Aircraft risk assessment

Commercial and Private aircraft analysis

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Business Expansion Goals

- Aircraft acquisition for portfolio expansion
  - Expanding into new industries
  - increasing diversification of company's existing lines of business.
  - Increase economies of scale with larger logistics capabilities
- Analysis of aircraft by manufacturer and model
  - Identify and distinguish lowest risk aircraft
  - Increase accuracy of preparation for entering into new industry
  - Attempt to identify possible synergies

About Us

- Multinational company
  - Provide logistics services for multiple companies across several industries
  - Medium of transportation currently is by road and railroad, and sea
- Long-term goal oriented
  - Sustainable growth and predictable returns
  - Asset allocation mainly in industrial sector. Small percentage in other sectors .
- Expansion plans:
  - Broaden our logistics services by diversification
  - Provide logistics services for urgent, high-value and perishable goods

Method of Analysis

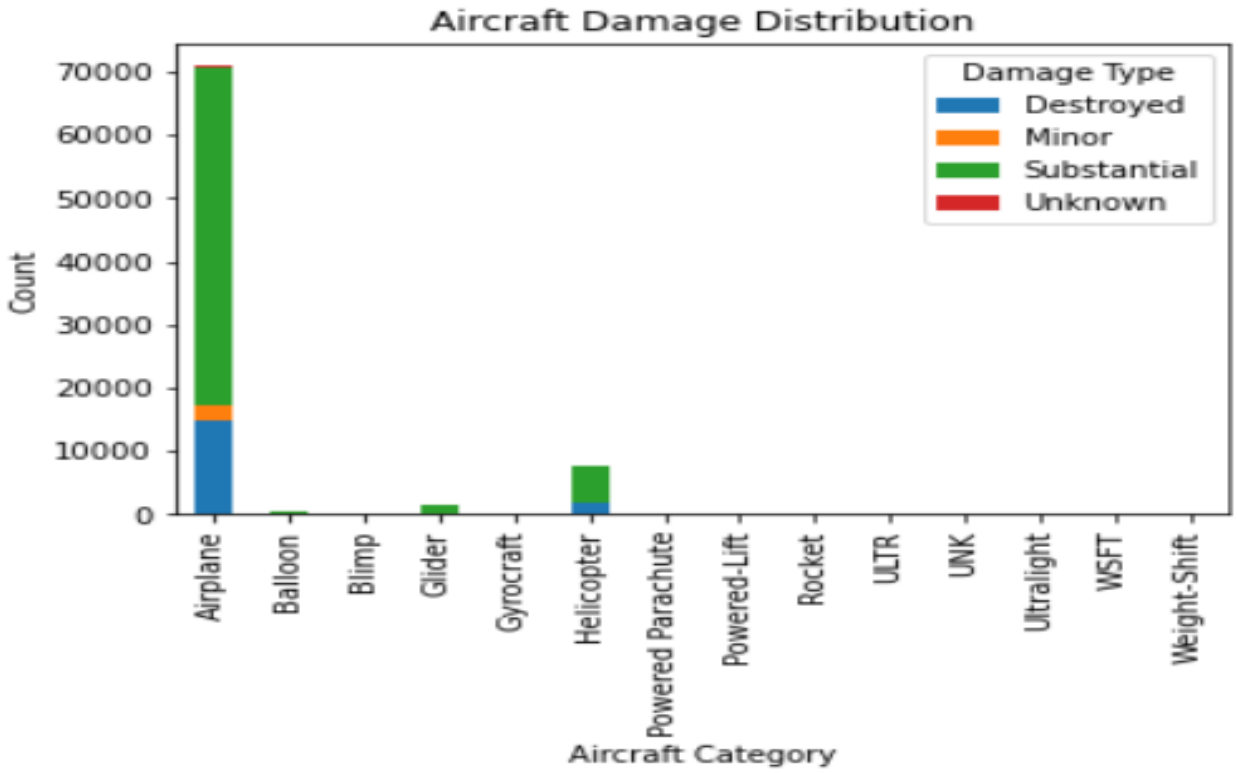
- Utilizing publicly available aircraft data since 1962
  - Provided by National Transportation Safety Board (NTSB)
- Statistical methods and Technologies:
  - Programming language
  - Libraries
  - Interfaces or UI’s

Analysis

- We are concerned with answering the following questions:
  - which aircraft make has the highest and lowest risk
  - which aircraft tends to sustain the most damage
  - what is the survival rate of passengers based on airplane models
  - which engine type is associated with the highest and lowest total injuries

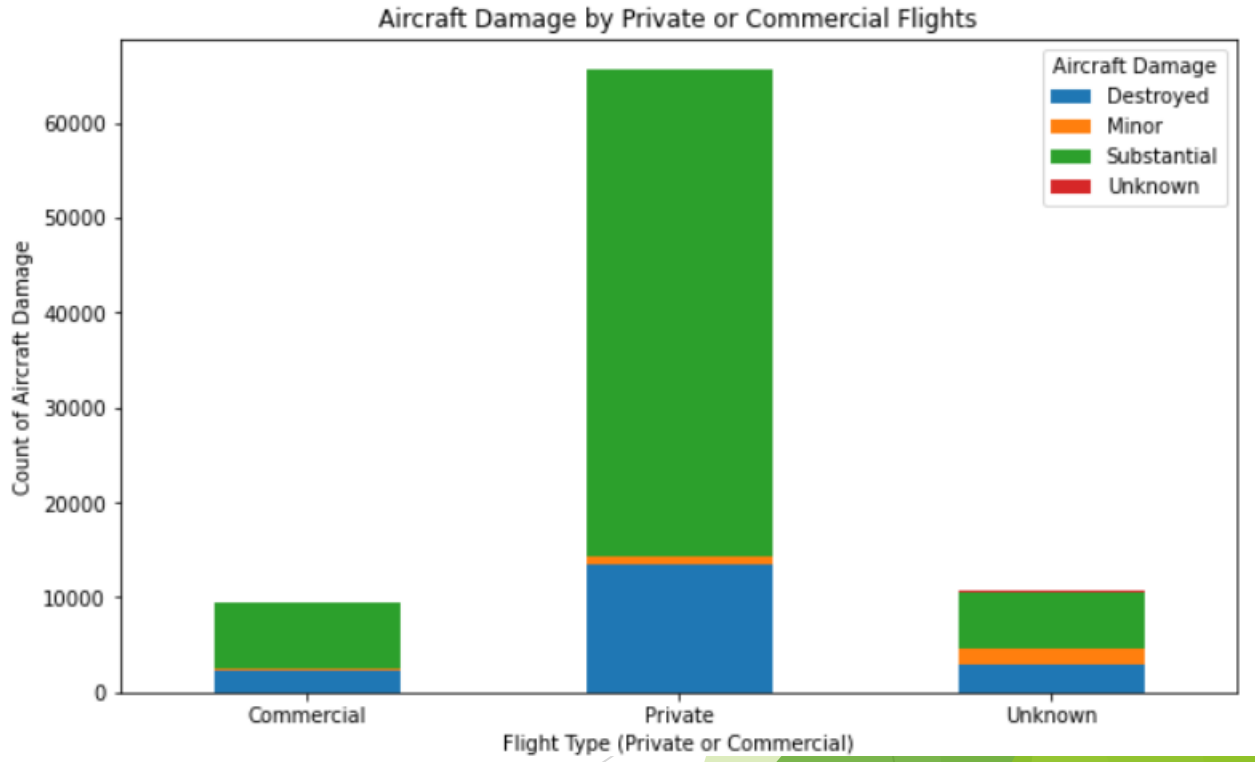
which aircraft has the highest and lowest risk

- What is high or low risk?
  - Substantial
  - Destroyed
  - Minor



which aircraft has the highest and lowest risk based on purpose of use

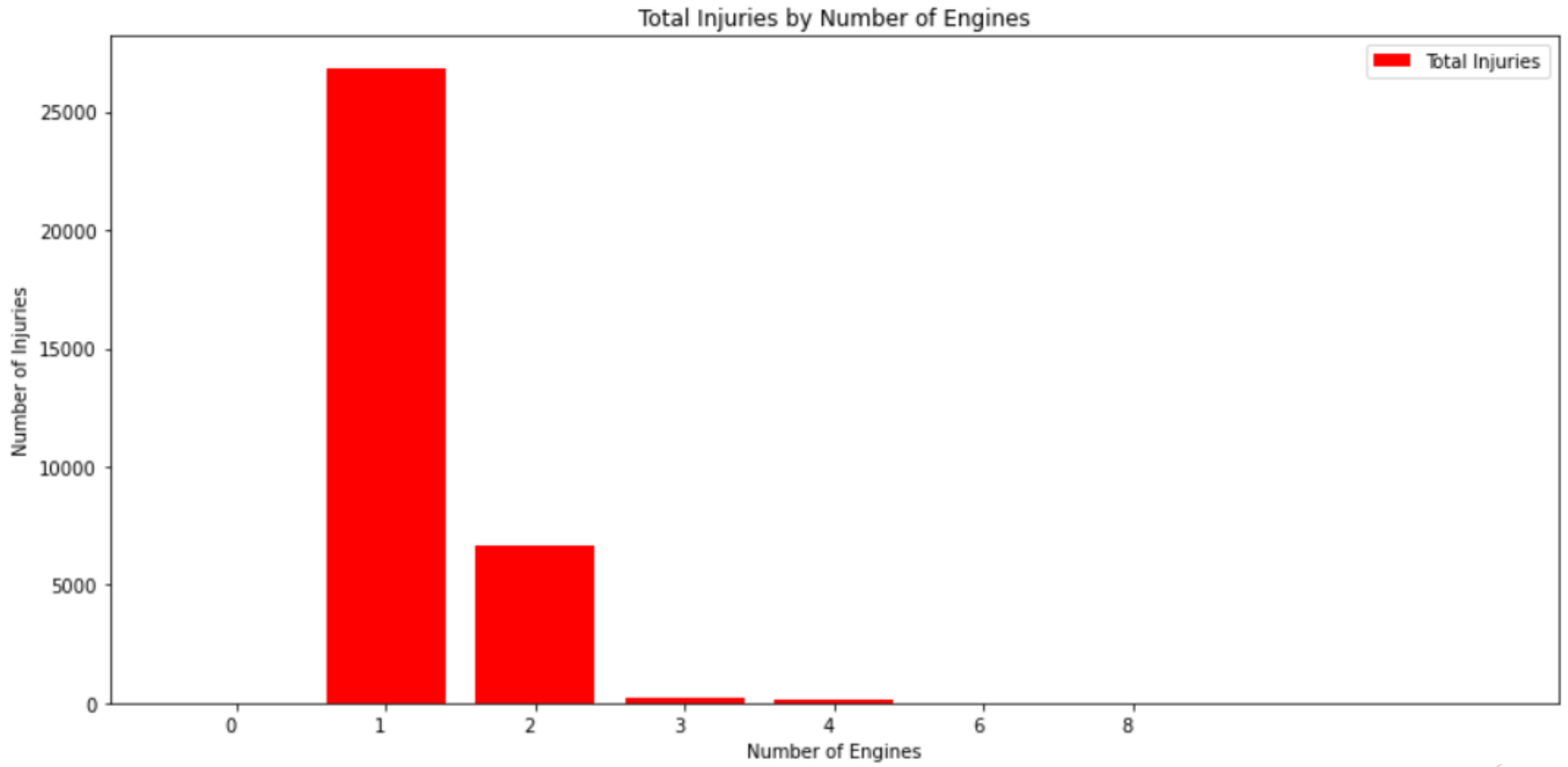
- Risk by aircraft designation or intended use
  - Private use has the highest damage rate compared to commercial



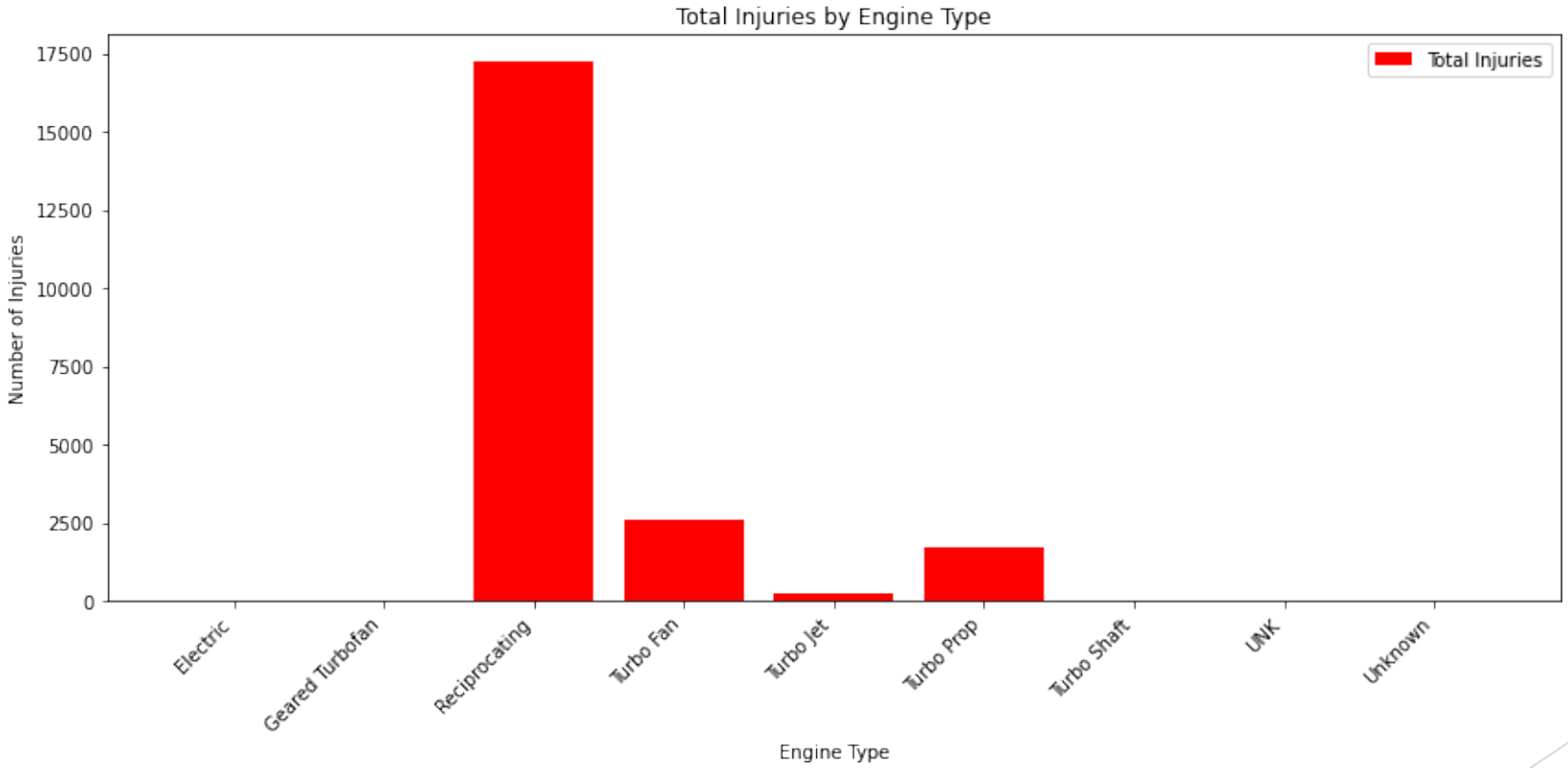
which manufacturer makes the lowest risk aircraft

- Analyze by :
  - Make
  - Model
- Other bases of risk assessment:
  - Number of engines
  - Engine types

Total injuries by Number of Engines



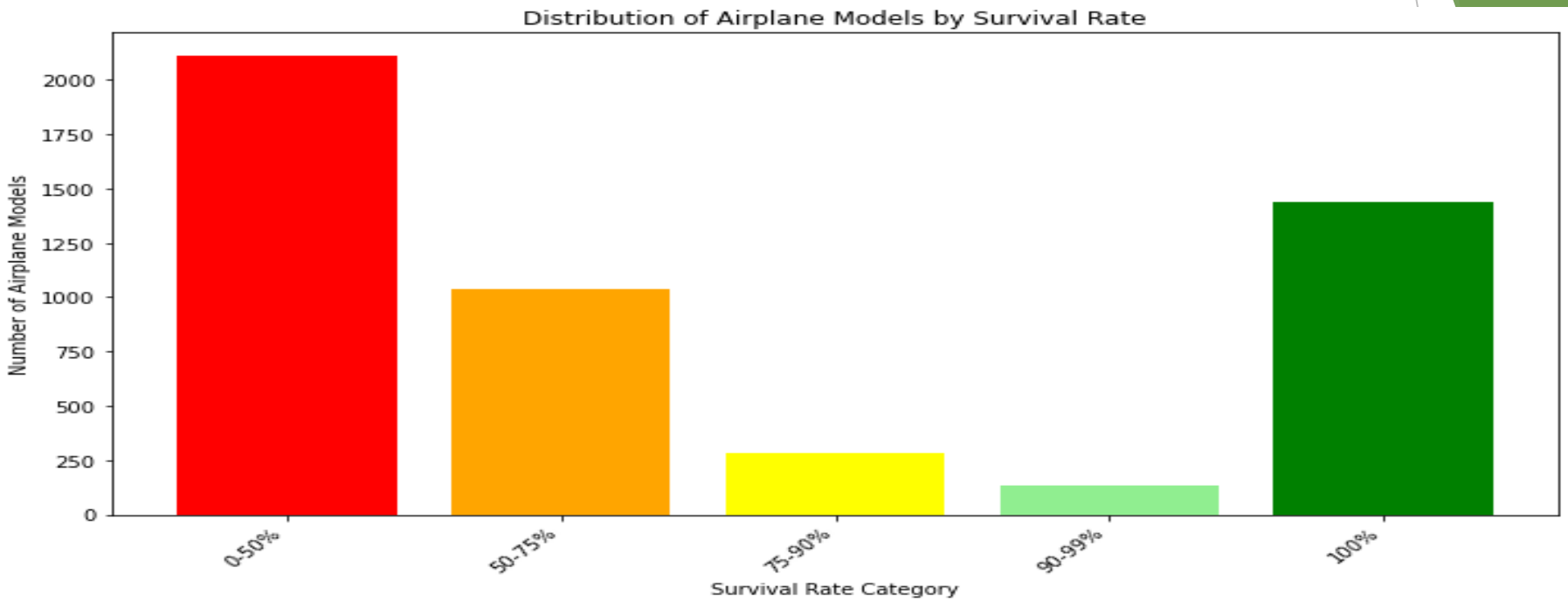
What engine type is the safest



what is the survival rate of passengers on each type of airplane Model

- Ultimately. The preservation of life is the most important metric that we should be concerned about. On the next slide shows the percentile distribution and what airplane models are in each percentile. From the 90-99% and the 100% should be the ones considered.

Survival rate by Models



Airplane Models by Survival Rate Category

Survival Category	Airplane Models
0-50%	SEA-ERA, EAGLE 540, EA300, Titan Tornado II, SE5-A...
50-75%	Lightning, PIETENPOL AIR CAMPER, PA46R, JR. SR, MD 11F...
75-90%	DC-3T, A 1B, PA 32-260, 525B, AA 5...
90-99%	777 - 236, A319 132, DC-9-82, 777-236ER, 320-200...
100%	HPL 1 HIGH WING PARA, BL, BT13, BT 15, BRISTELL S-LSA...

Conclusion

- Our analysis shows that the safest aircrafts for our business has the following features and combinations:
  - Airplane
  - Dual engine
  - Jet propulsion
  - Models:
    - 777-236, A319, DC-9-82, 777-236ER, 320-200, MD-83
    - L1011-385, B767-287ER, DC-8-71F, F28 Mk 0100

*this is a short list of models that fall into our category.