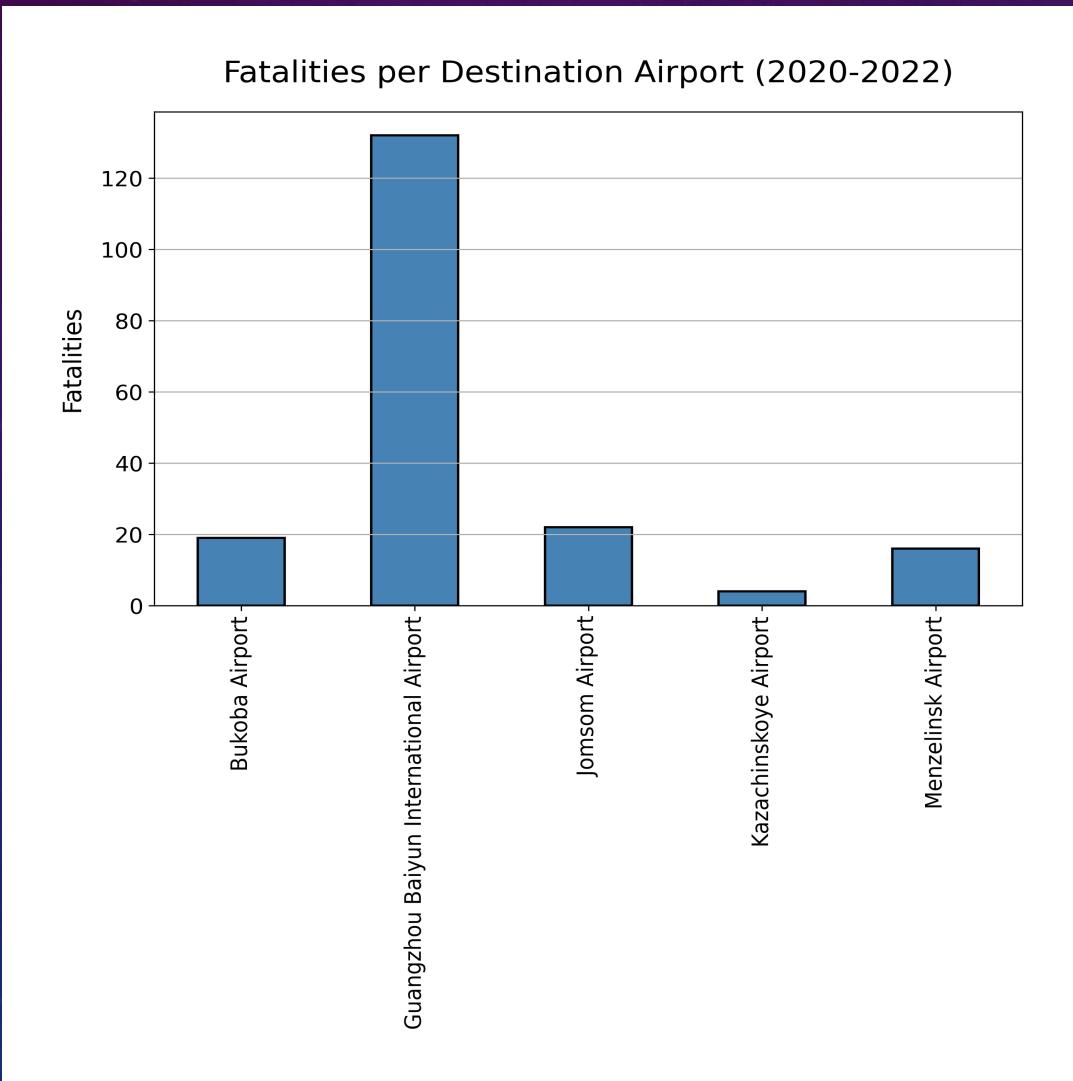
AVIATION ACCIDENTS VISUALIZATION

Analysis:



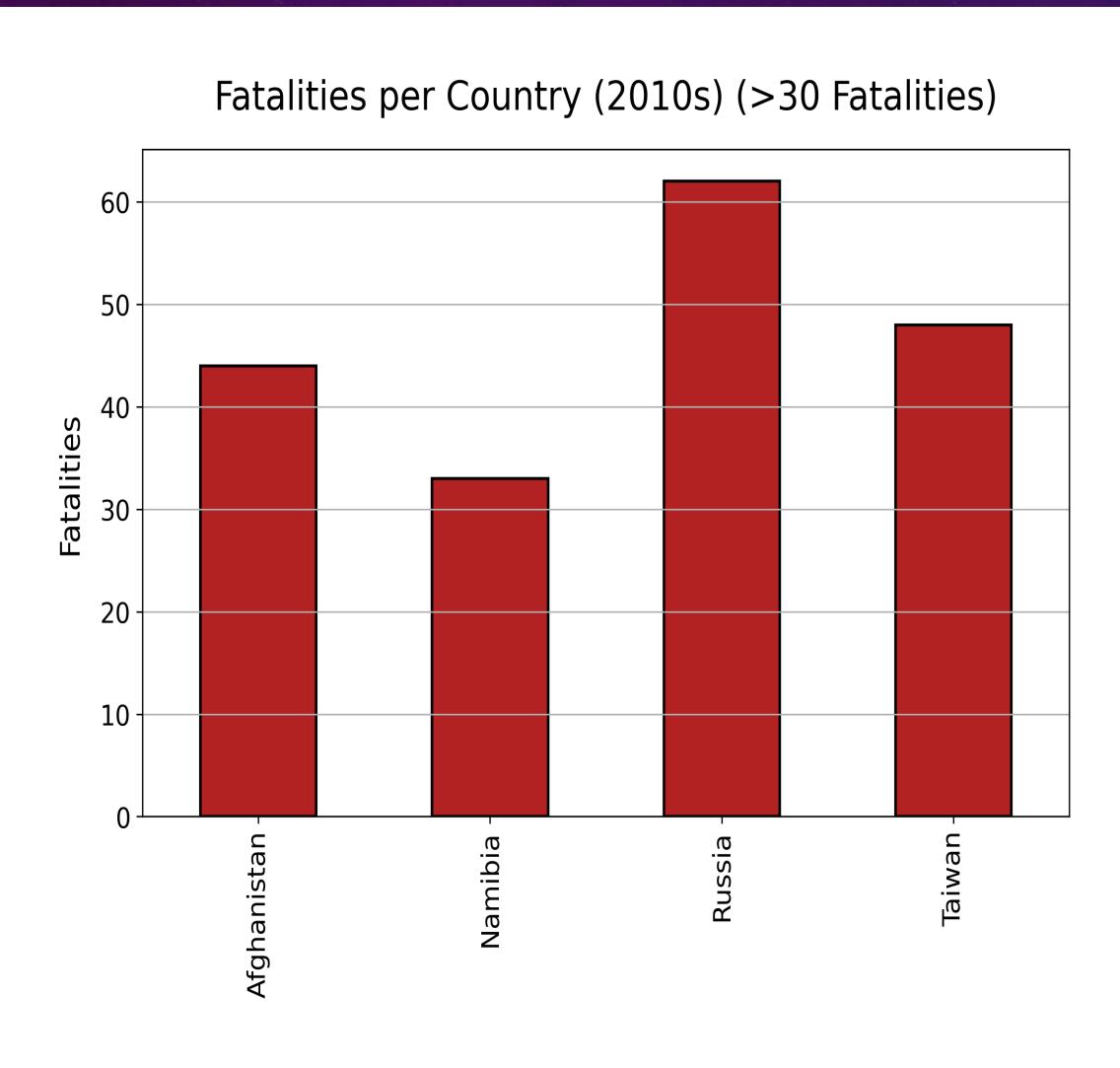
AVIATION ACCIDENTS VISUALIZATION

Analysis:



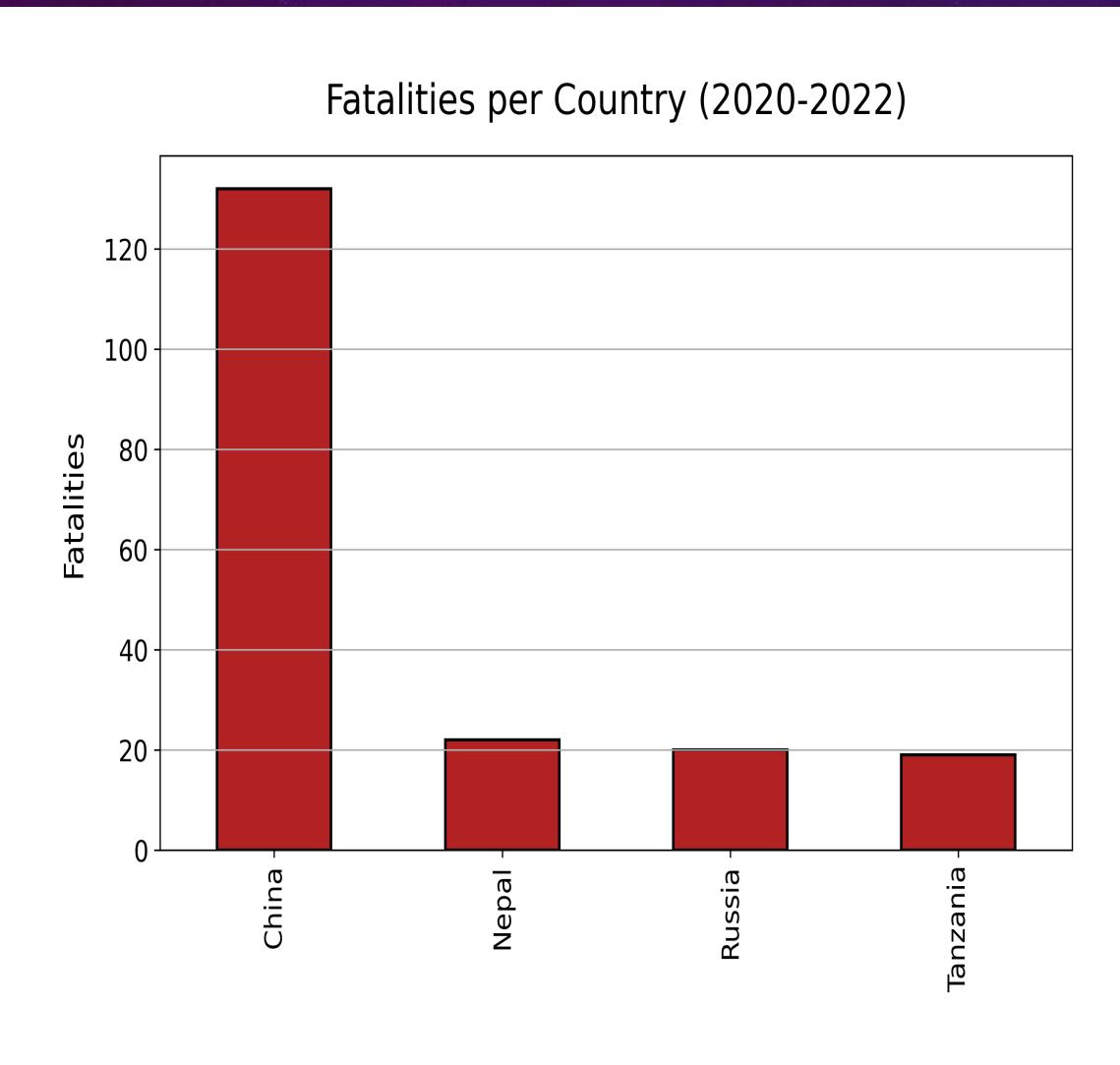
AVIATION ACCIDENTS VISUALIZATION

Analysis:



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Conclusion:

- We cannot accurately predict the location of plane crashes only the likelihood based on past events and those parameters change from decade to decade.
- During the last few years, China Eastern Airlines has experienced the highest number of fatalities.
- Possible outside factors for aviation fatalities include terrorism, political upheaval, and cultural practices.
- In any case, the next China Eastern Airlines domestic passenger flight from Kunming Changshui International Airport to Guangzhou Baiyun International Airport on a Boeing 737 should likely be avoided.
- This project is a positive first step toward understanding aviation accidents, and, in the future, these fatalities should be compared with total flight data to render percentages as the metric for a clearer picture of the situation.

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Questions? Comments?

