

AVIATION ACCIDENTS VISUALIZATION PROJECT

GROUP 3 MEMBERS:

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STEPHEN GRANTHAM, THERESA BRAVO, VISHNU PILLAI

AVIATION ACCIDENTS' VISUALIZATION

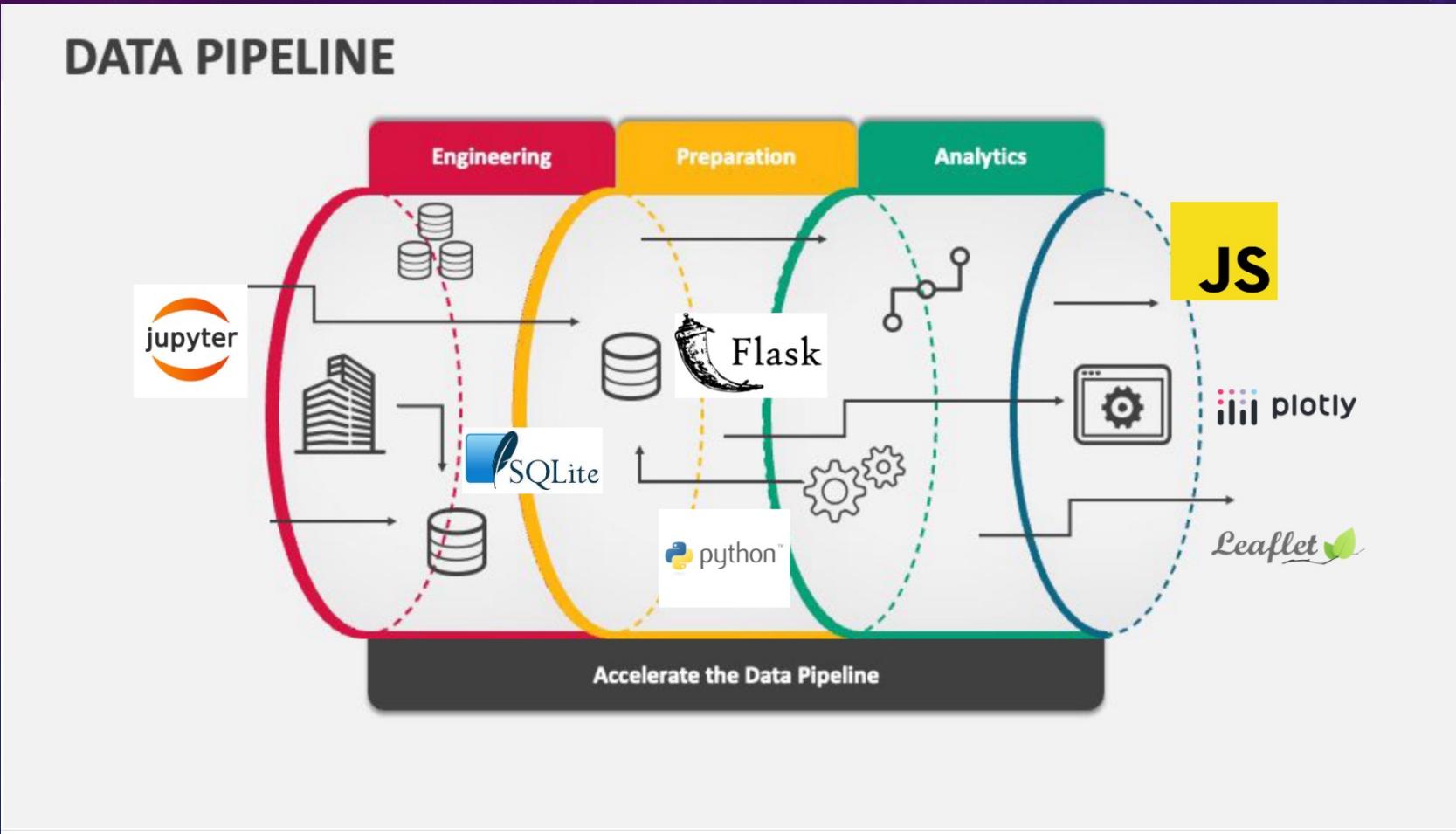
Introduction:

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

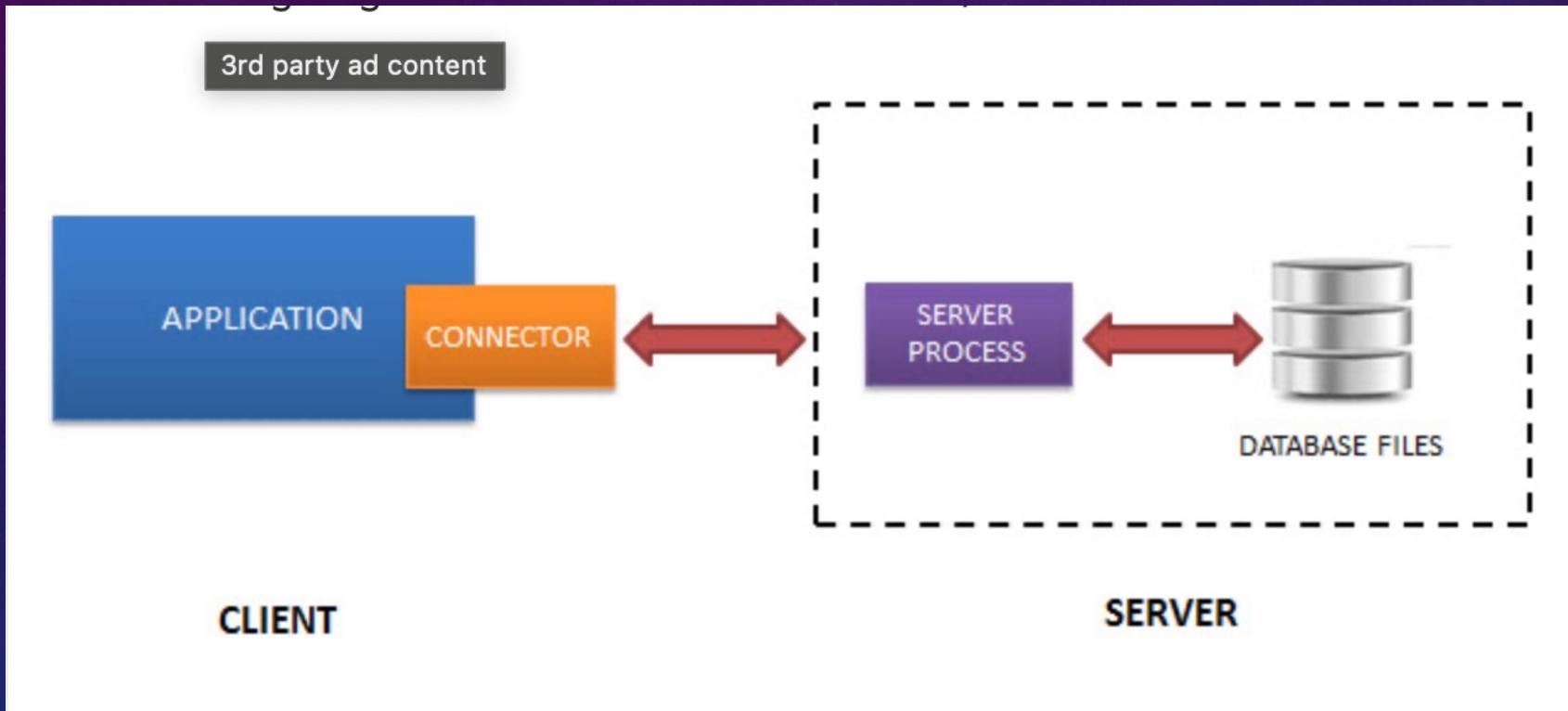
- Removal of Unwanted Information
- Old/New Names
- Standardization



AVIATION ACCIDENTS VISUALIZATION

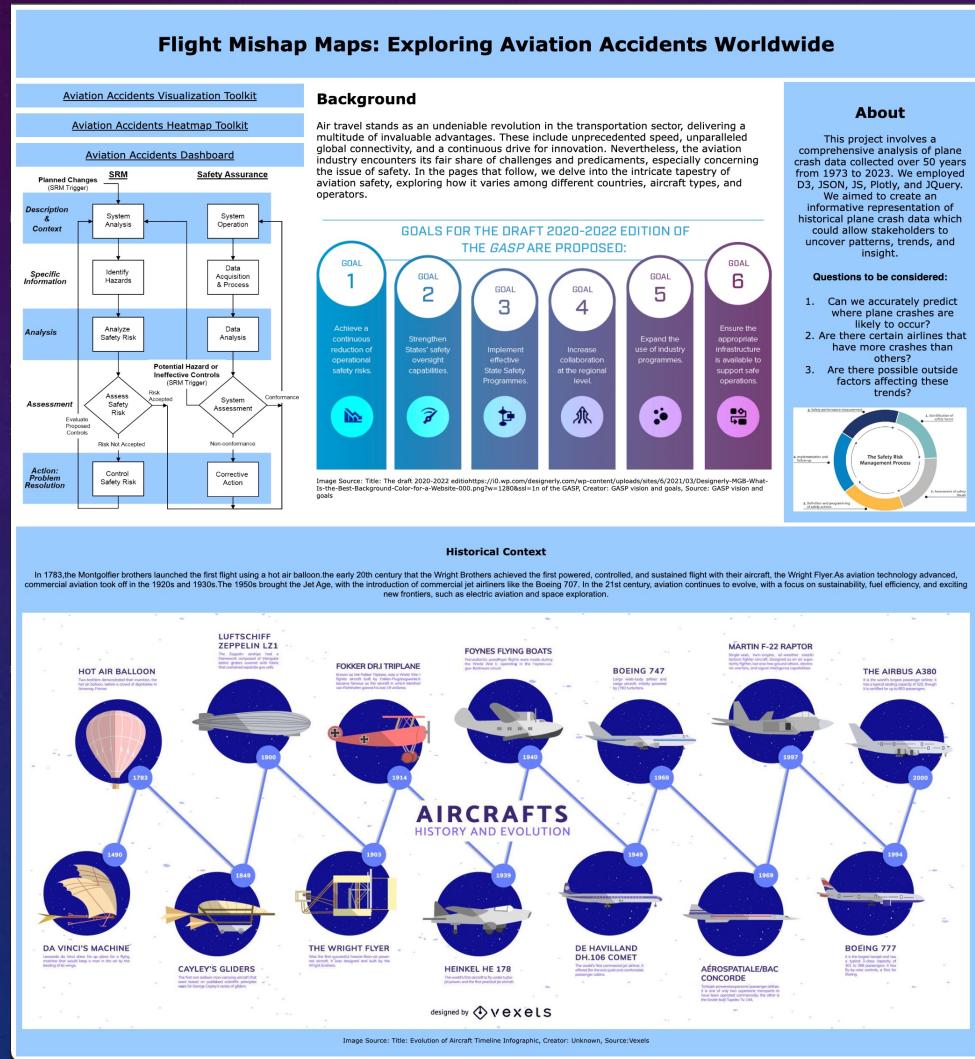
Flask API / SQLite

Database
Loading:



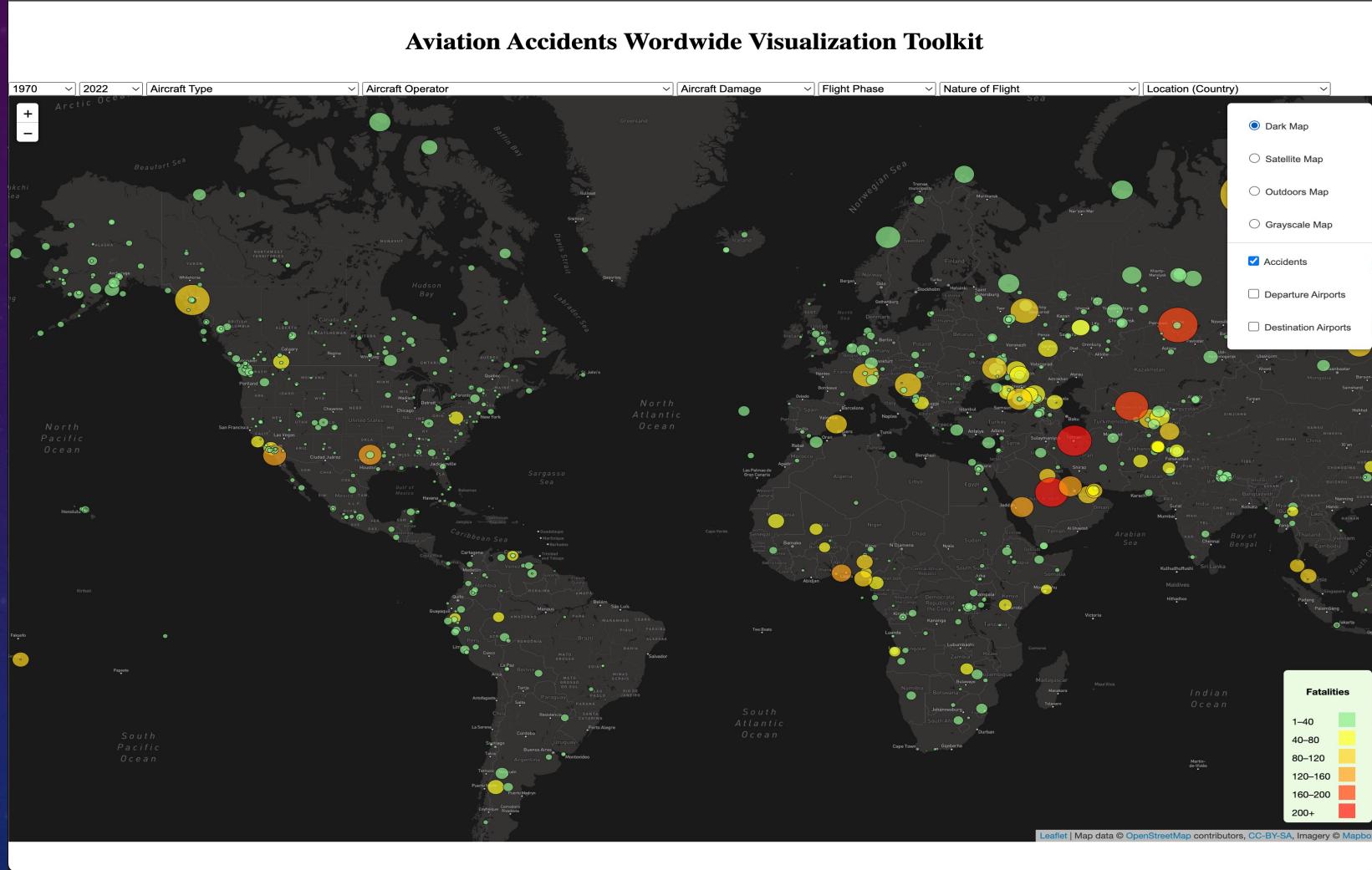
AVIATION ACCIDENTS VISUALIZATION

Landing Page:



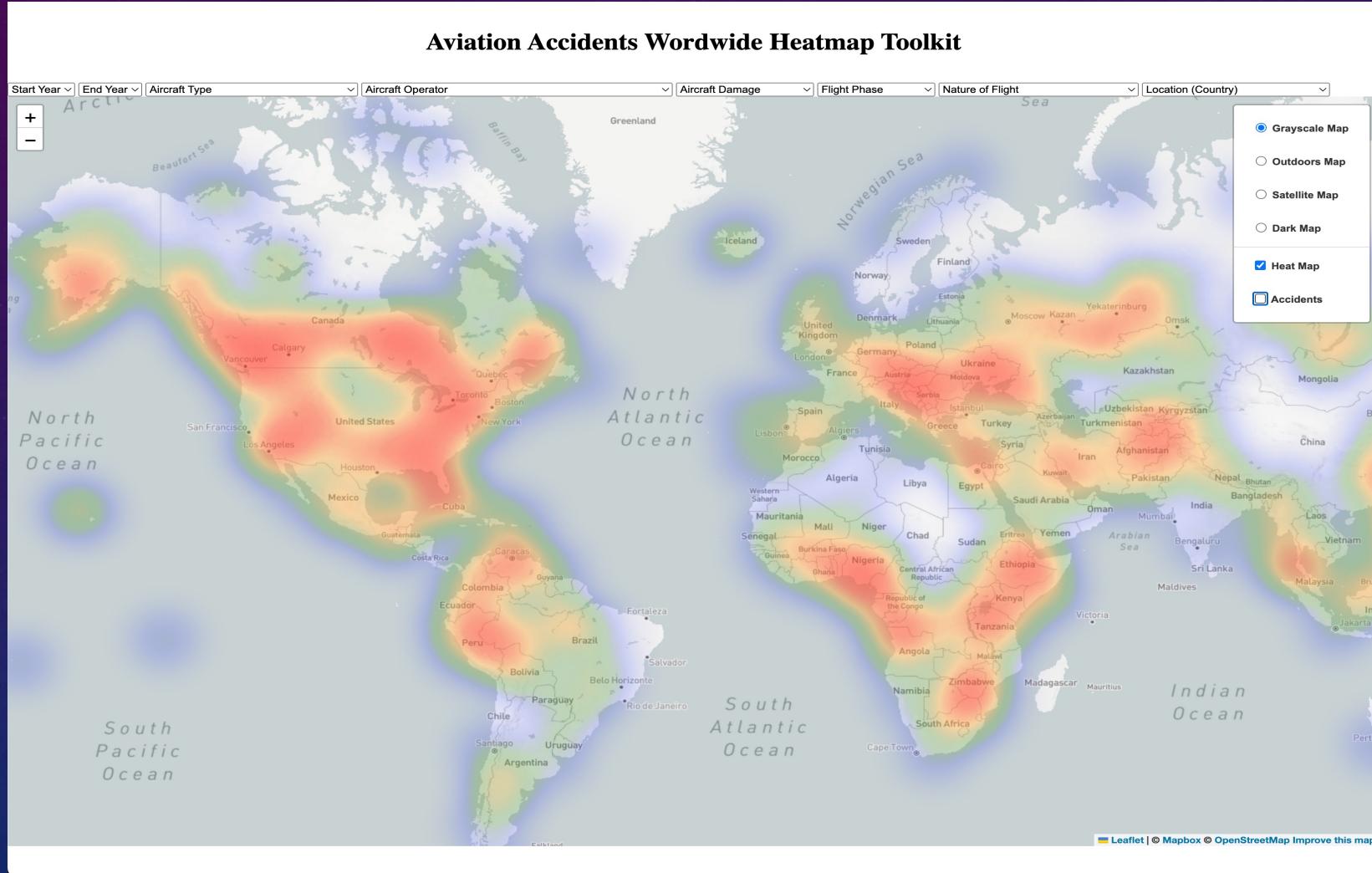
AVIATION ACCIDENTS VISUALIZATION

Visualization:



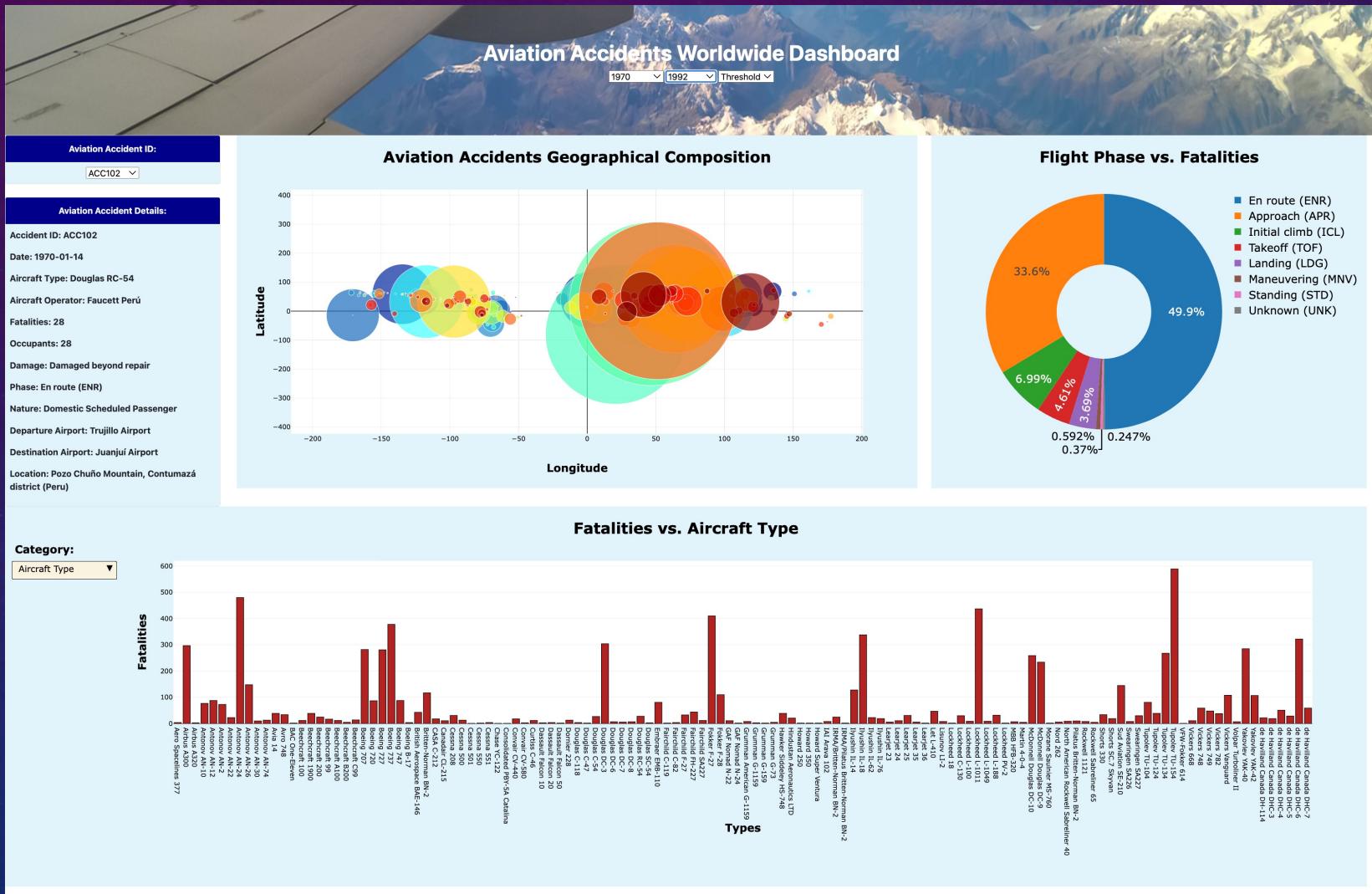
AVIATION ACCIDENTS VISUALIZATION

Heatmap:



AVIATION ACCIDENTS VISUALIZATION

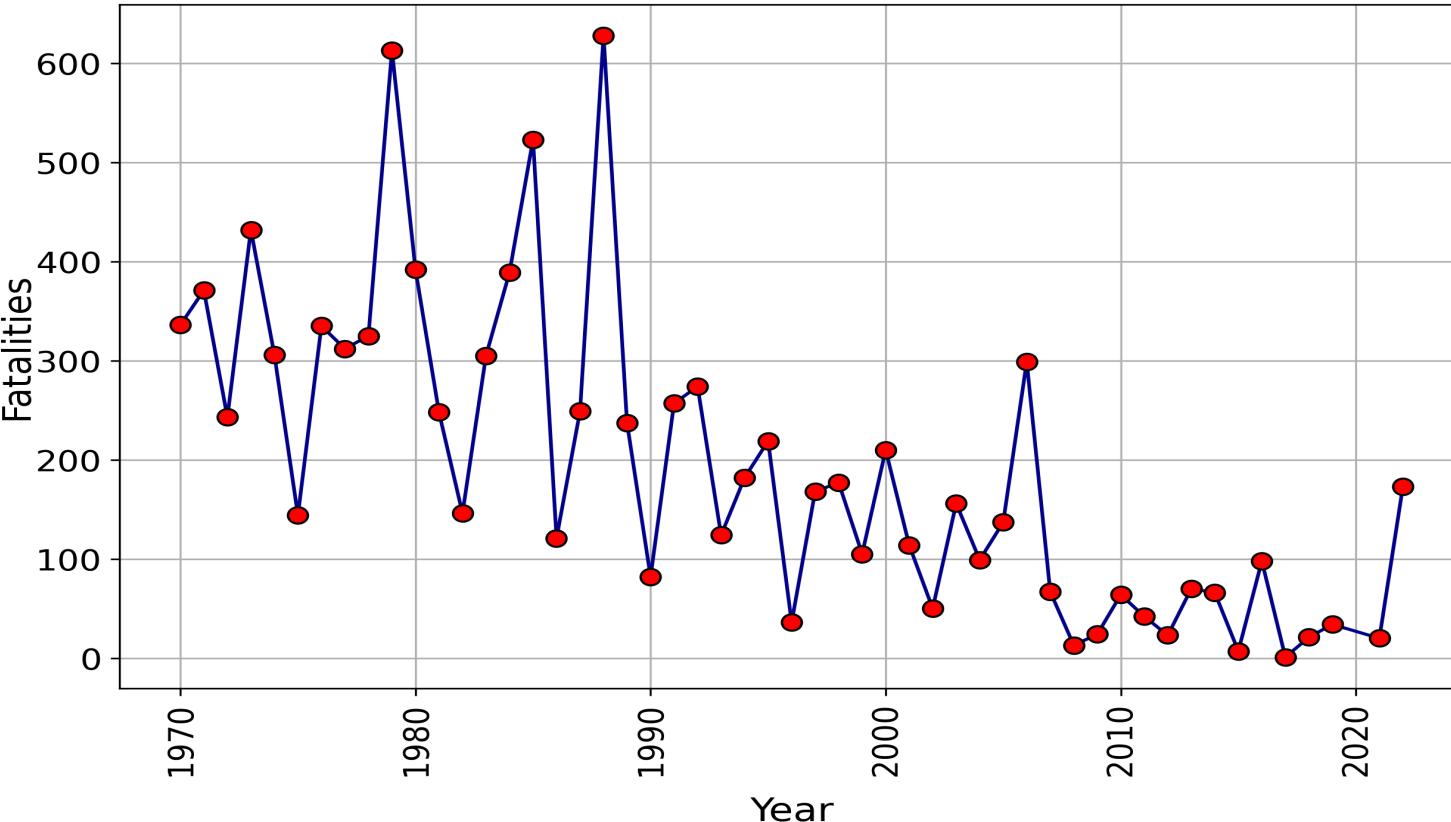
Dashboard:



AVIATION ACCIDENTS VISUALIZATION

Analysis:

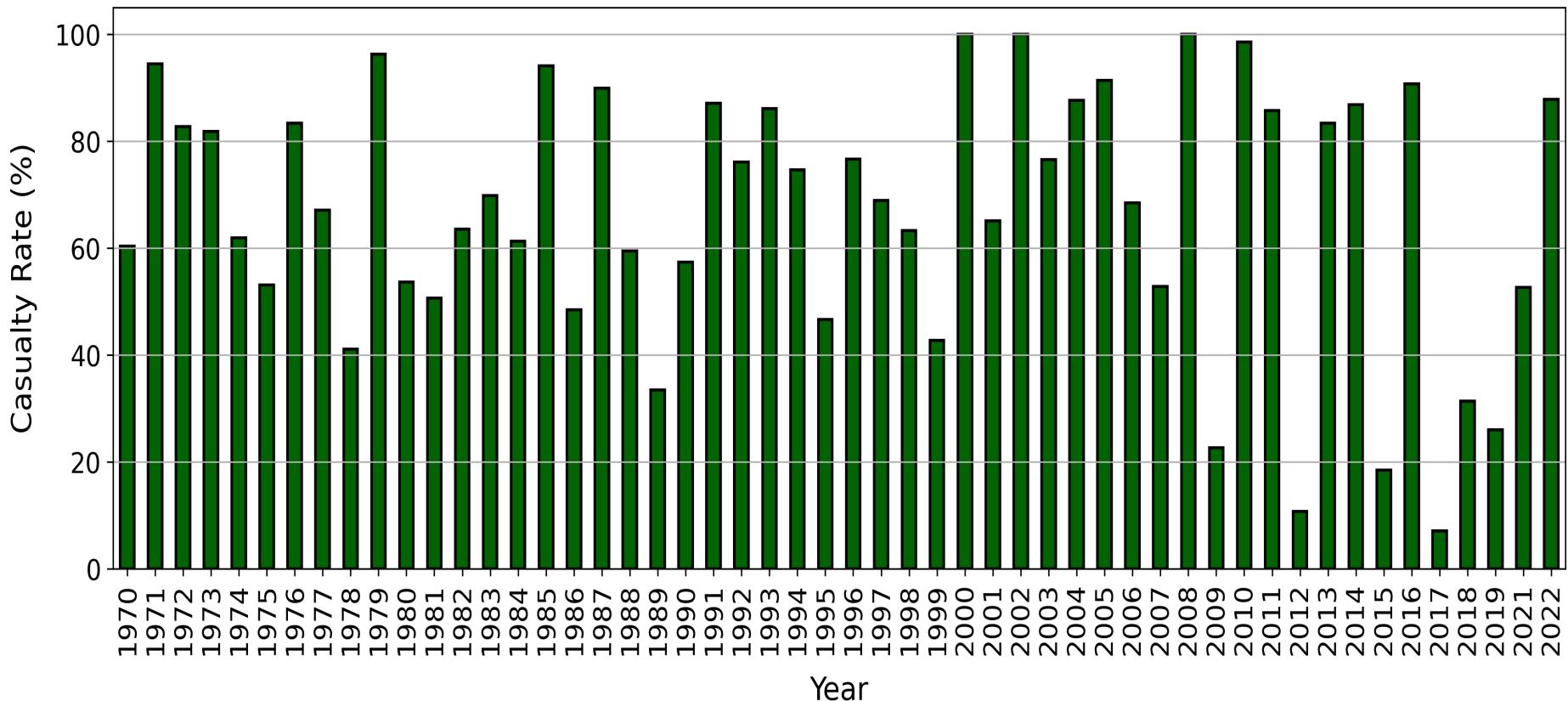
Total Aviation Fatalities vs. Year (1970-2022)



AVIATION ACCIDENTS VISUALIZATION

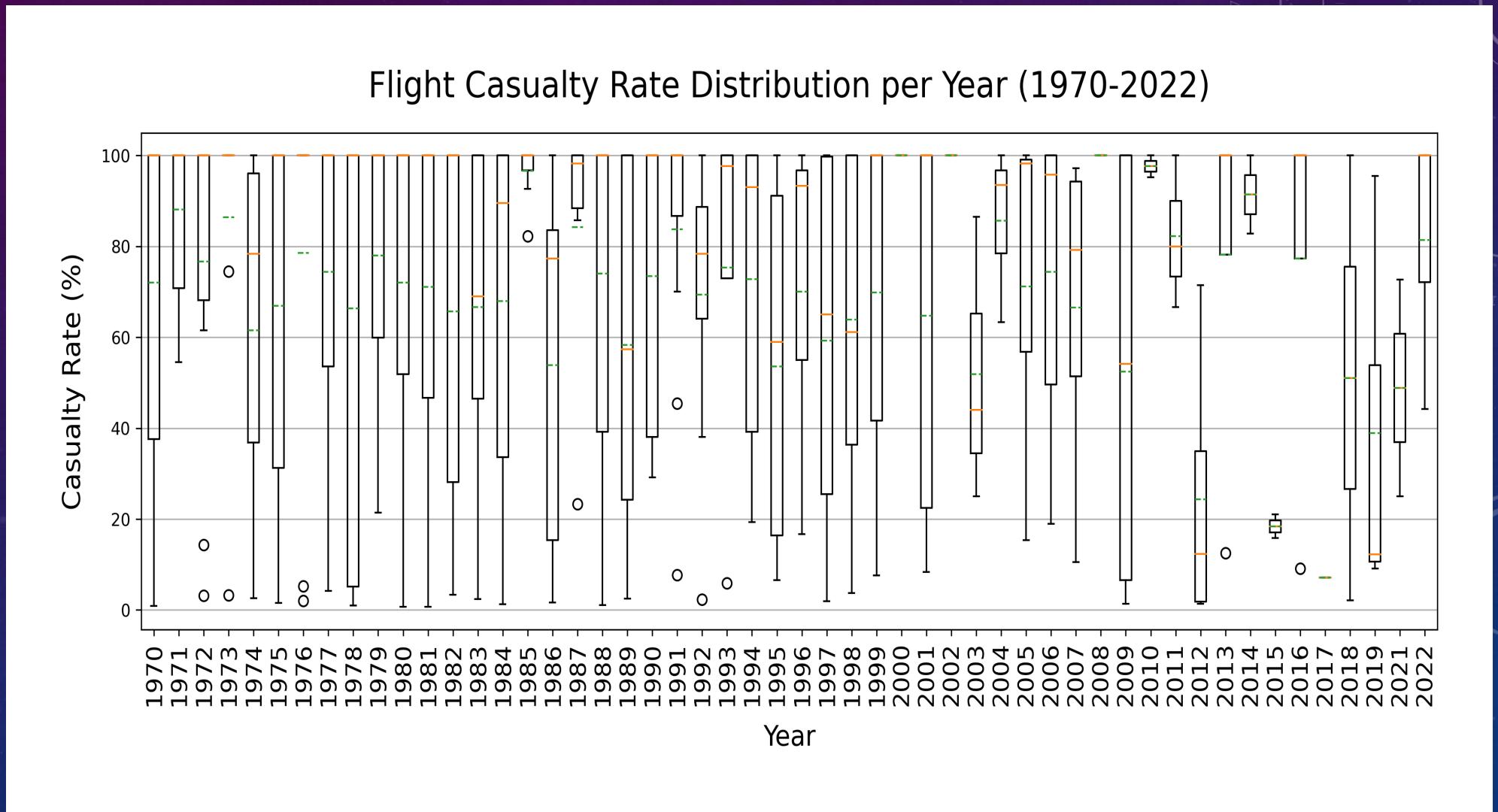
Analysis:

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



AVIATION ACCIDENTS VISUALIZATION

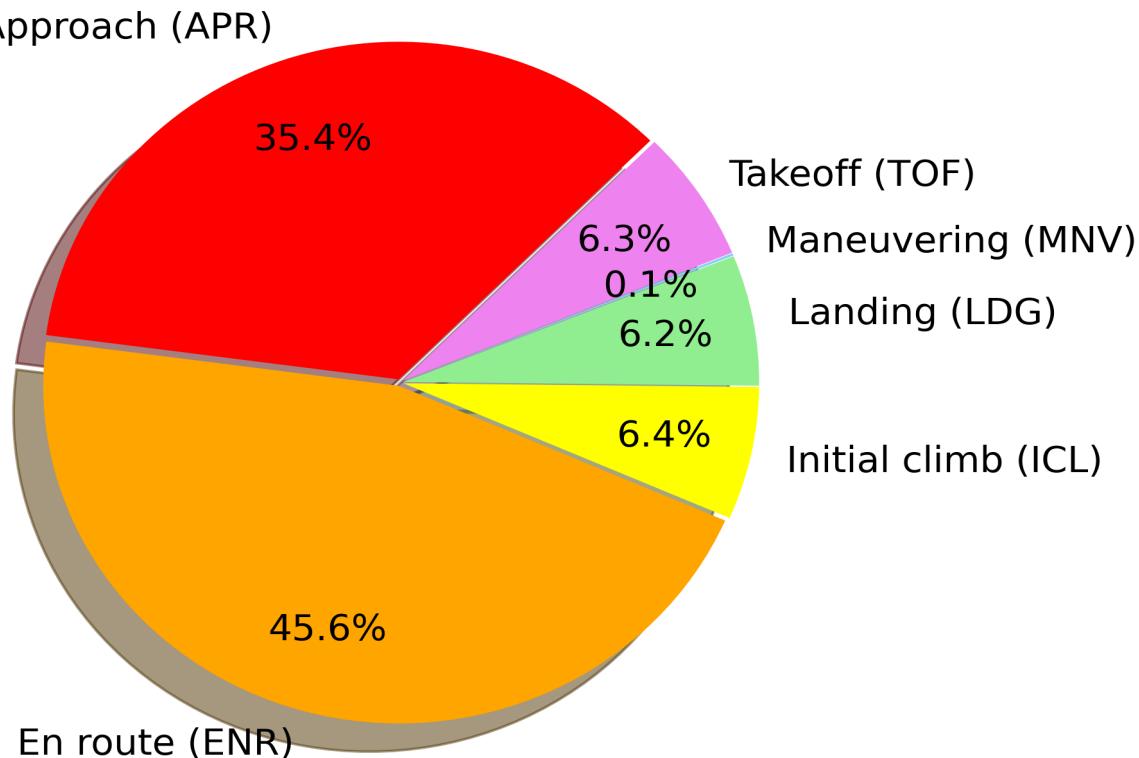
Analysis:



AVIATION ACCIDENTS VISUALIZATION

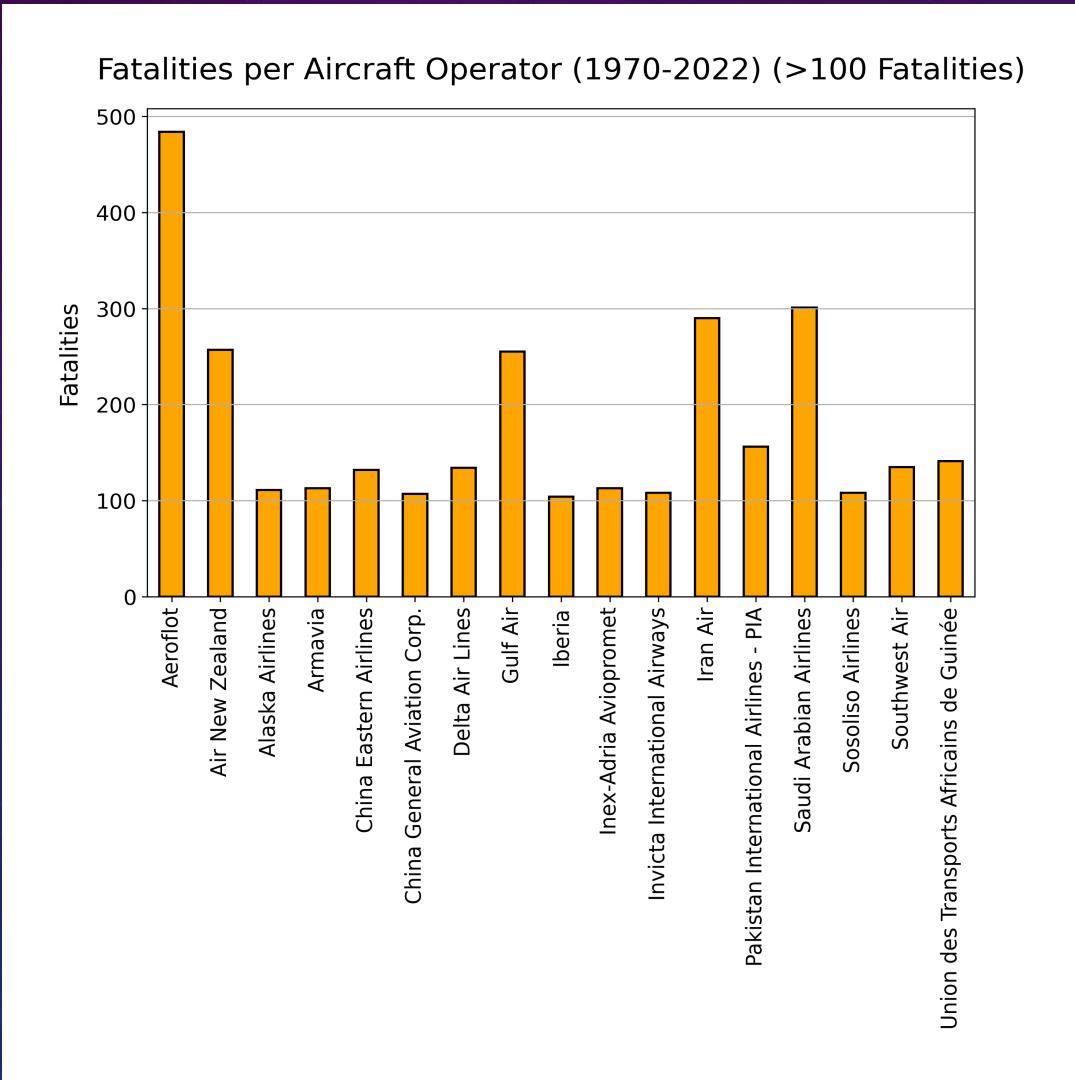
Analysis:

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



AVIATION ACCIDENTS VISUALIZATION

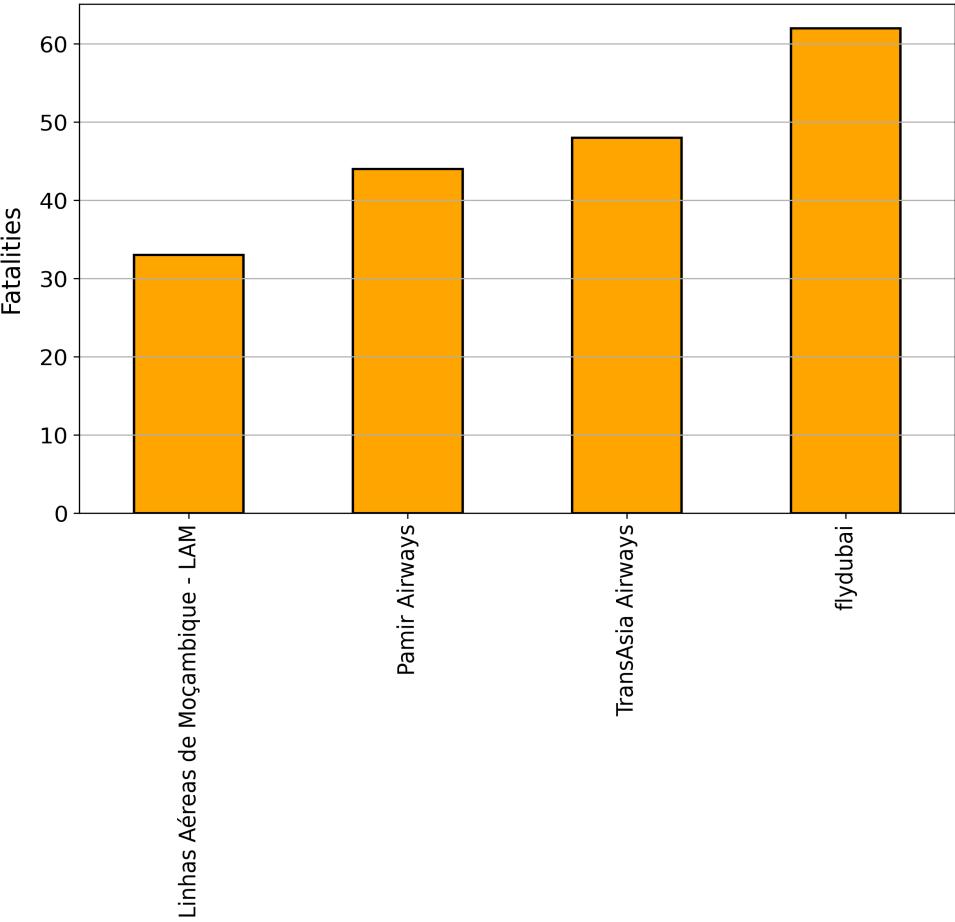
Analysis:



AVIATION ACCIDENTS VISUALIZATION

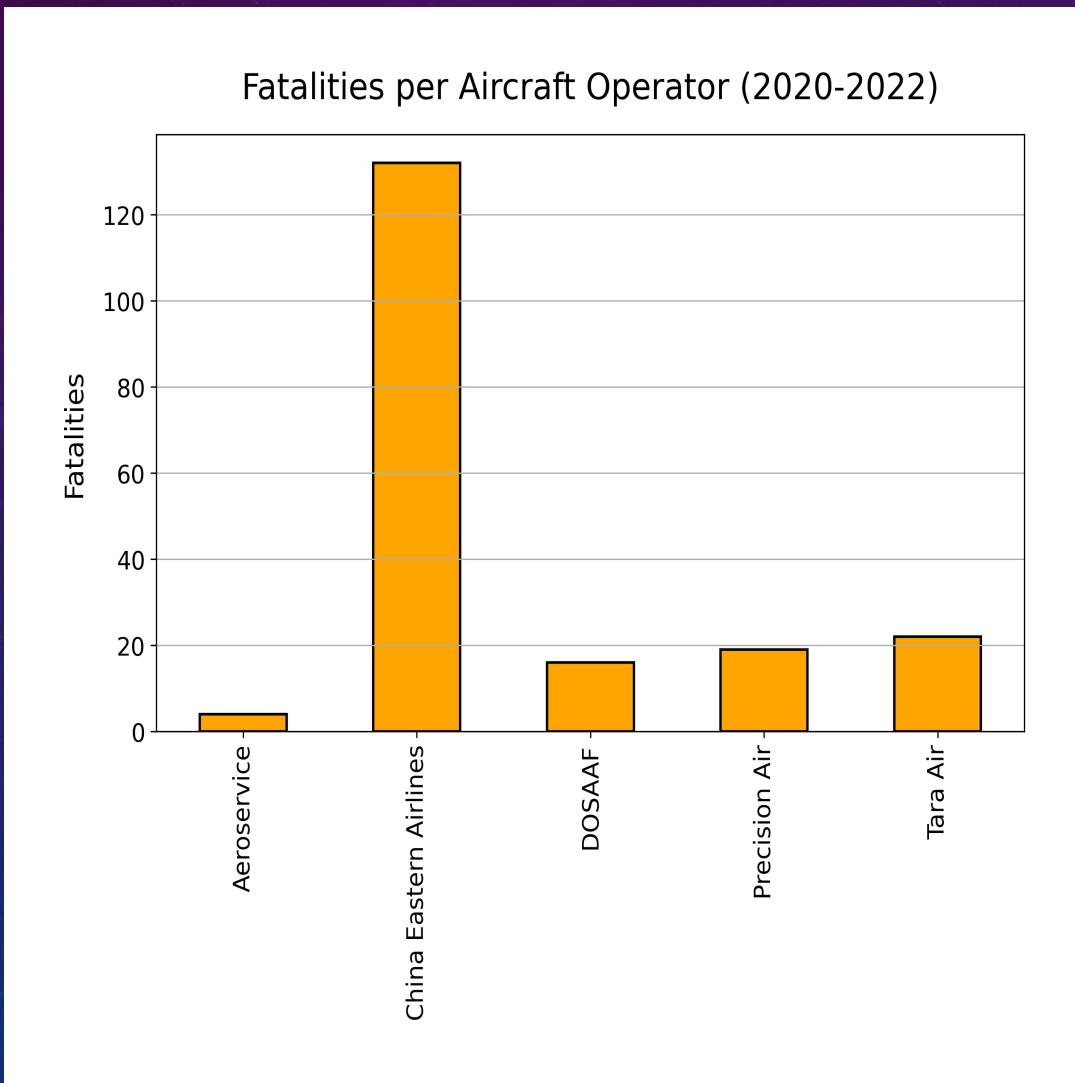
Analysis:

Fatalities per Aircraft Operator (2010s) (>30 Fatalities)



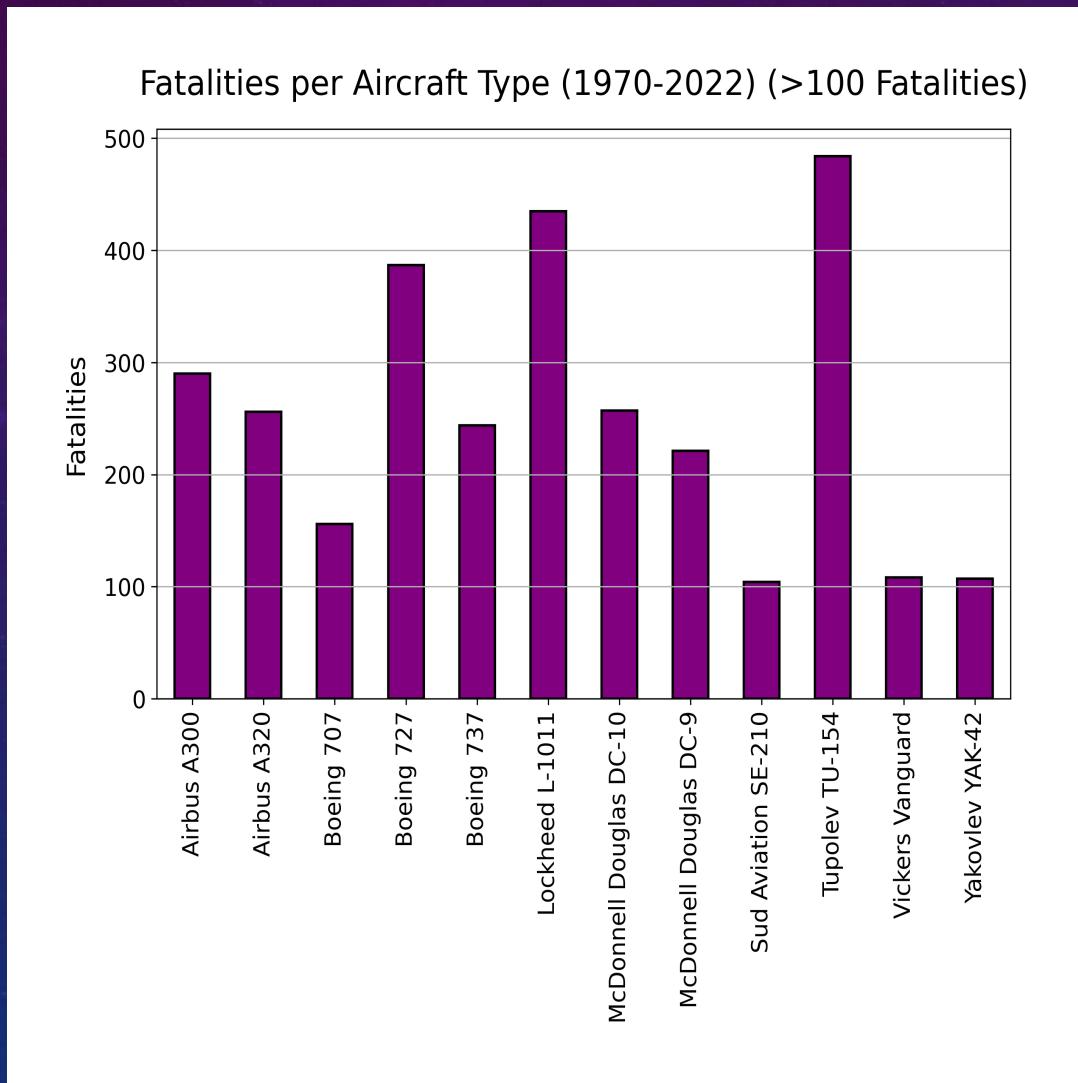
AVIATION ACCIDENTS VISUALIZATION

Analysis:



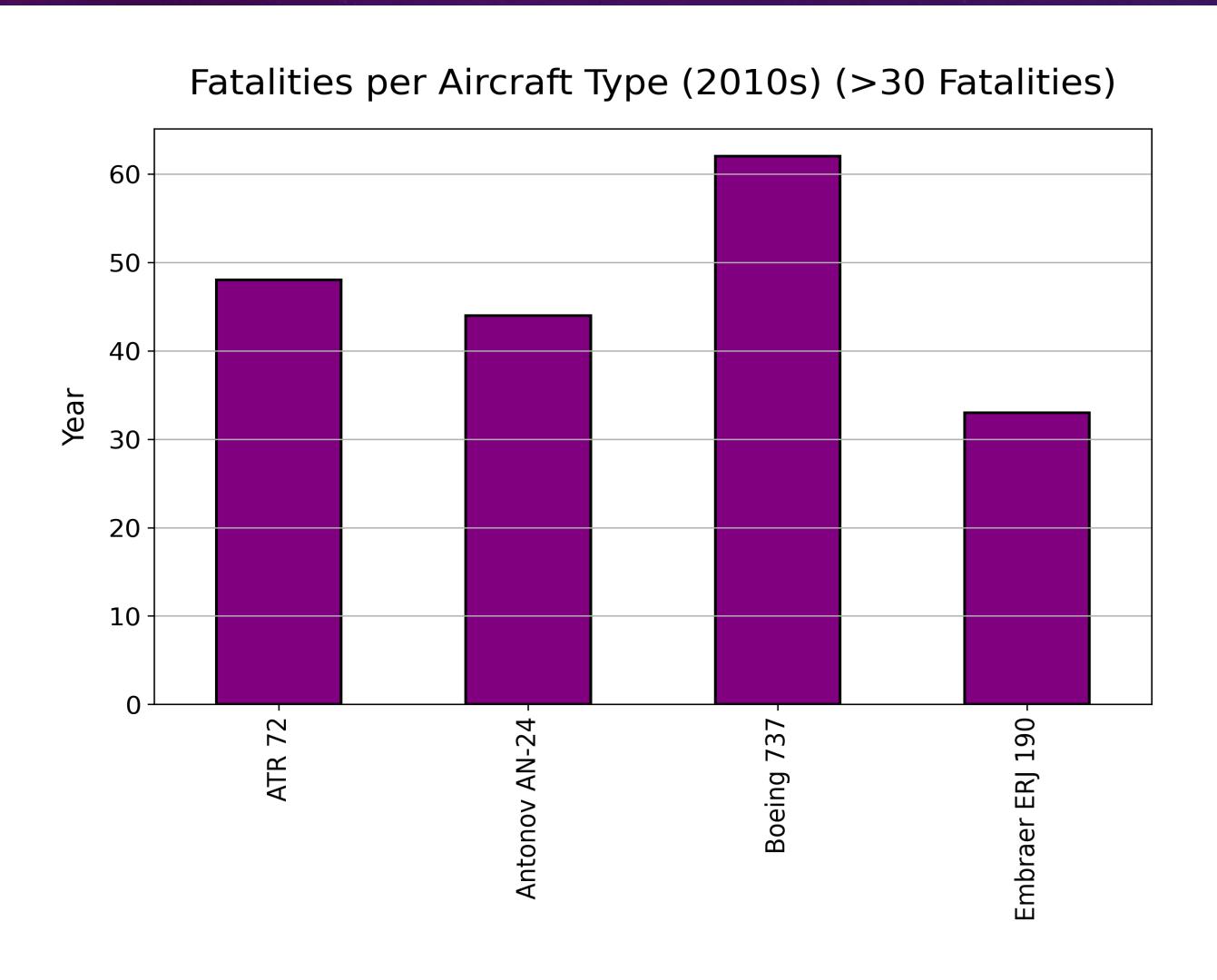
AVIATION ACCIDENTS VISUALIZATION

Analysis:



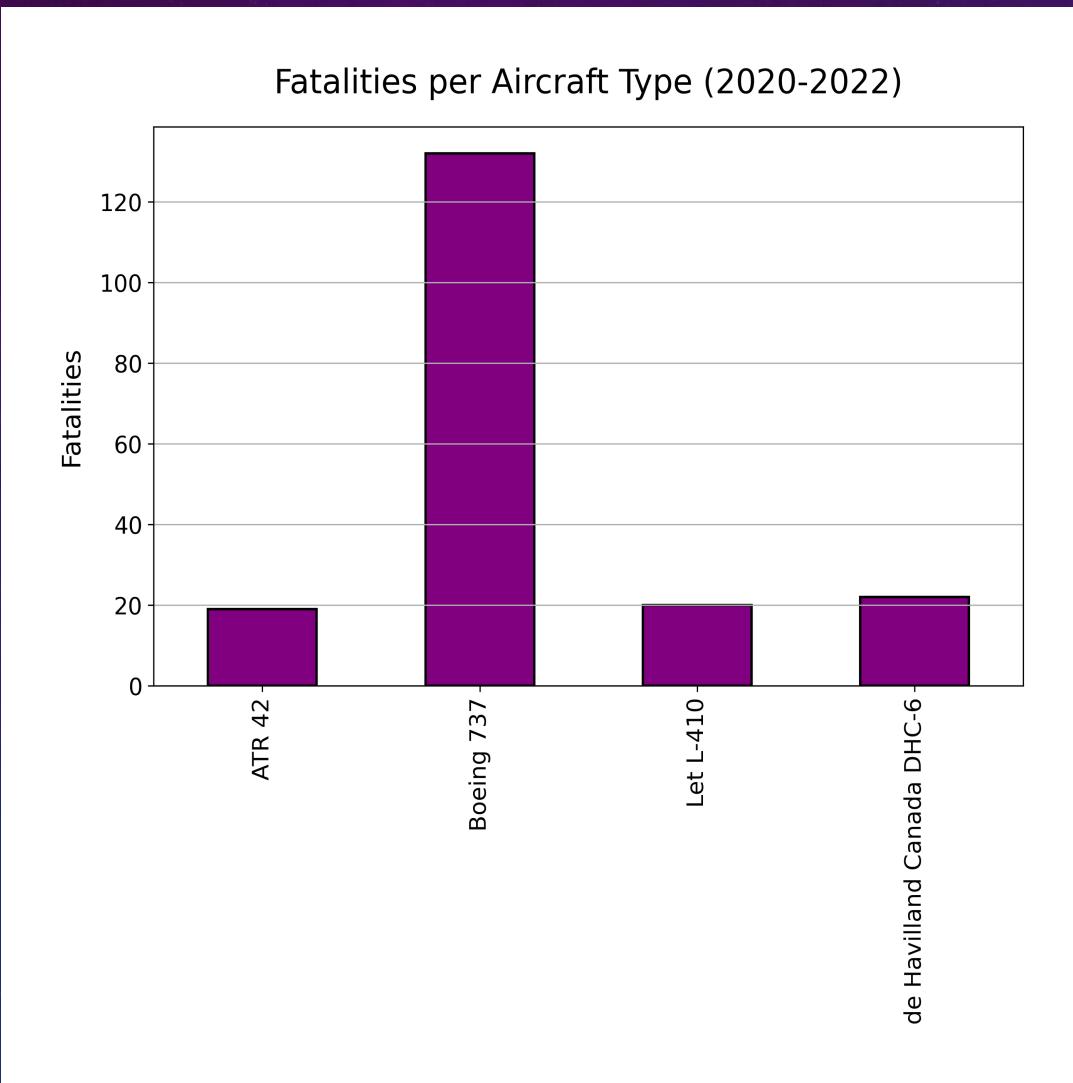
AVIATION ACCIDENTS VISUALIZATION

Analysis:



AVIATION ACCIDENTS VISUALIZATION

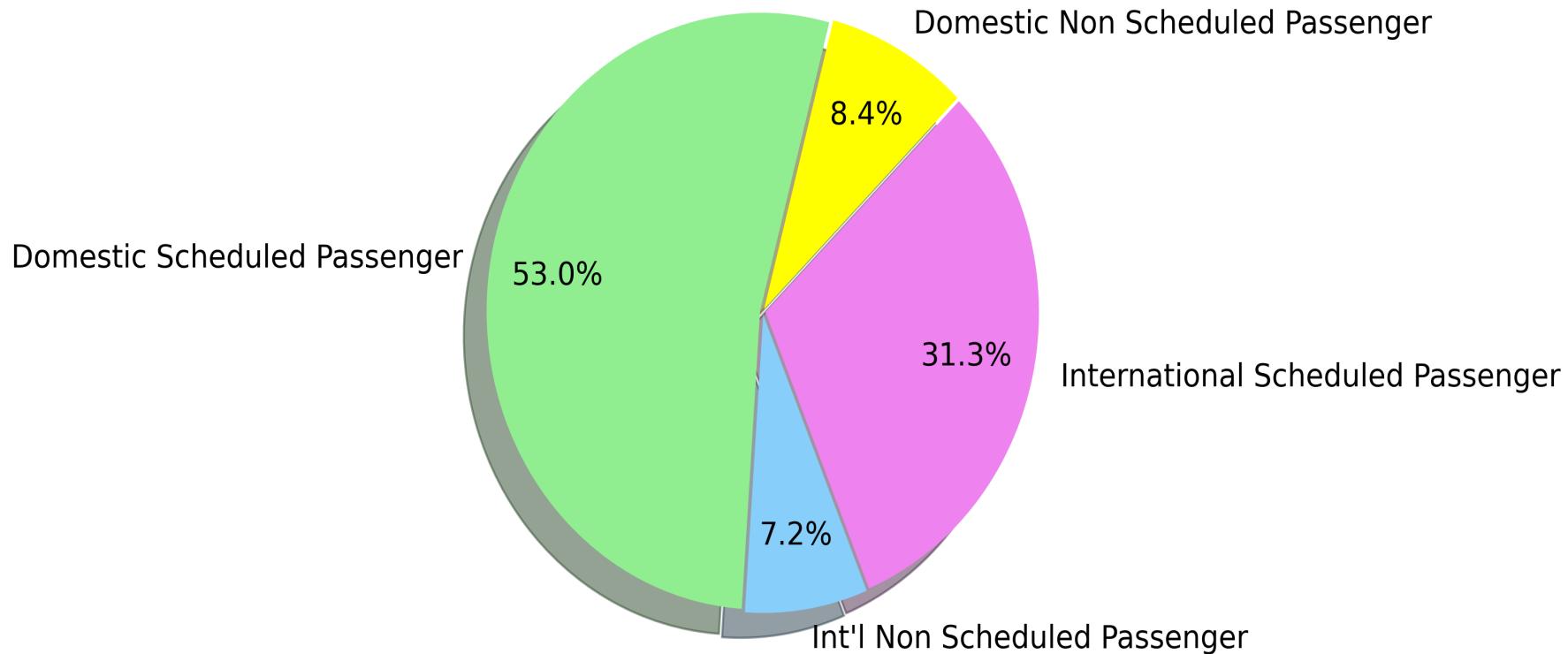
Analysis:



AVIATION ACCIDENTS VISUALIZATION

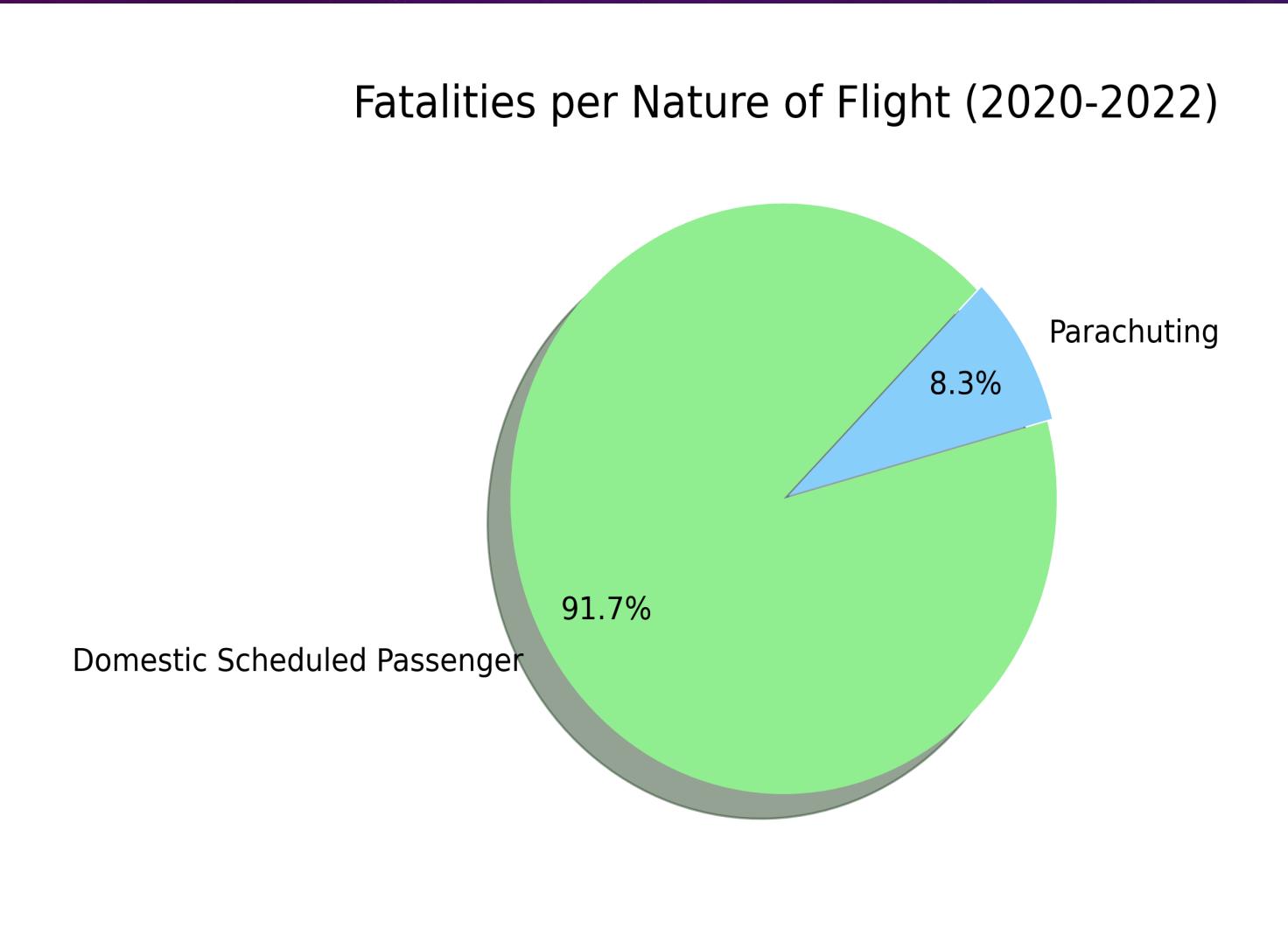
Analysis:

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



AVIATION ACCIDENTS VISUALIZATION

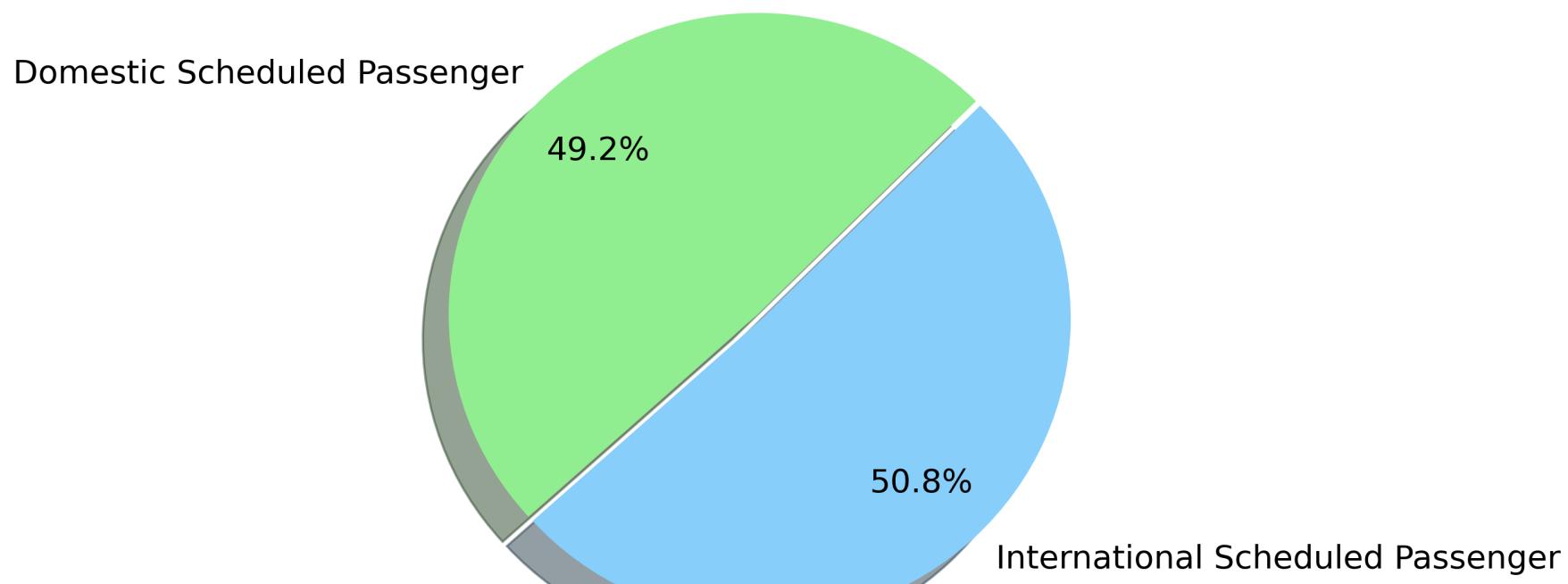
Analysis:



AVIATION ACCIDENTS VISUALIZATION

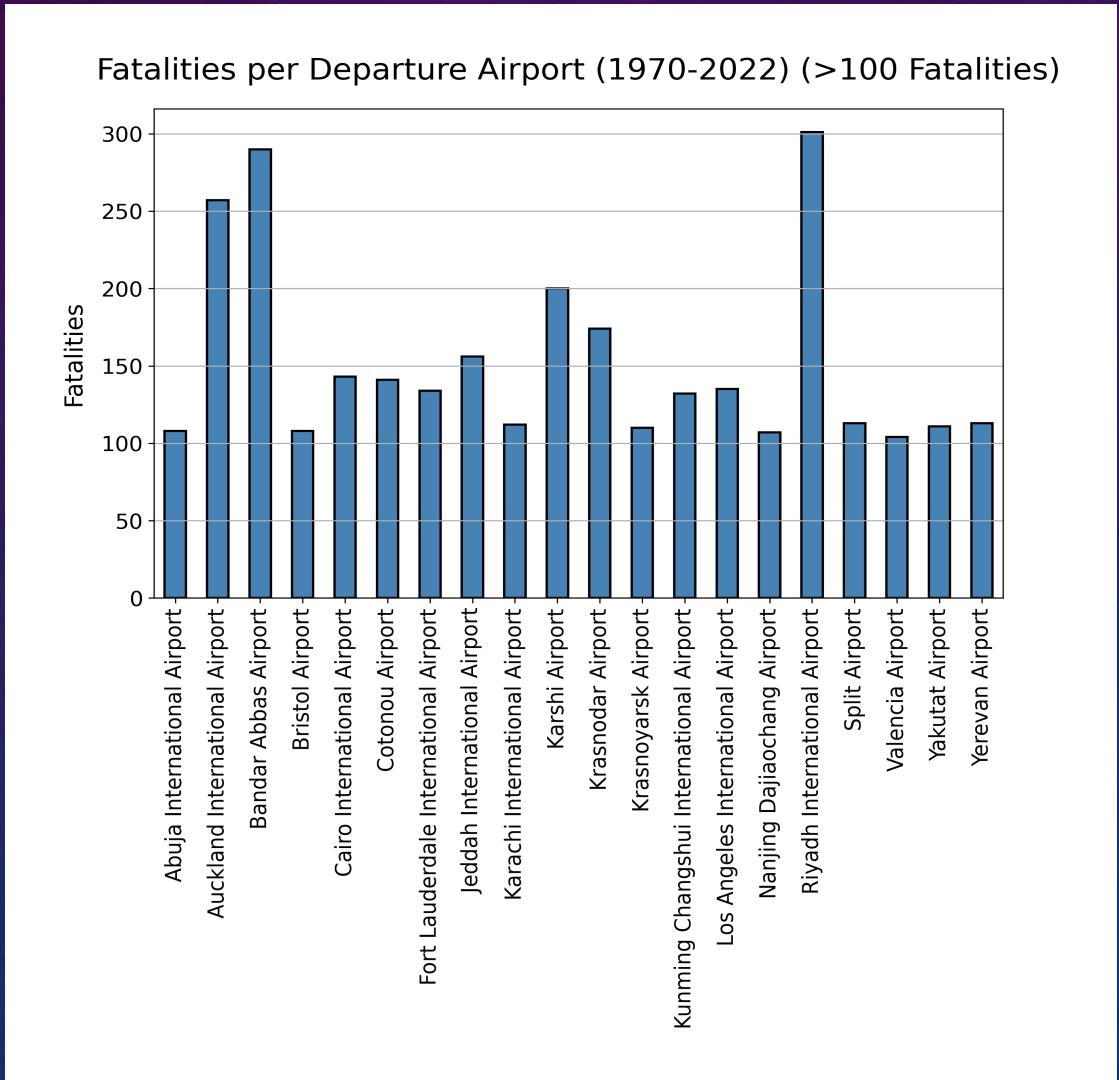
Analysis:

Fatalities per Nature of Flight (2010s) (>30 Fatalities)



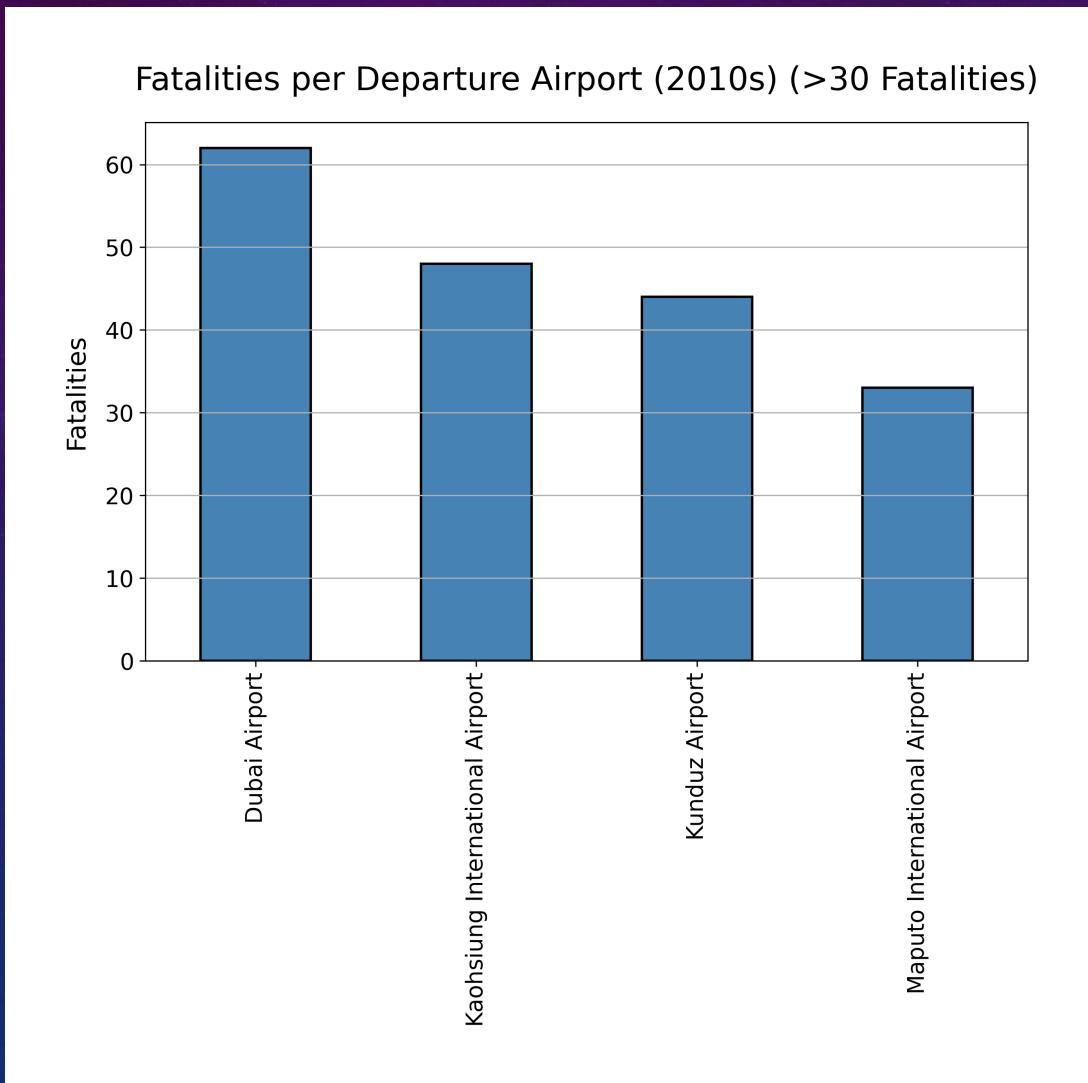
AVIATION ACCIDENTS VISUALIZATION

Analysis:



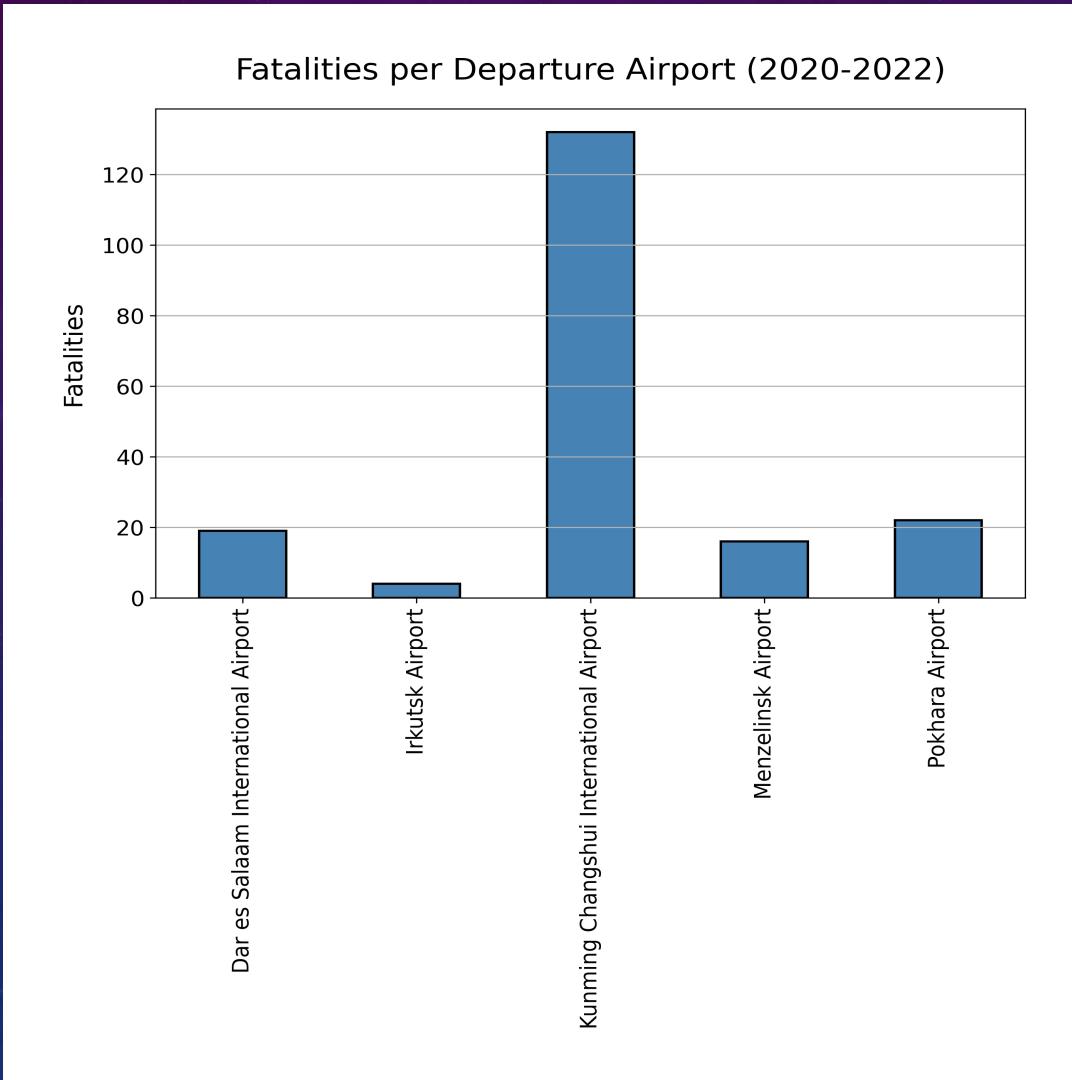
AVIATION ACCIDENTS VISUALIZATION

Analysis:



AVIATION ACCIDENTS VISUALIZATION

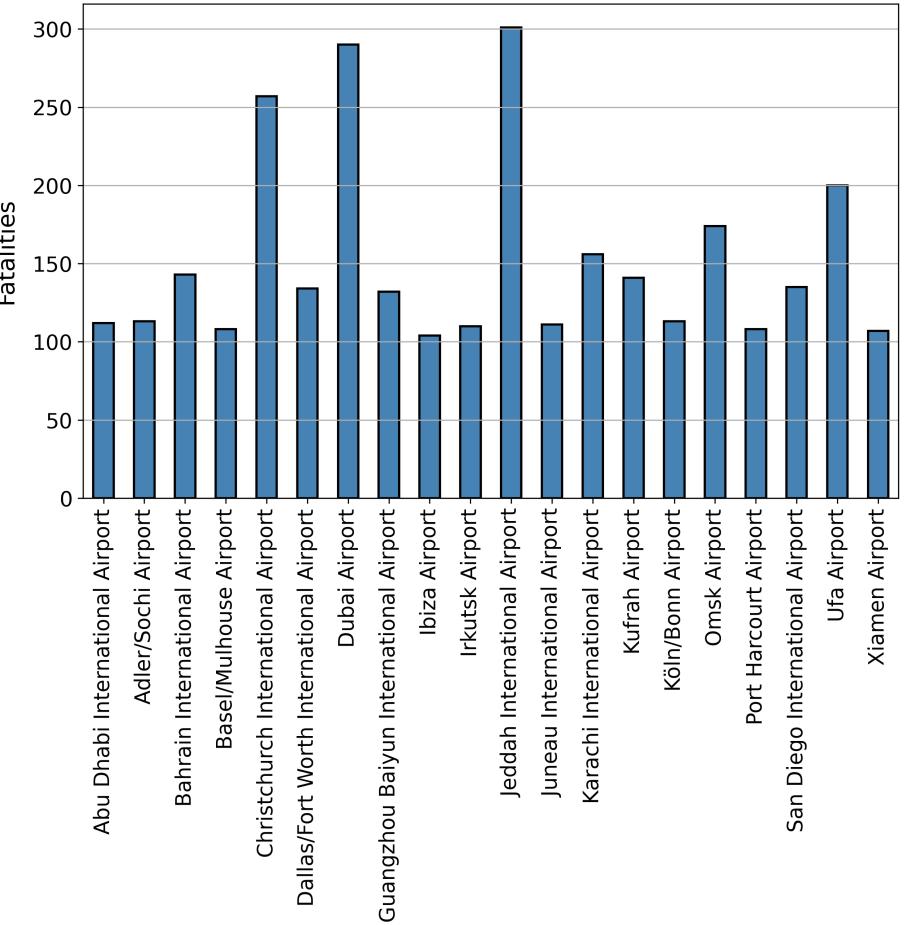
Analysis:



AVIATION ACCIDENTS VISUALIZATION

Analysis:

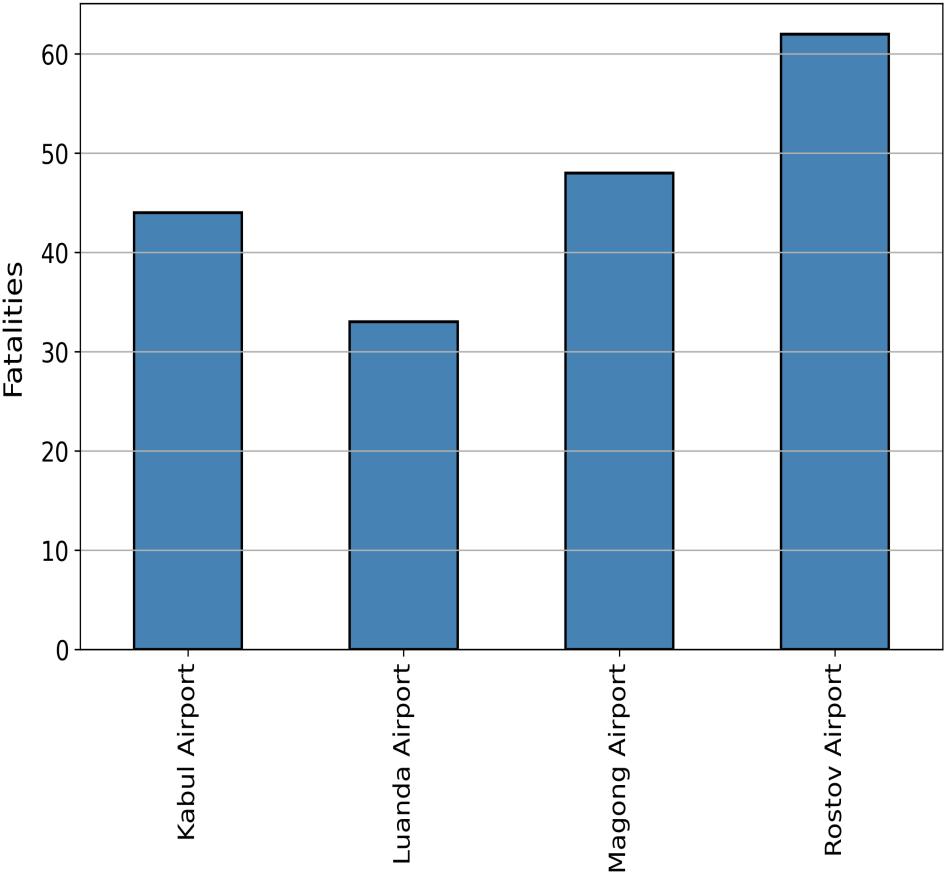
Fatalities per Destination Airport (1970-2022) (>100 Fatalities)



AVIATION ACCIDENTS VISUALIZATION

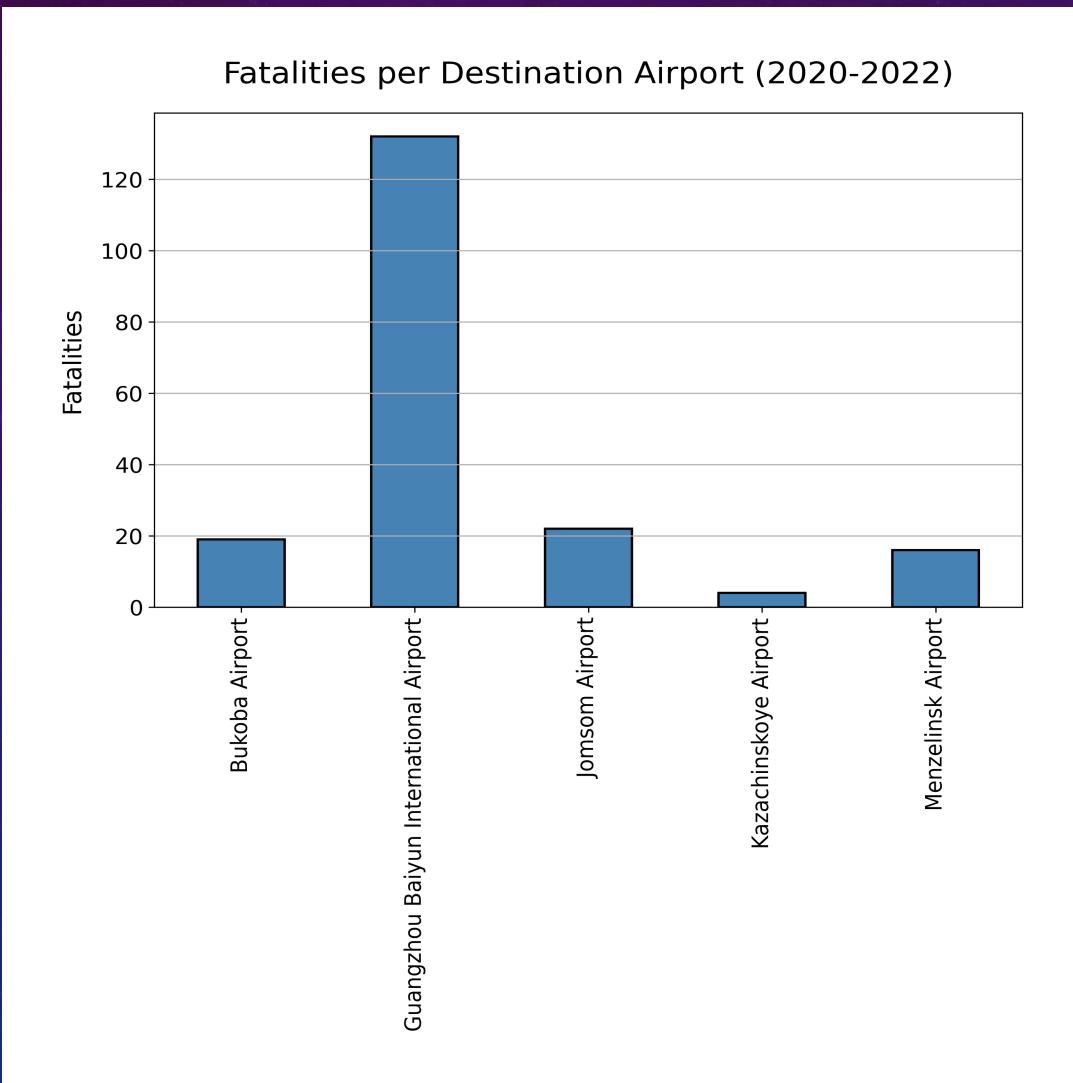
Analysis:

Fatalities per Destination Airport (2010s) (>30 Fatalities)



AVIATION ACCIDENTS VISUALIZATION

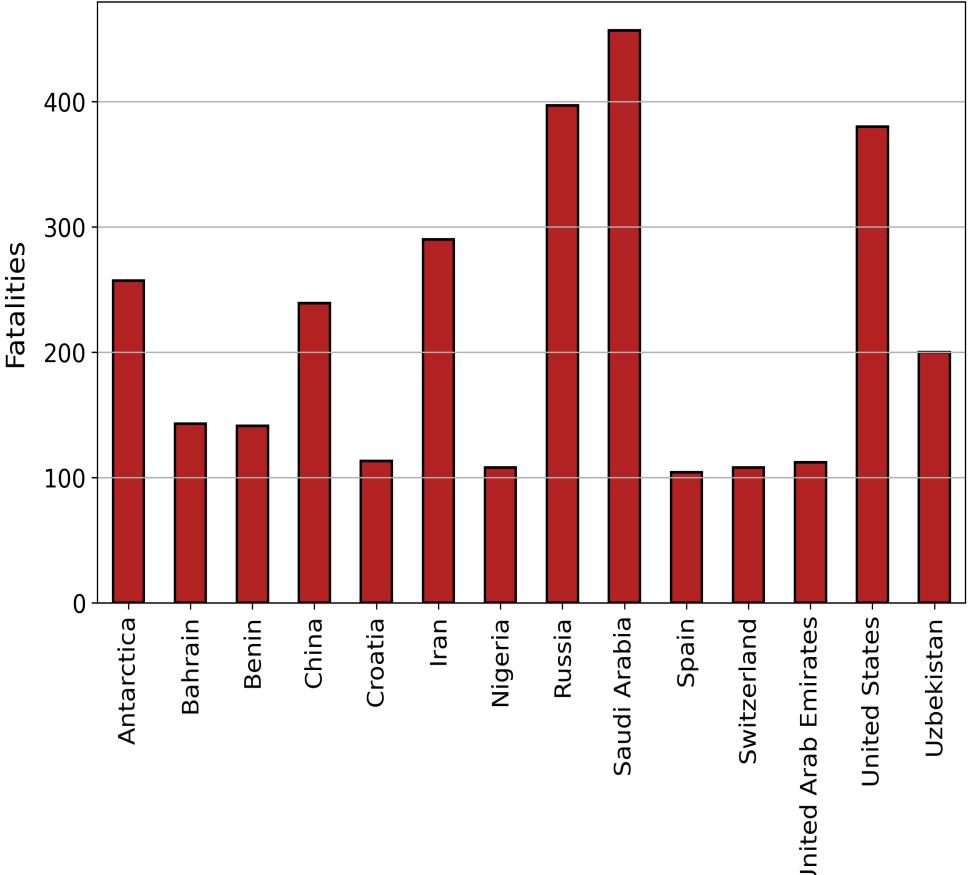
Analysis:



AVIATION ACCIDENTS VISUALIZATION

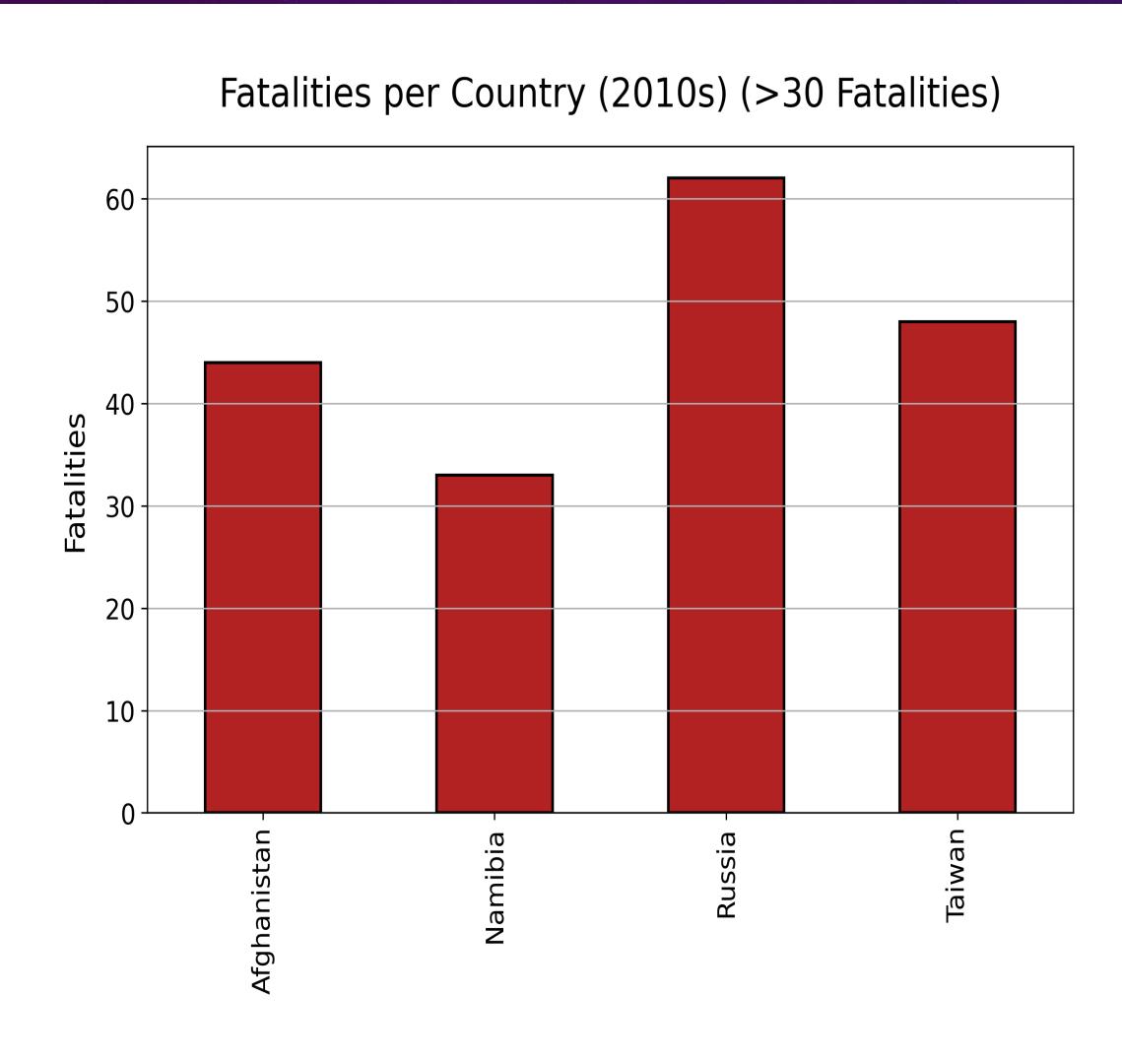
Analysis:

Fatalities per Country (1970-2022) (>100 Fatalities)



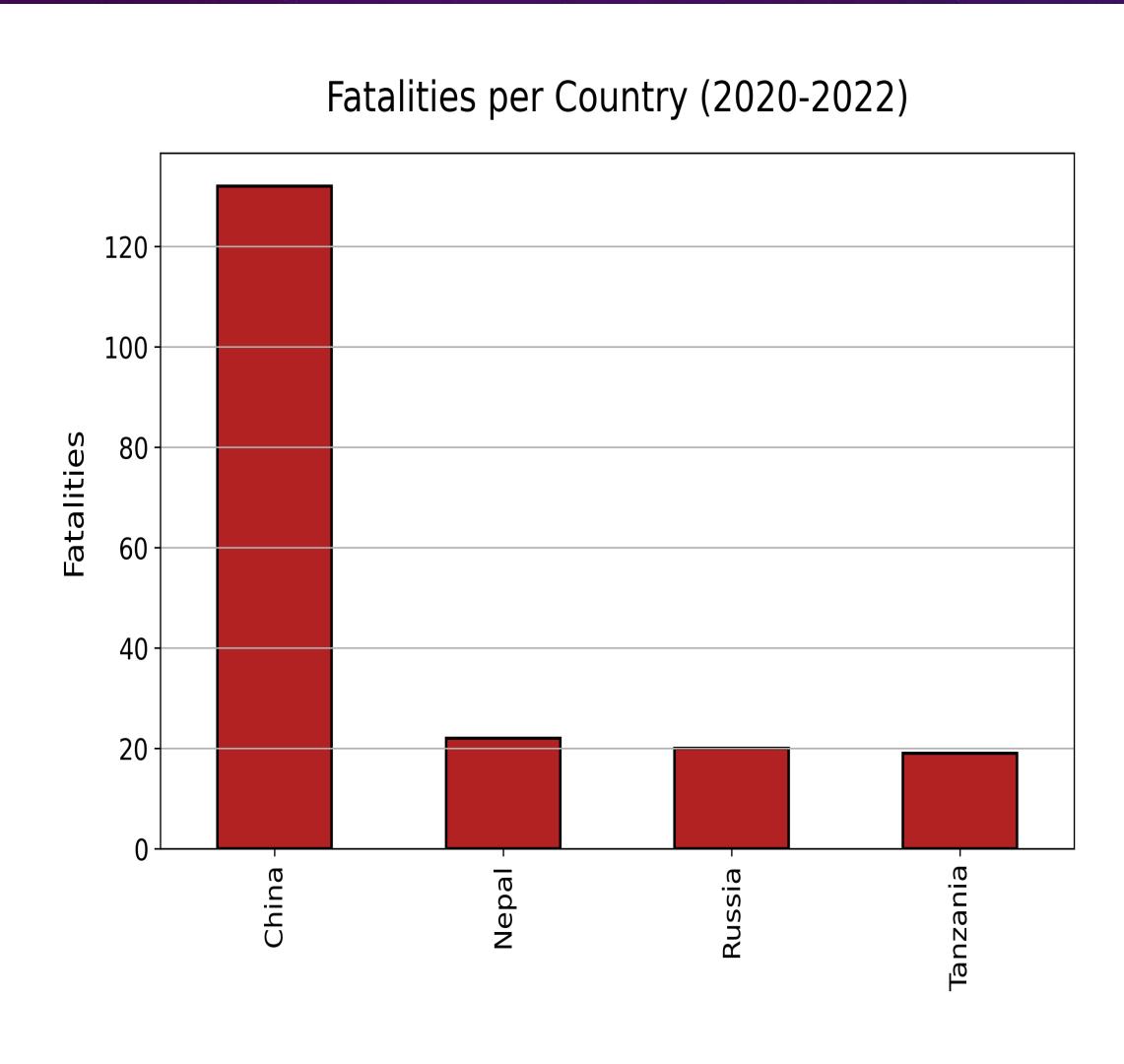
AVIATION ACCIDENTS VISUALIZATION

Analysis:



AVIATION ACCIDENTS VISUALIZATION

Analysis:



AVIATION ACCIDENTS VISUALIZATION

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 two years, China Eastern Airlines has experienced the largest fatalities.
- Possible outside factors for aviation fatalities include terrorism, poor maintenance, and employee malfeasance, misfeasance, or nonfeasance.
- Do not catch the next China Eastern Airlines domestic passenger flight from Kunming Changshui International Airport to Guangzhou Baiyun International Airport on a Boeing 737.

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Questions? Comments?

