



# AVIATION EXPLORATORY ANALYSIS

Tai Bui

# AGENDA

Business Understanding

Data Understanding

Data Analysis

Recommendations

Q&A

# BUSINESS UNDERSTANDING

- Focus on analyzing aviation accident data from the National Transportation Safety Board (NTSB) to support the company's strategic investment in operating airplanes.
- The goal is to gain valuable insights into aviation incidents, identify patterns, and provide meaningful recommendations to major stakeholders of the investments.

## DATA UNDERSTANDING

- dataset from the National Transportation Safety Board, including accident aviation data from 1962 to 2023 about civil aviation accidents
- 31 columns and 90348 data points, storing worldwide aviation accidents
- data fields include details such as accident locations, date, injuries, contributing factors and probable causes reports. It not only includes airplanes' accidents data, but also other aircraft categories such as helicopter, balloon, gyrocraft, etc.

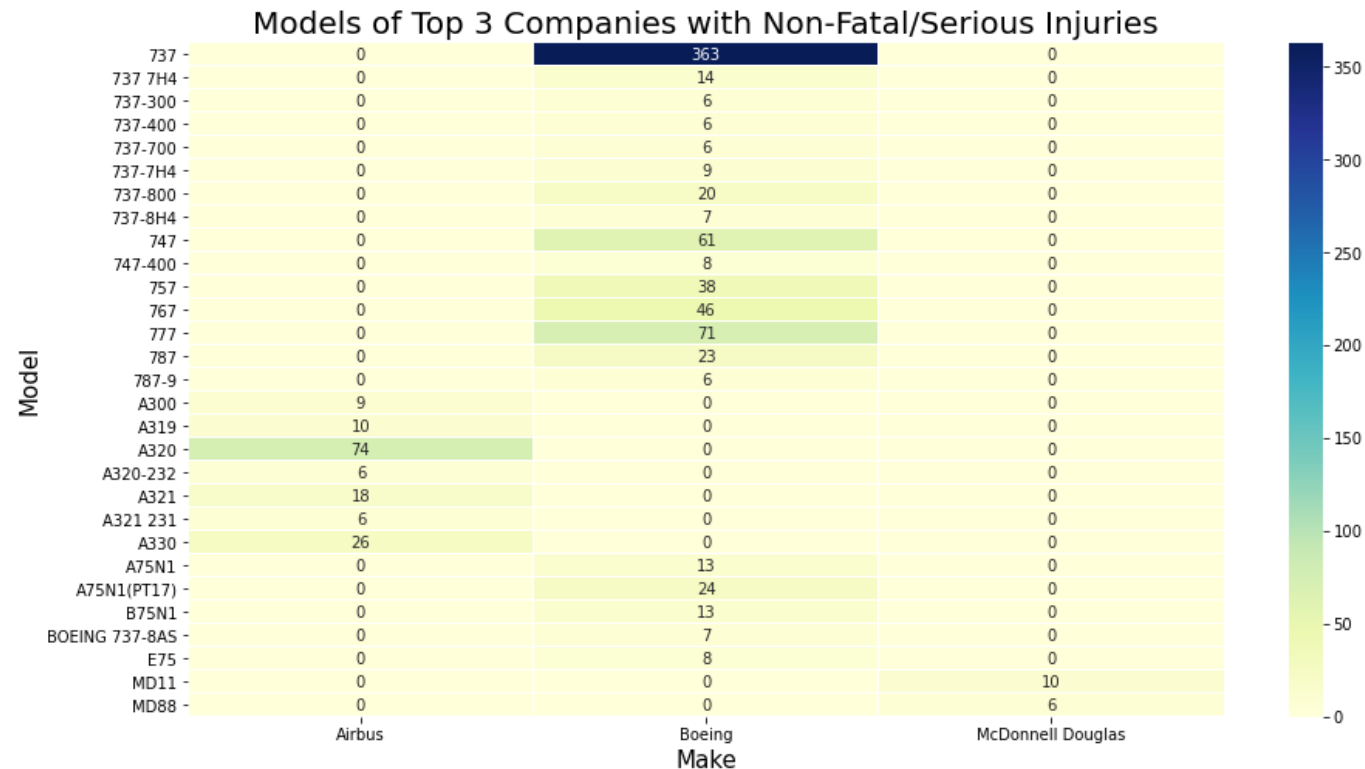
# DATA ANALYSIS

- only include airplane accident data and most of my analysis only include accidents occurred after 2000
- To determine the level of safety of a certain aircraft maker or model, I use the ratio of fatality/serious accidents over all the accidents it occurred in this dataset

	Event.Date_x	Event.Date_y	Fatal ratio
Make			
Airbus	33	243	0.14
Boeing	196	1309	0.15
Mcdonnell Douglas	22	113	0.19

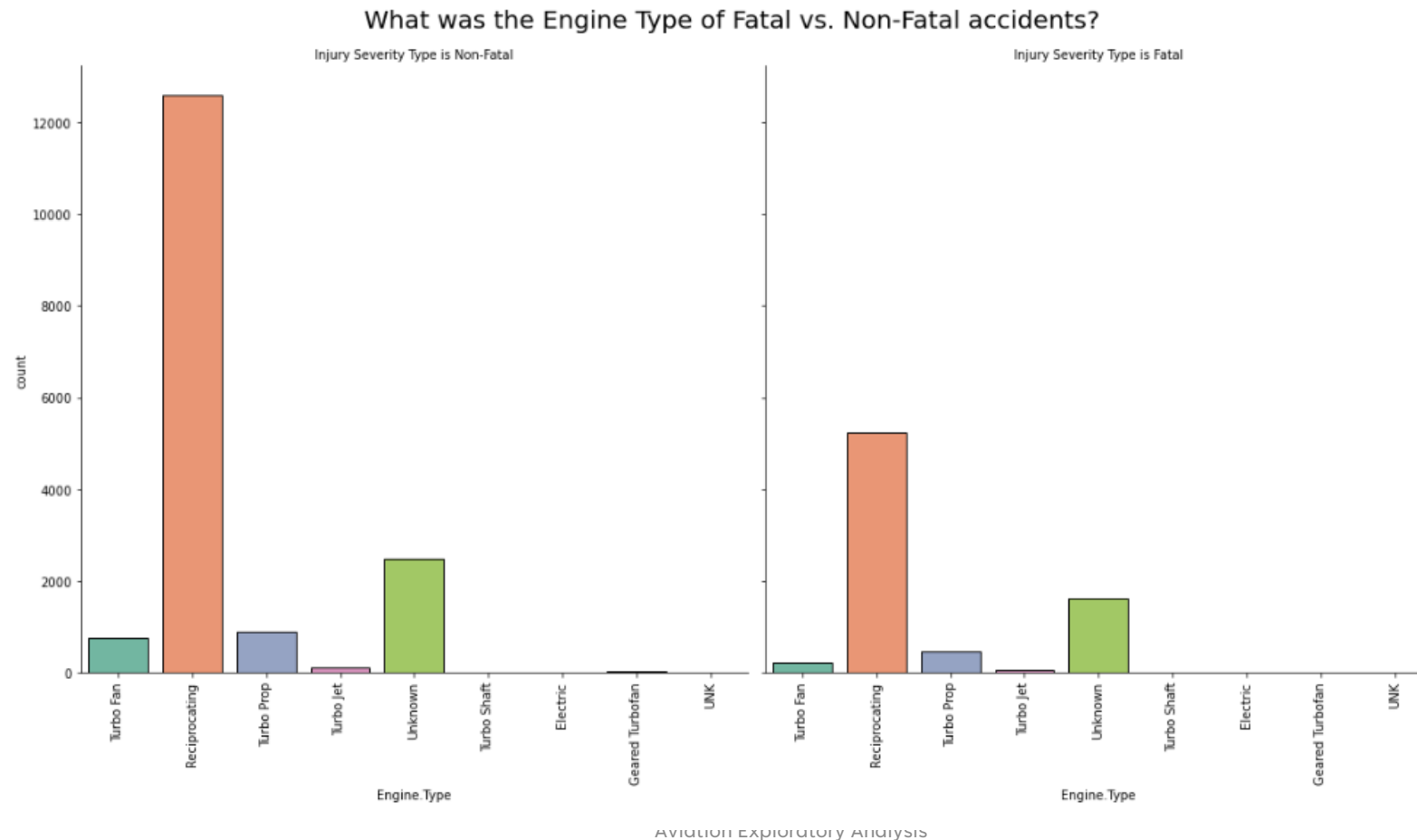
# RECOMMENDATION

- Prioritize investing in the three aircraft makers including Boeing, Airbus and McDonnell Douglas.



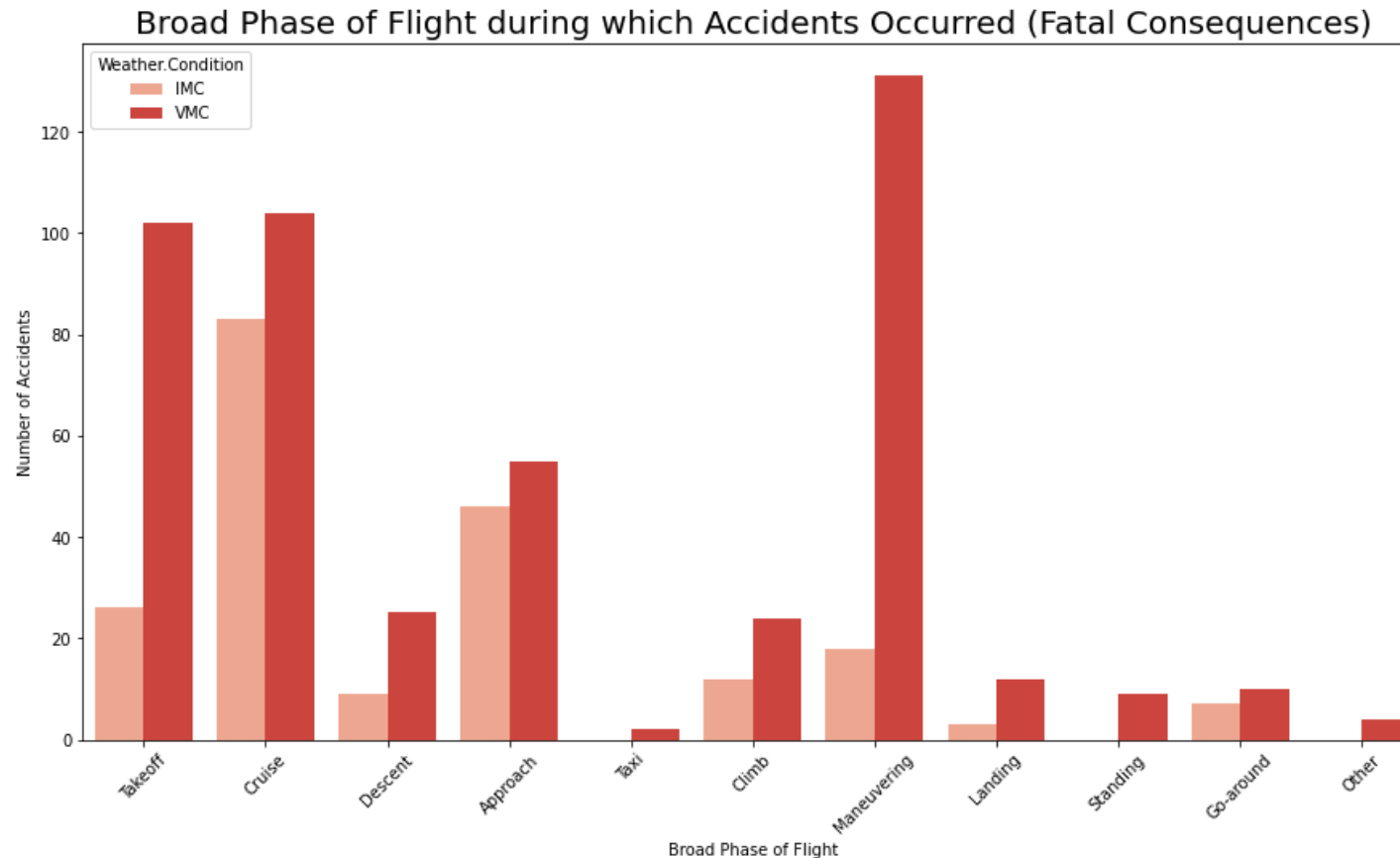
# RECOMMENDATION

- Prioritize investing in reciprocating (one or two engines) and turbo fan (2 engines) for the company aircraft's fleet.



## RECOMMENDATION

- offer more trainings for our pilots regarding these four phases of flights including take-off, landing, cruise and maneuvering







# Q&A

Tai Bui

<https://www.linkedin.com/in/tai-bui-ngoc>