



Evaluating Aircraft Risk for Business Expansion

Agenda

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Business Understanding

Goal: Conduct analysis to identify low-risk commercial and private aircraft manufacturers based on NTSB accident data.

Outcome: Provide stakeholders with a list of recommended low-risk aircraft manufacturers and models to purchase bases on their risk profile.



Data Understanding

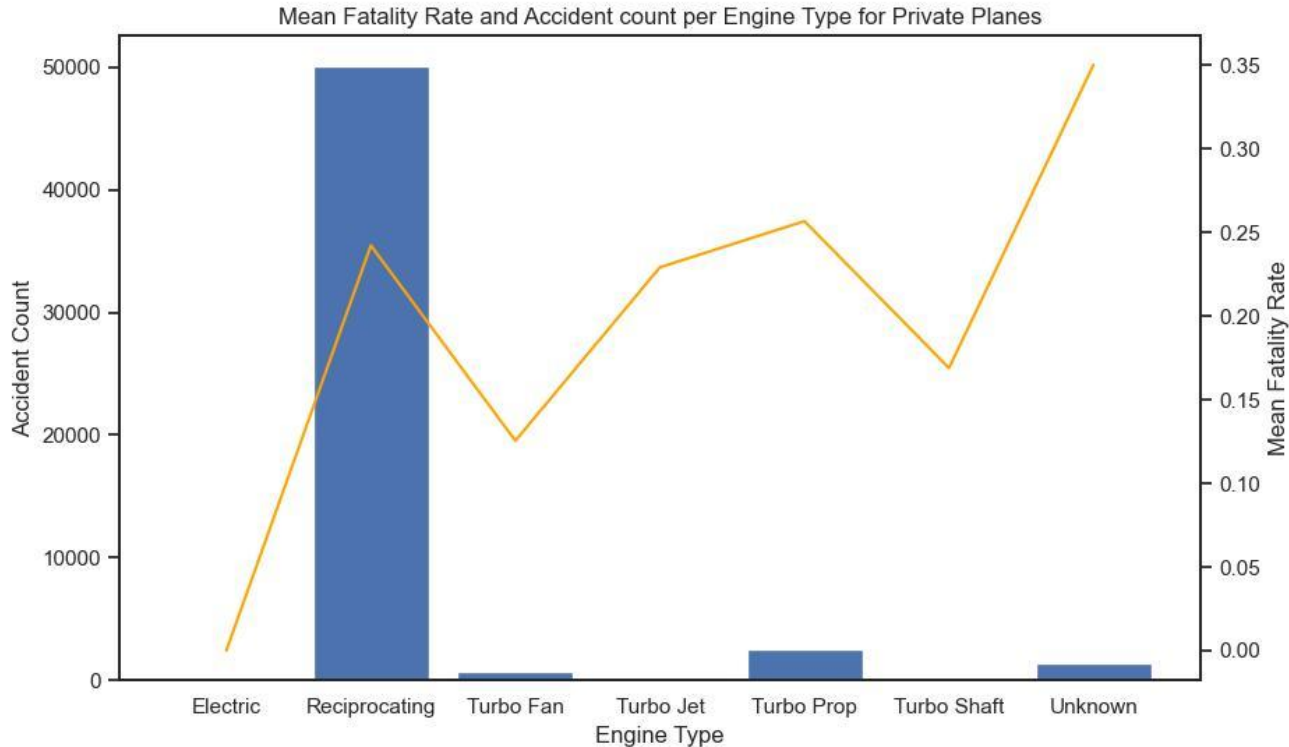
Database used is the [NTSB aviation accident](#) which contains 90,348 lines of accidents for United States between 1962-2023.

Database provides reliable and comprehensive data on aviation accidents, including detailed information about each incident.

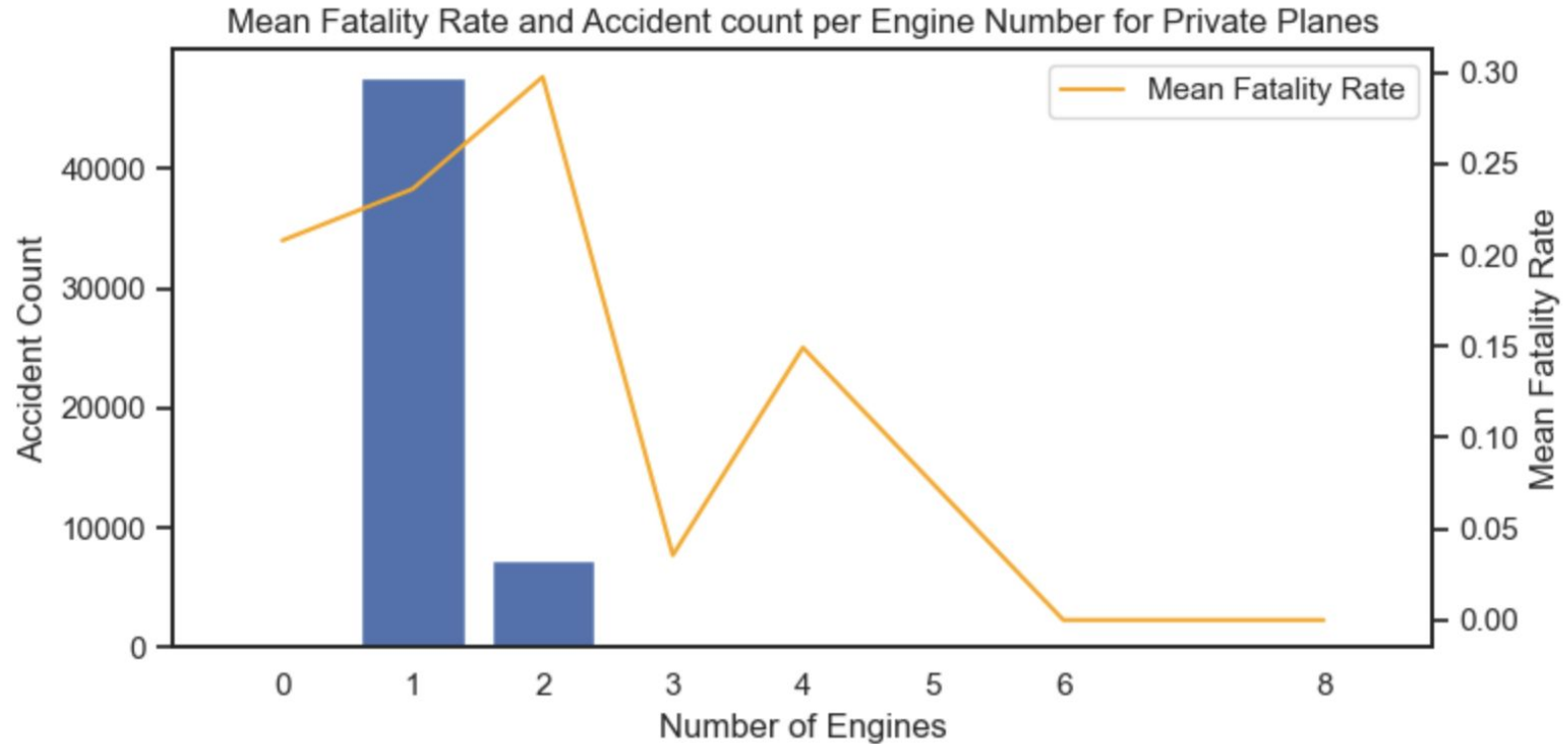
The limitation of the dataset is that it offers a biased perspective on aircraft safety by focusing on only on accidents and failing to capture all risk factors associated with aircrafts.

Data Analysis: Private Planes

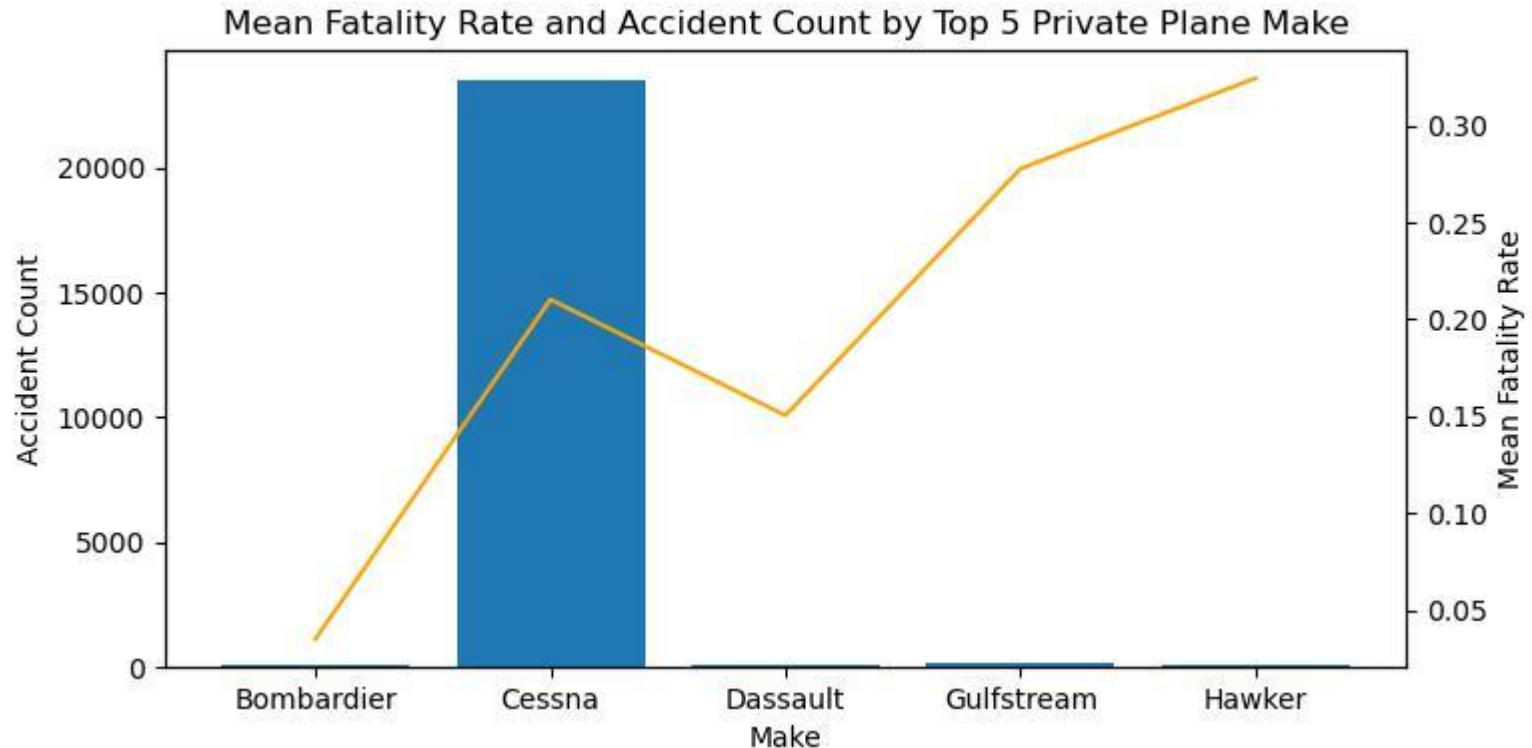
Engine Type Analysis



Number of Engines Analysis

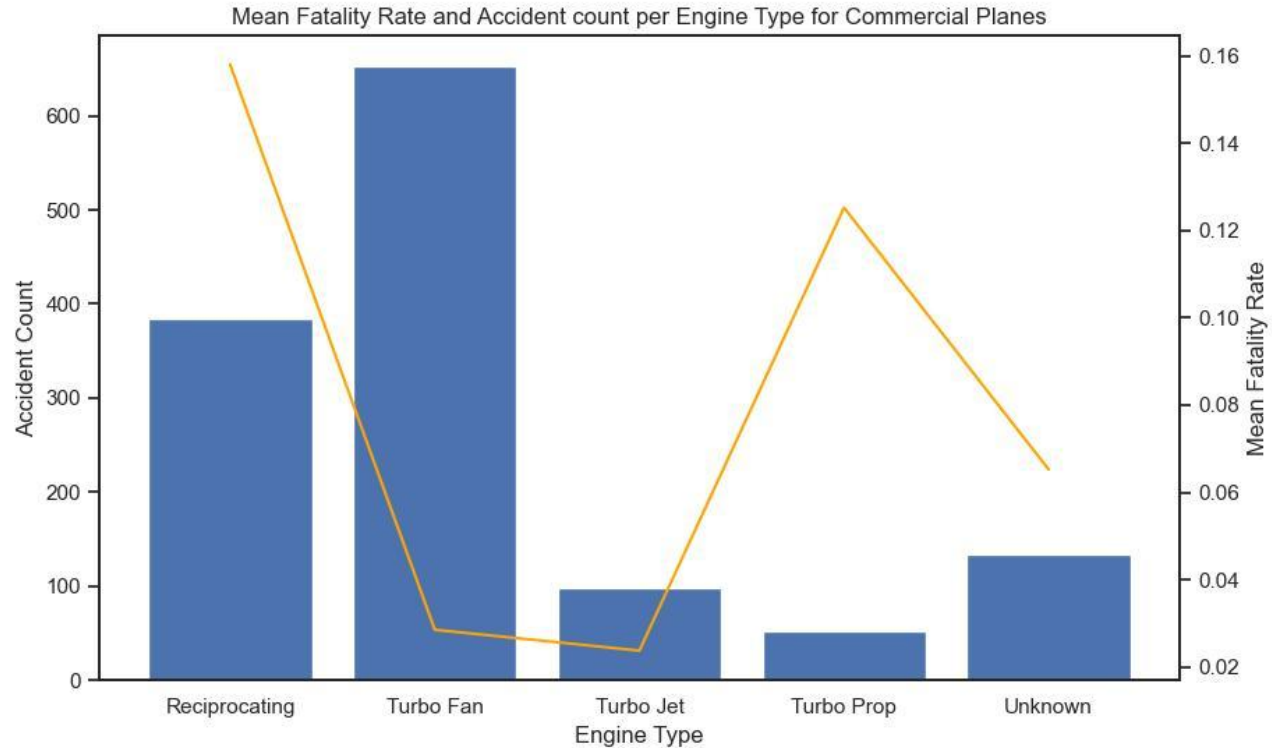


Private Planes Manufacturers

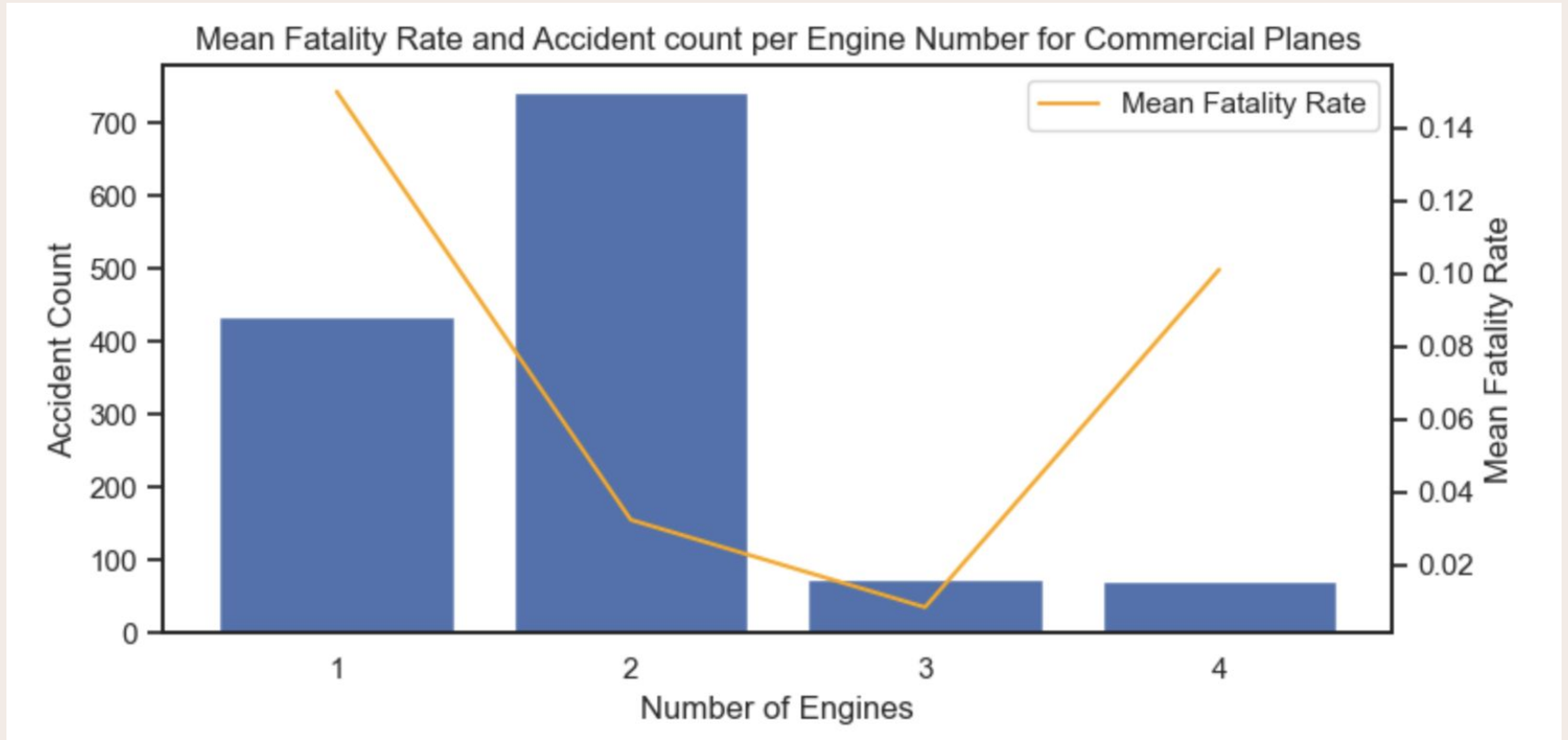


Data Analysis: Commercial Planes

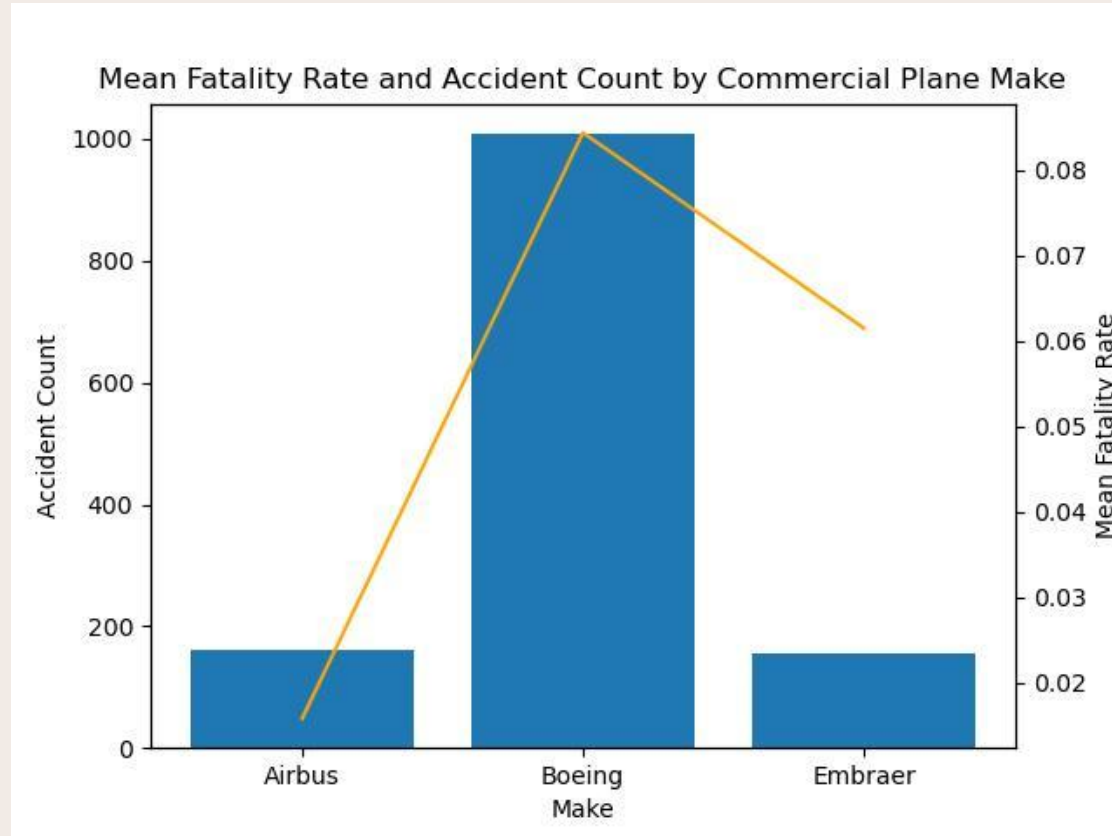
Engine Type Analysis



Number of Engines Analysis



Commercial Planes Manufacturers





Recommendations

Private Planes

- Aircrafts with Reciprocating, Turbo Fan or Turbo Jet Engines.
- Opt for aircrafts with 1 Engine.
- Manufacturers:
 - Bombardier with models 35A, BD100 & CL600
 - Dassault with models FALCON 10 and FALCON 900

Commercial Planes

- Aircrafts with Turbo Fan or Turbo Jet Engines.
- Opt for aircrafts with 2 or 3 Engines.
- Airbus is the safest manufacturer with models:
 - A340 and A380 due to low fatality rates
 - A320 due to safety and popularity



Next Steps

- Enhance Engagement with Stakeholders to gain insights into their objectives and challenges

- Broaden the Range of Data Sources

- Create a detailed analysis and model by integrating a variety of factors to improve the assessment of aircraft safety and business viability

- Include aviation industry context into the analysis

Questions?

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