AIRCRAFT ACCIDENT DATA ANALYSIS

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AGENDA

- Introduction
- About the Data
- Process steps
- Results & business application
- Recommendation

INTRODUCTION

- Our company is expanding to new industries to diversify its portfolio.
- Specifically, they are interested in purchasing and operating airplanes for commercial and private enterprises.
- Know more on potential risks of aircraft to pick the low-risk ones.
- Considerations:
  - Factors for low-risk: injuries, level of damage, etc.
  - Make and model
  - Level of damage

ABOUT THE DATA

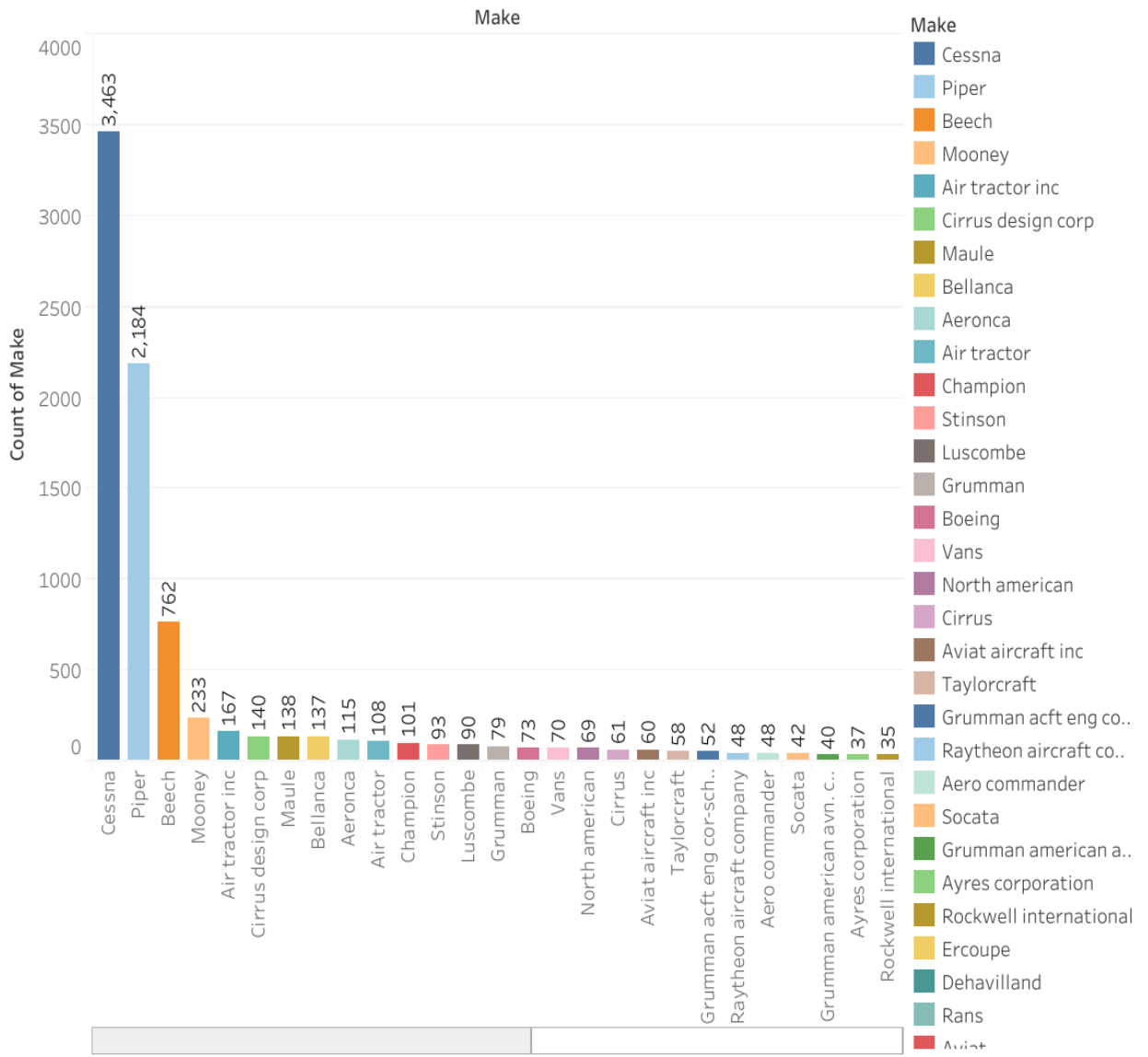
- Data is for aviation accident data from 1962 to 2023 obtained from the National Transportation Safety Board.
- Data on accidents and incidents from aviation used to determine low-risk aircraft
- Coverage => United States, its territories and international waters

PROCESS STEPS

- Data understanding:
  - Overview – understand business requirements
  - Data understanding - Attributes and records
  - Selecting factors to be considered
- Data preparation
  - Records editing for uniformity and easy manipulation
  - Handling missing records
- Exploring data
  - Answering important questions: make, model, damage, injuries, etc
- Recommendations
  - Selecting prospective suitable make and models

Aircraft Data Risk Analysis Story

These are the aircraft Makes Samples analysed | The Damage obtained during the accident | Injuries per Aircraft Make | These are injuries per model | This is the level of injury severity and model count per ..



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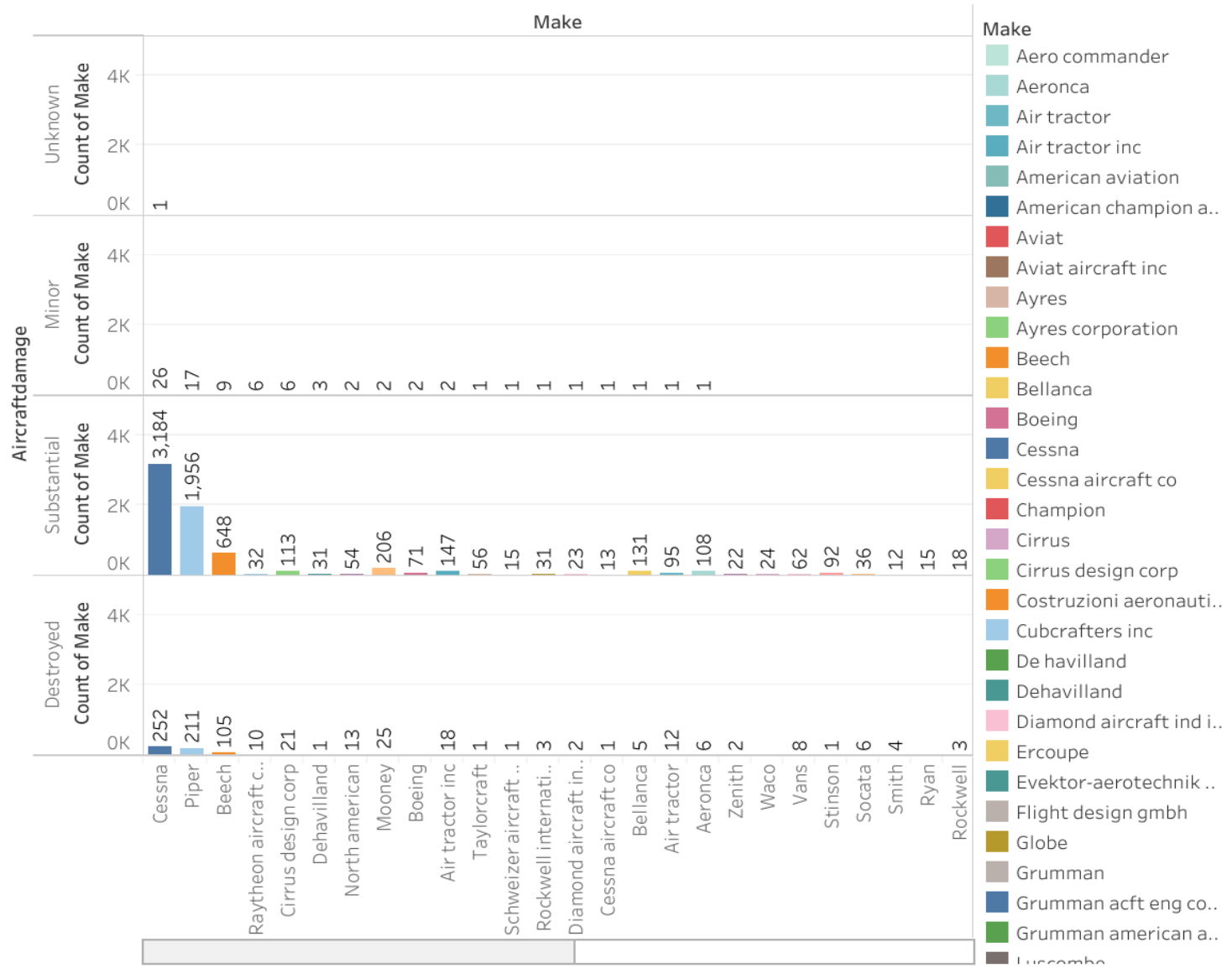

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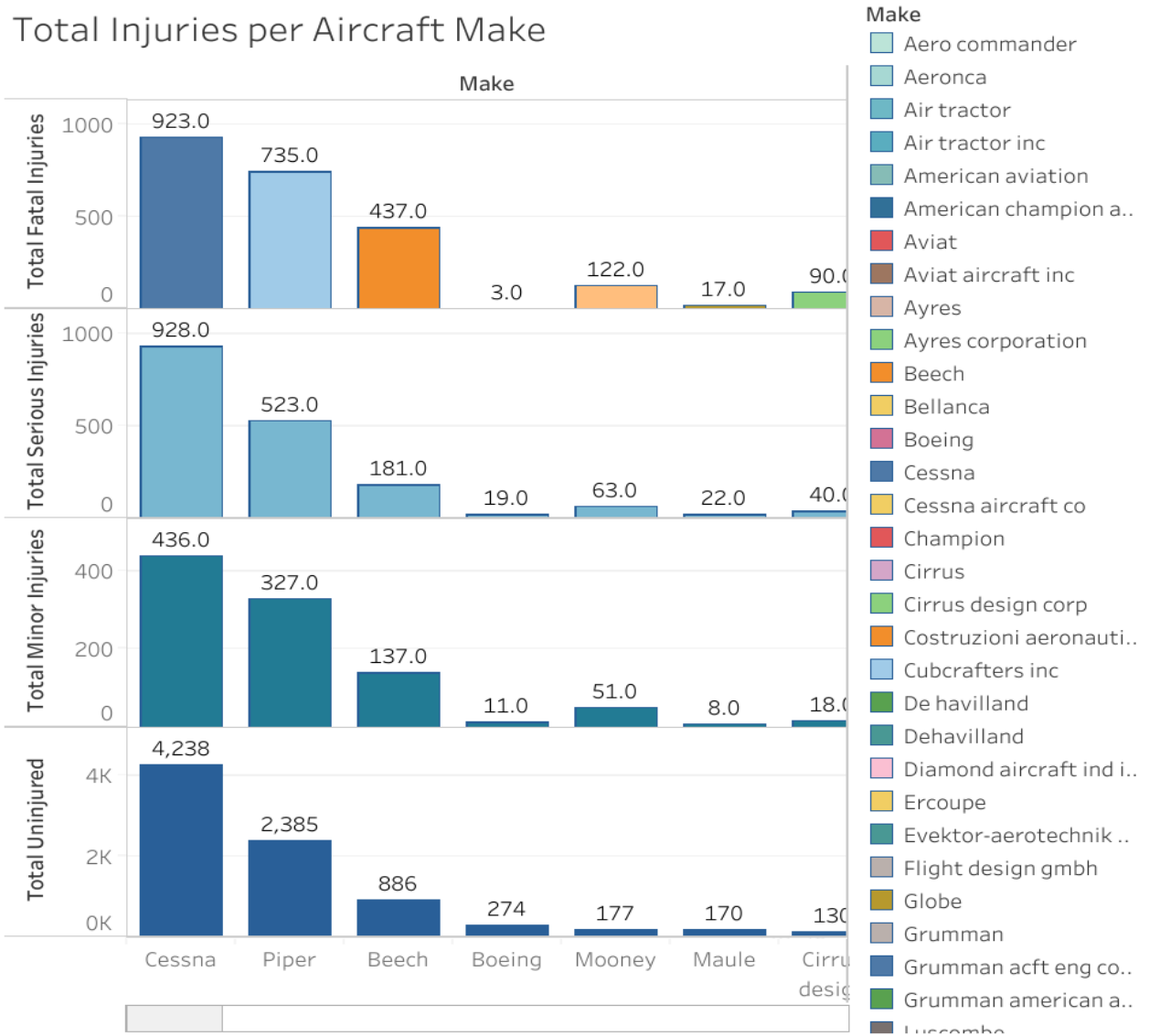

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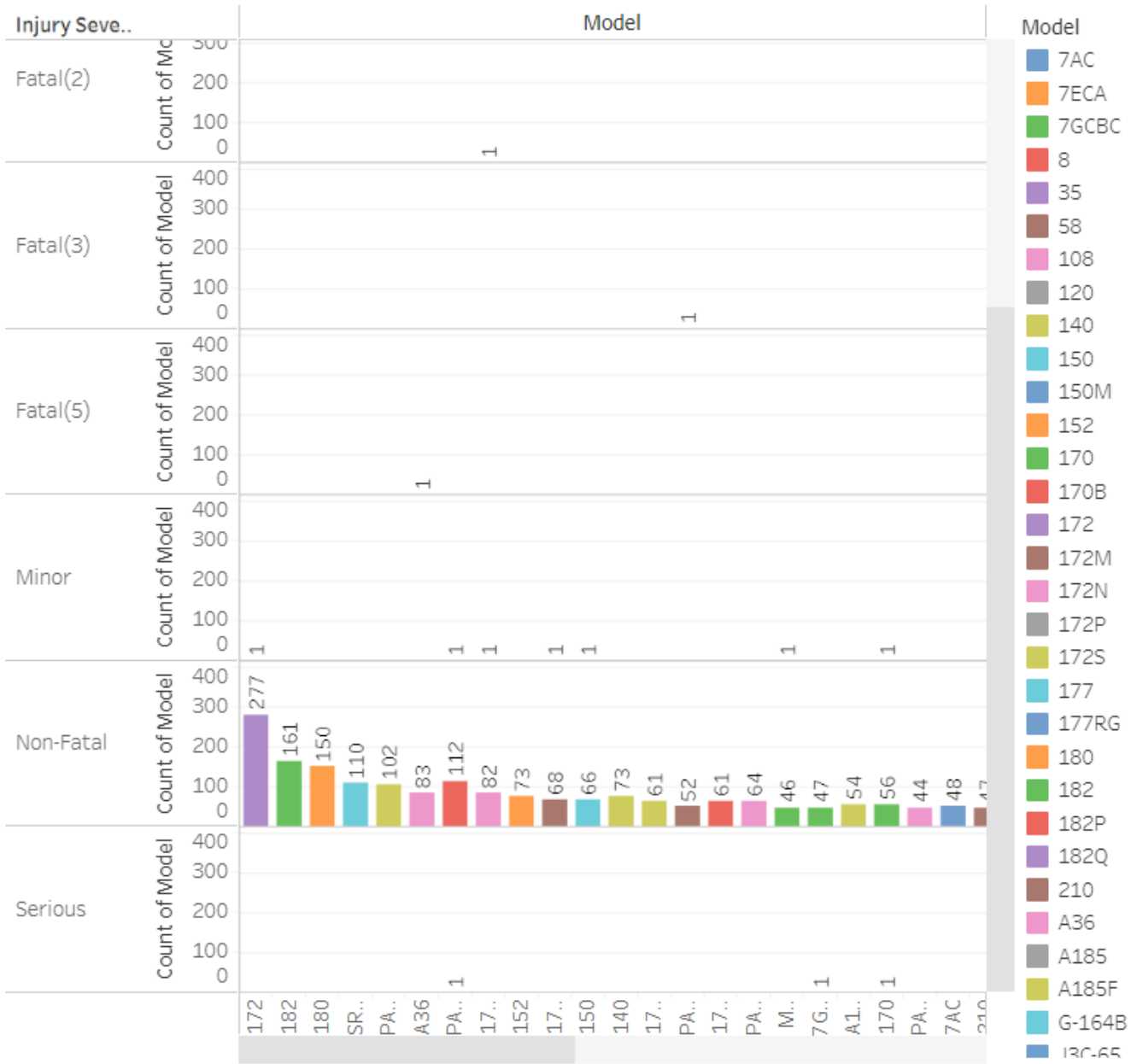

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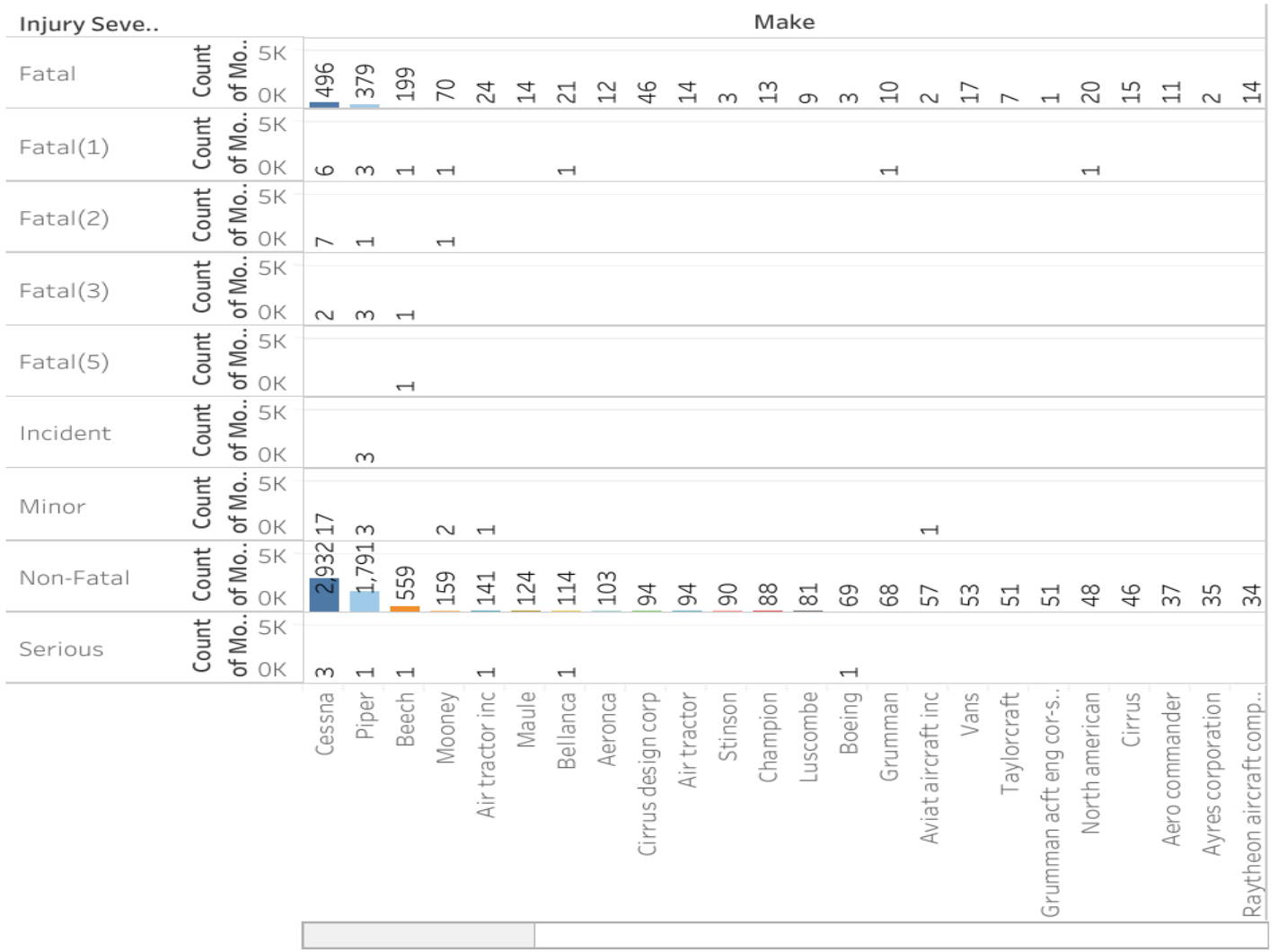
Injury Severity and model count per Aircraft Make



RECOMMENDATIONS

- The top 3 showing more safety in terms of non-Fatal accidents and Level of Damage. i.e.: Cessna, Piper and Beech Make.
- Model selection: The low-risk are the 172 models (of Cessna), with the most non-fatal injuries.
  - Others: Piper and Beech.
- Cessna has the highest number of model count for non-fatal injuries, thus showing more safety.
- Note: More research to be done based on other factors before making a decision on the chose of Airplane Make having more models that have Non-Fatal incidents/accidents.

THANK YOU ☺