Aircraft safety recommendations

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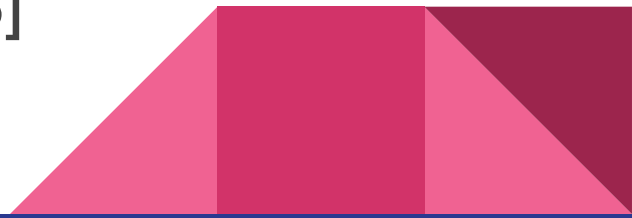
Introduction

- Objective: Provide three business recommendations related to a measure of safety
- Business Context: Pfizer will benefit from improving employee and product safety of cargo.
- Data Overview: Data is from National Transportation Safety Board [NTSB]



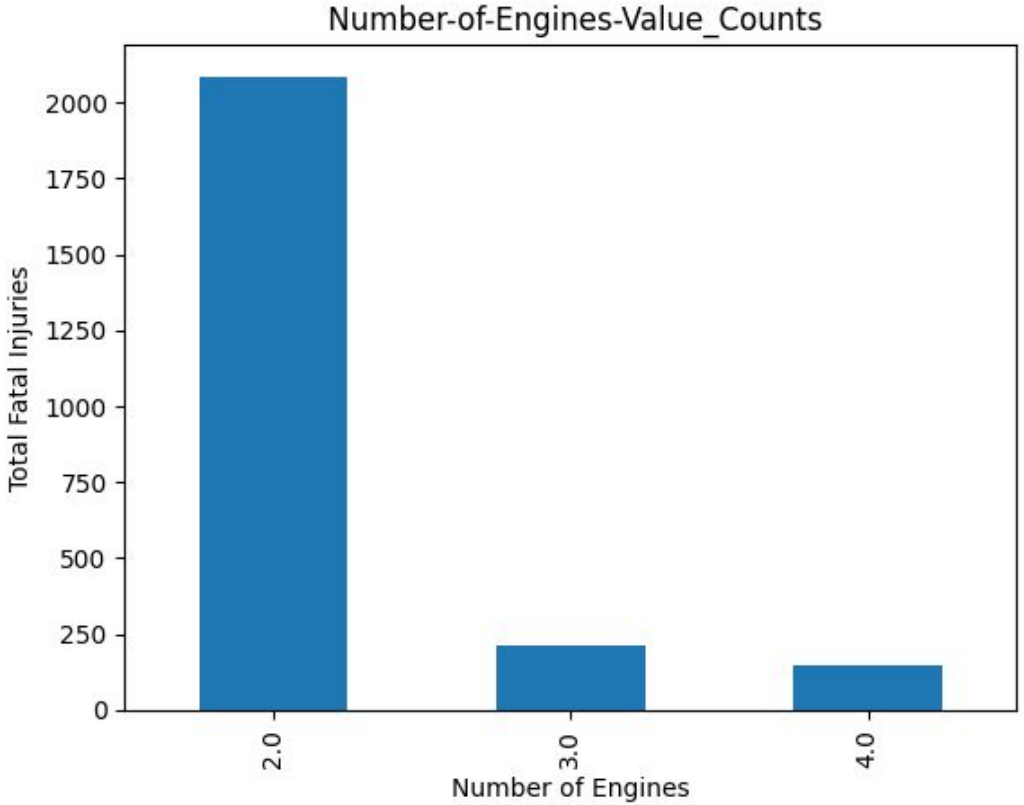
Data Understanding

- Aircraft models display only:
  - “Airplane” and “Helicopter”
- Examples of data columns of importance:
  - ‘Total.Fatal.Injuries’ & ‘Number.of.Engines’

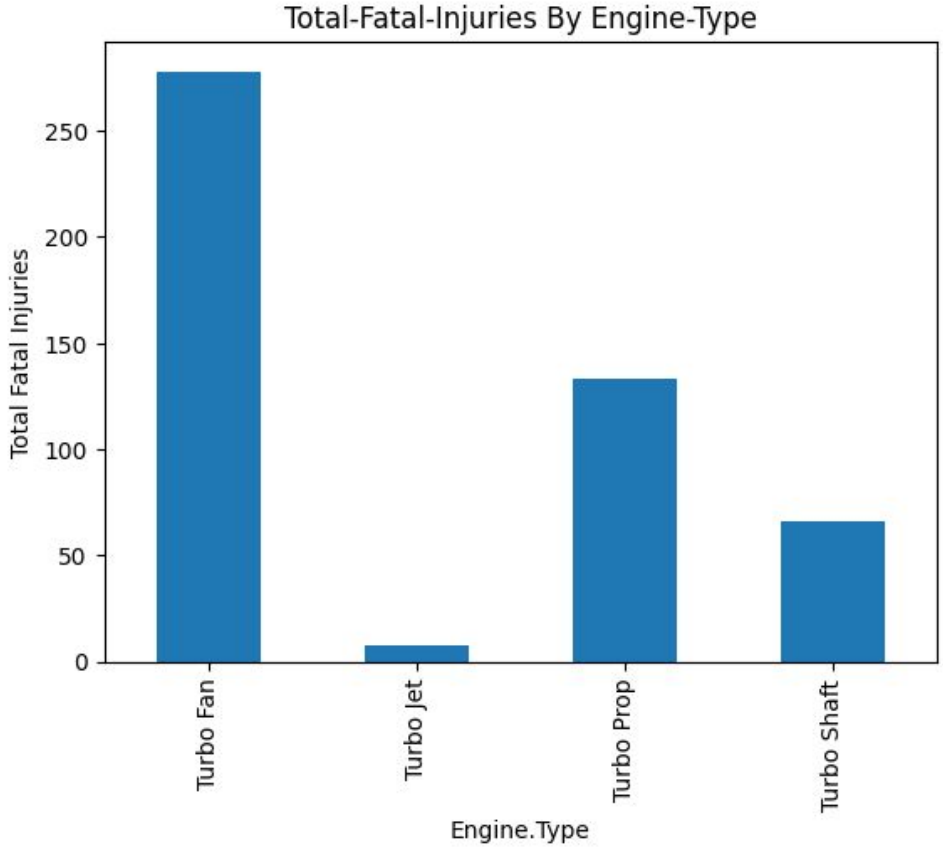
Data Cleaning & preprocessing

- Handling missing values:
  - Dropped missing data based on % in columns
- Data transformation: If factors associated with decreased safety:
  - Number of engines from 1 to multiple engine types.

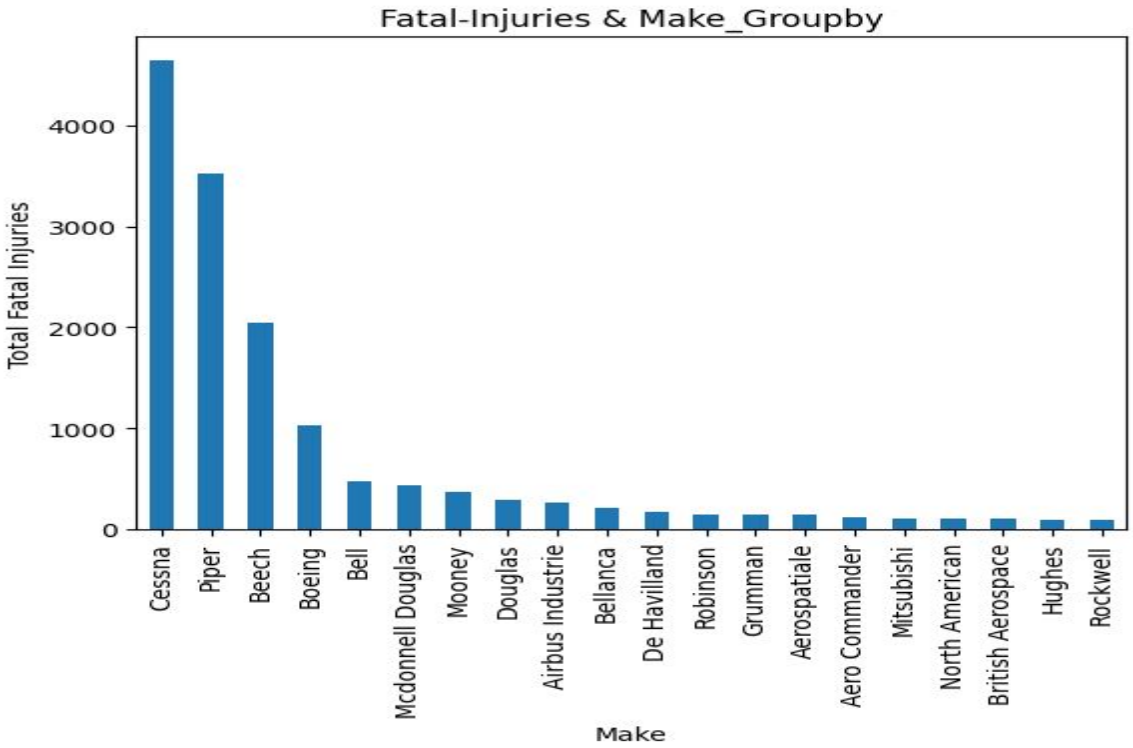
Exploratory Data Analysis



Exploratory Data Analysis



Exploratory Data Analysis



Insights & Findings

- Obtained results from data analysis consist of:
  - **Engine types:**
    - **Reciprocating dropped from data**
  - **Number of engines:**
    - 2 or more engines = more safety
  - **Make of Aircraft:**
    - **Boeing, Mcdonnell Douglas, Beech, Airbus**
      - **More fatal injuries**

Conclusion

Summary of key points

- Standards of aircraft usage influence factors like increased fatal injuries

Business implications:

- Pfizer will be able to have options for improved safety for cargo and employees
- Pfizer will obtain information about financial cost versus safety for future purchases of airplanes.