Aircraft Purchase Risk Assessment for Mawingu Group of Companies

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Evaluating Low-Risk Aircrafts for Commercial and Private Operations

Summary

Analysis of historical data from the National Transportation and Safety Board on aviation accidents from 1962 to 2023 has outlined the necessities of identifying low risk aircrafts by:

- Purchasing aircrafts with proven records of safety from manufacturers with proven track record of safety.
- Choosing engine types that are proven to be safe.
- Choosing planes with strong structural integrity.

Outline

Project overview

Business problem

Data understanding and cleaning

Data visualizations

Conclusion & Recommendation

Business Problem

Understanding Risks: Purchasing and operating aircraft involves safety, financial, and reputational risks.

Aircraft Selection: Choosing models with strong safety records is crucial for both commercial and private operations.

Data-Driven Decisions: Analyzing historical accident data helps identify trends, patterns, and risk factors.

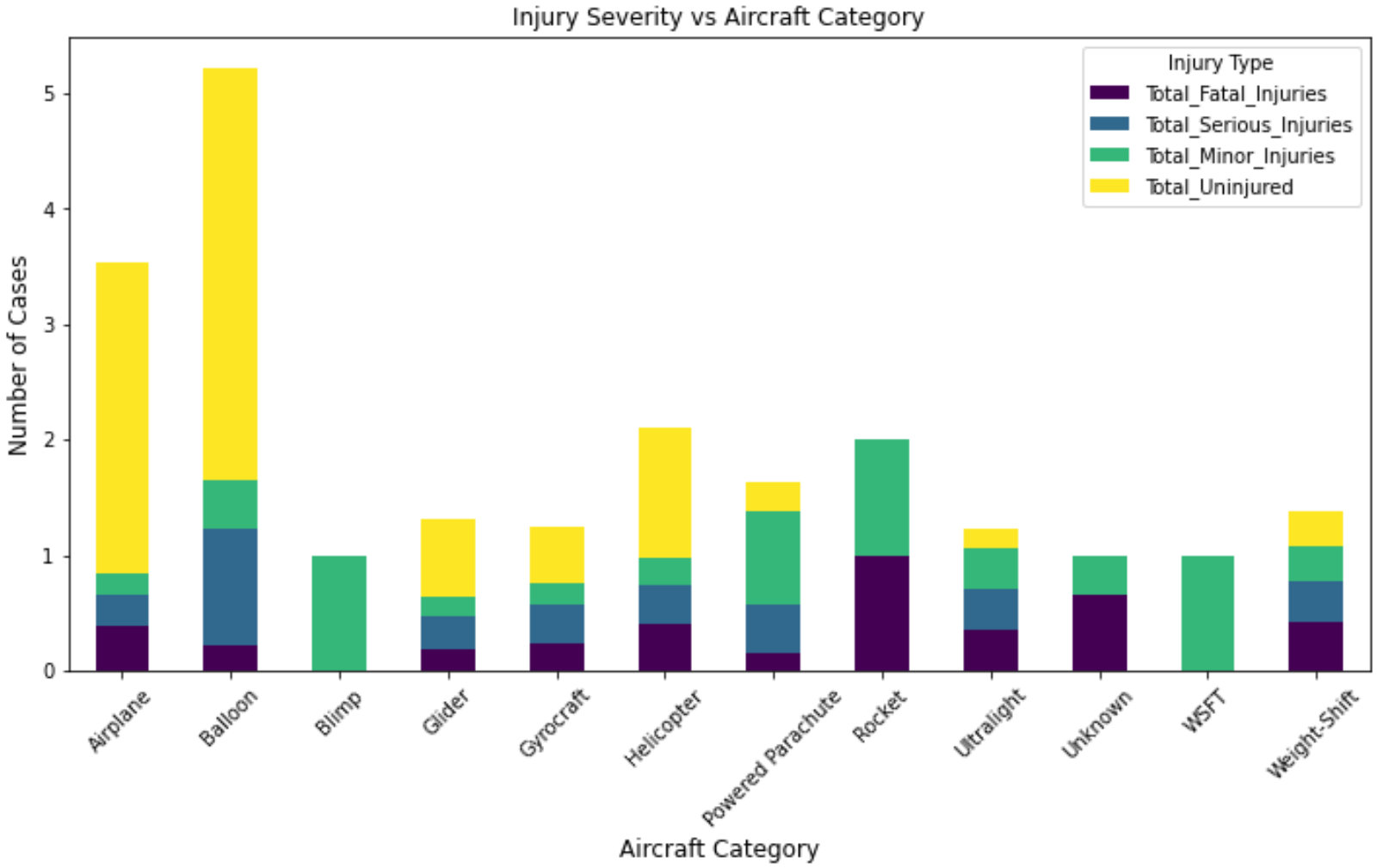
Business Impact: Prioritizing safe aircraft enhances customer trust, financial stability, and brand reputation.

Data understanding and cleaning

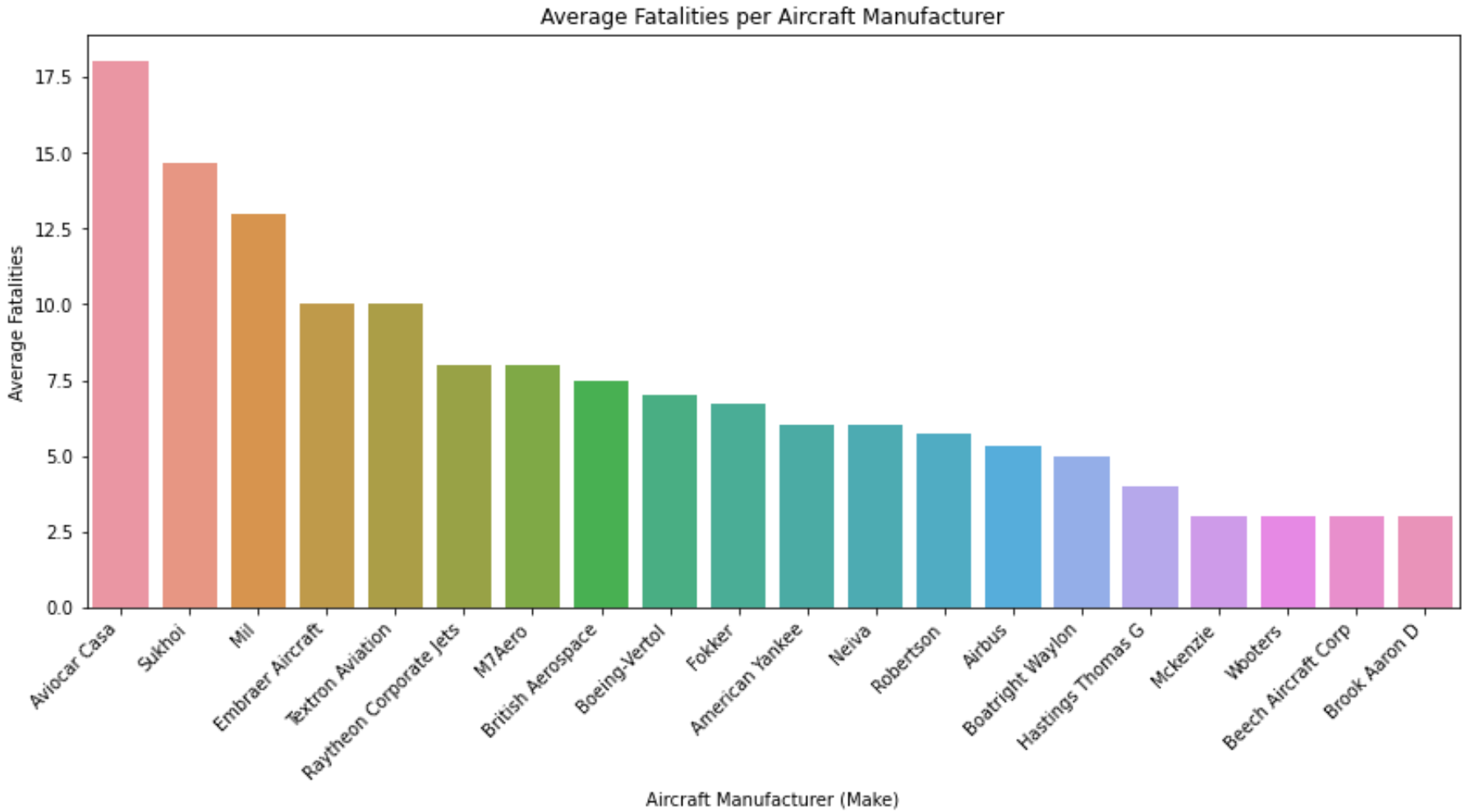
Data from the National Transportation Safety Board on aviation accidents and incidents that occurred in the United States and other countries from 1962 to 2023

Includes fatalities, aircraft categories, aircraft damage, make and engine type etc.

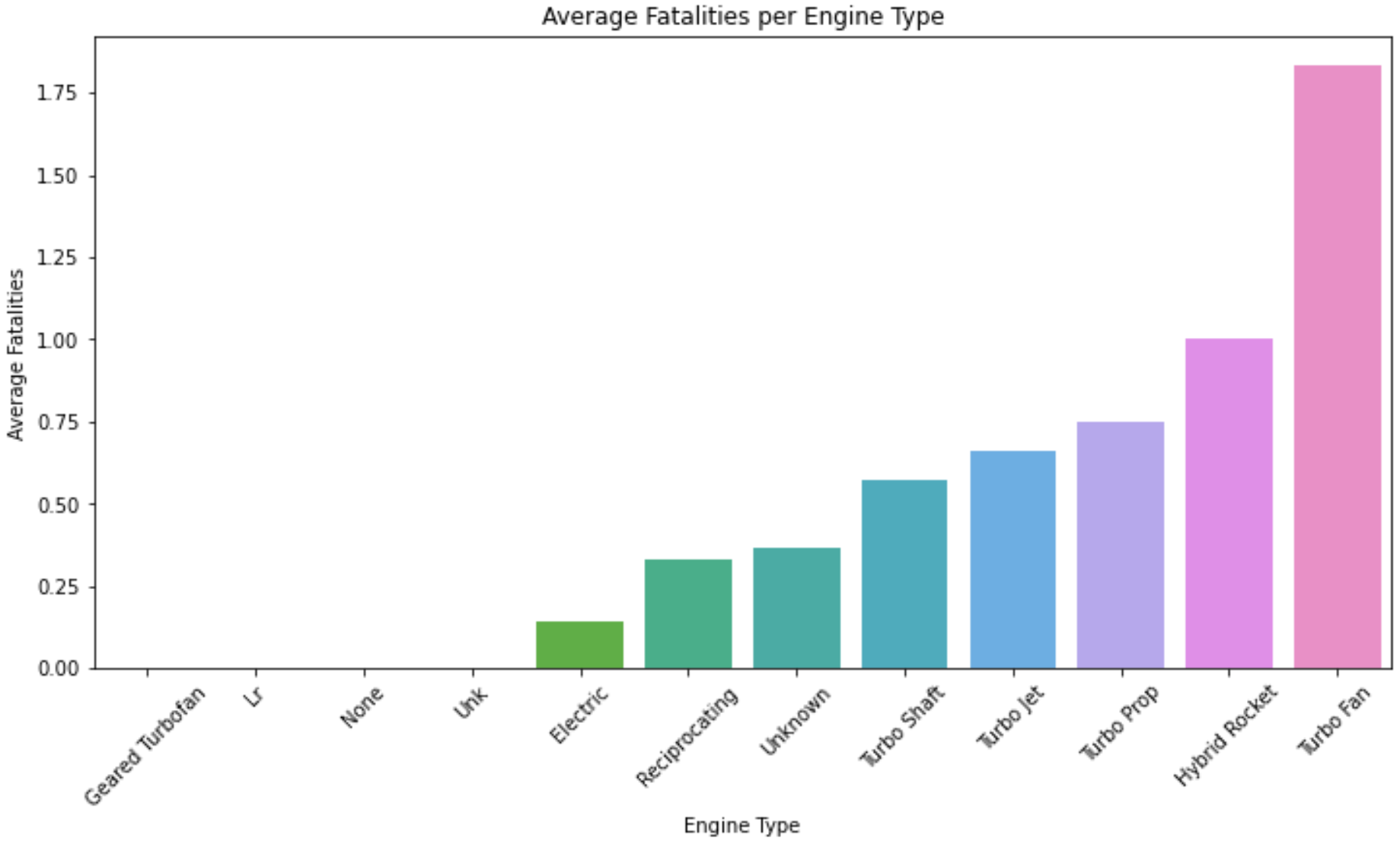
Data visualizations



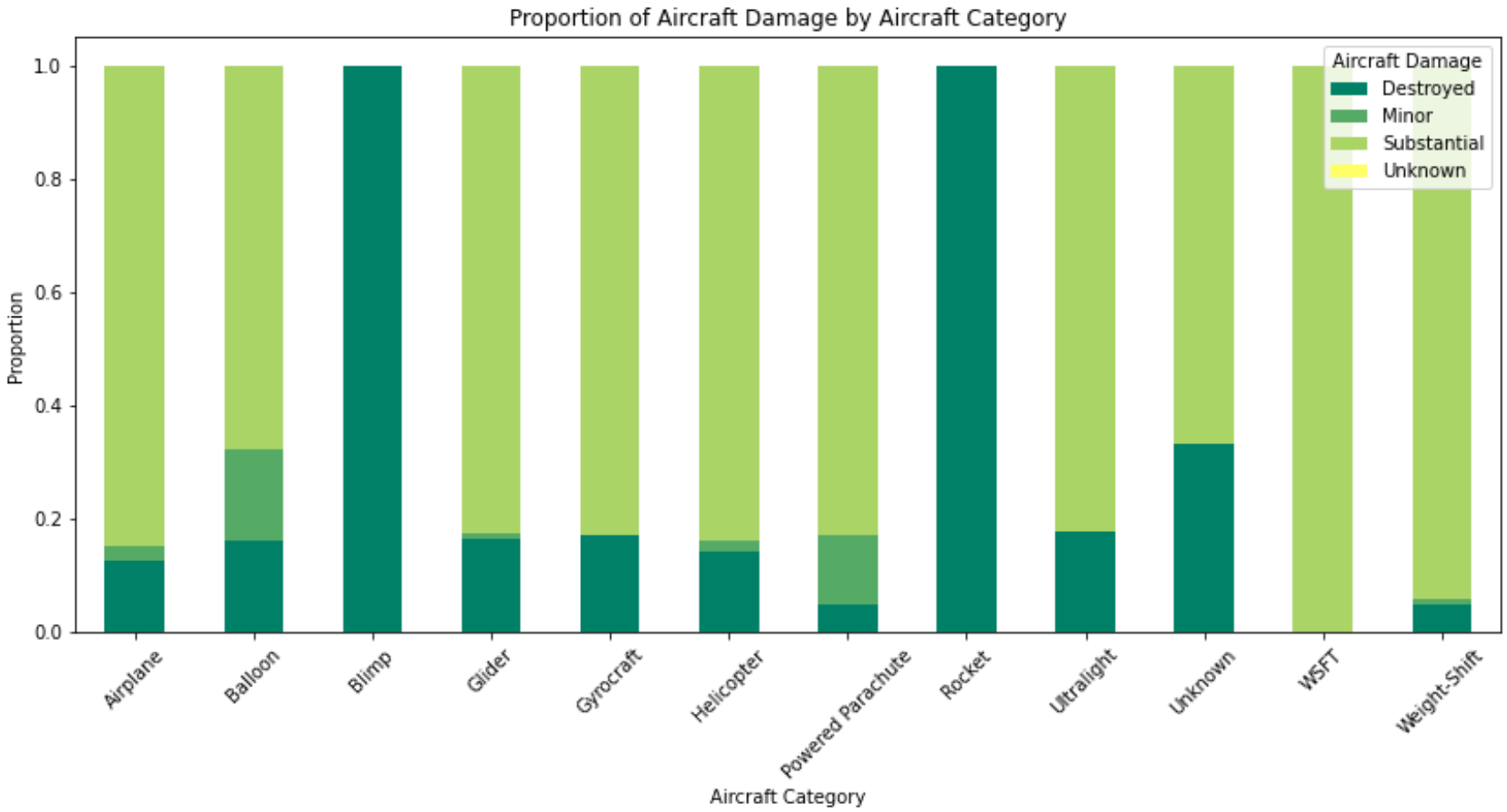
- Most aircrafts that got involved in accidents had fairly more uninjured people compared to total fatalities.
- Blimp and WSFT only had minor injury cases and registered no fatalities



- Manufacturers like Aviocar Casa have a history of higher average fatalities compared to other Makes.
- Manufacturers with lower or zero fatalities are the best option for our needs



- Turbo fan engines have higher fatalities compared to geared turbofan which has no known fatalities.



Aircrafts like the WSFT with only substantial amount of damage in accidents due to strong structural integrity may have fewer fatalities than others.

Conclusion

Ultimately, penetrating into the aviation industry requires selecting the right aircrafts that guarantee safety, operational efficiency and reliability.

Low-risk aircrafts not only guarantee our customers safety but also guarantees us business success and longevity.

Recommendation

Prioritize aircrafts and manufacturers with proven safety records

Ensure aircraft engine safety

Prioritize aircrafts with strong structural integrity and minimal damage history.