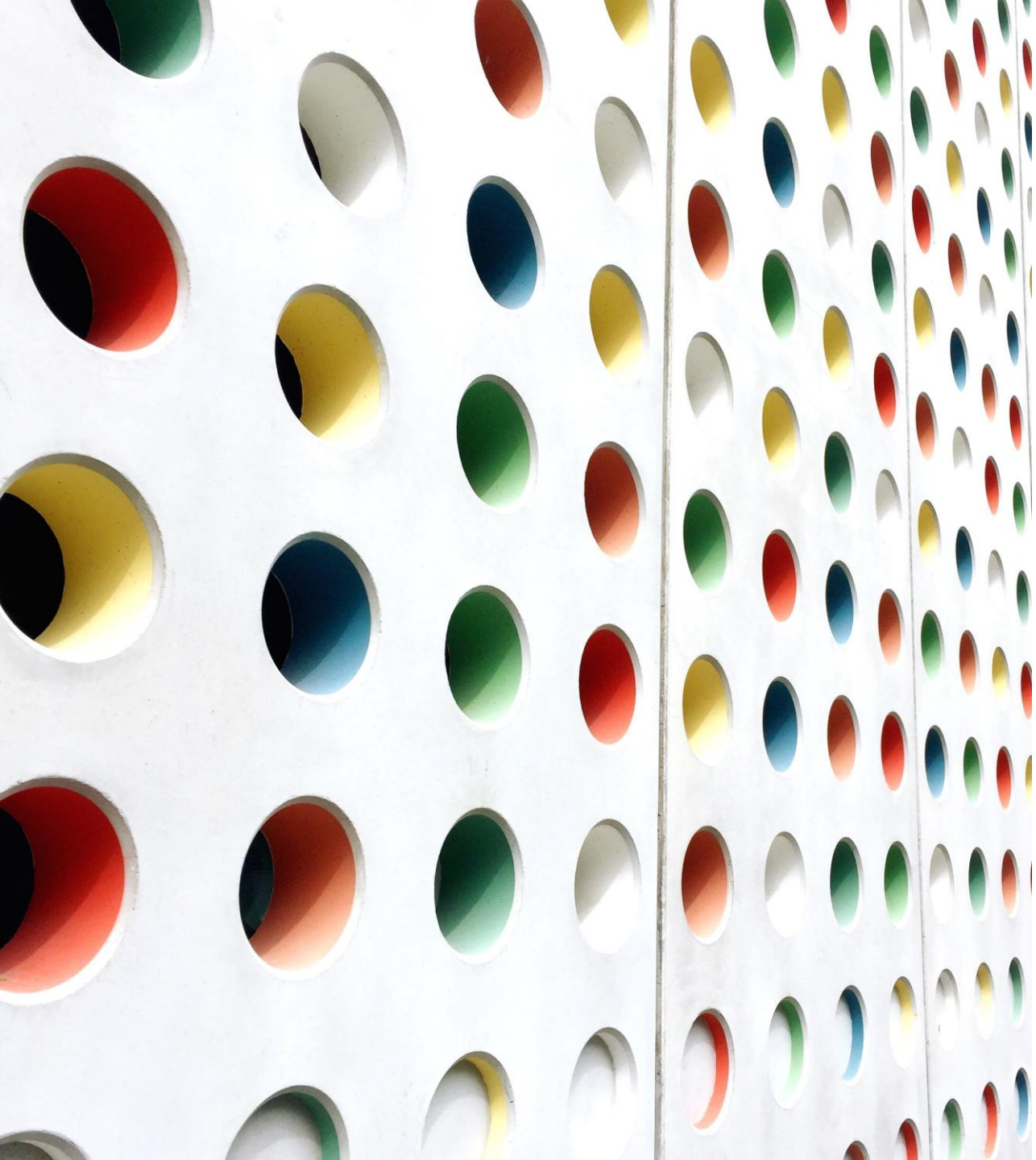
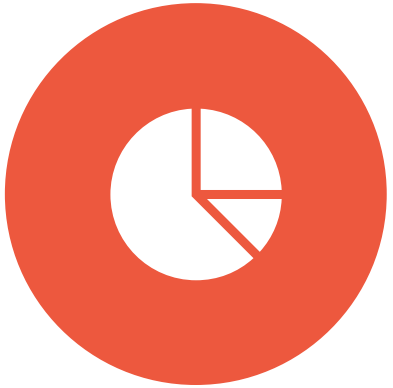


Aviation Risk Analysis

MOTALO MUSESYA

Identifying High- and Low-Risk Aircraft Models



Business Objective

Objective & Stakeholder Value

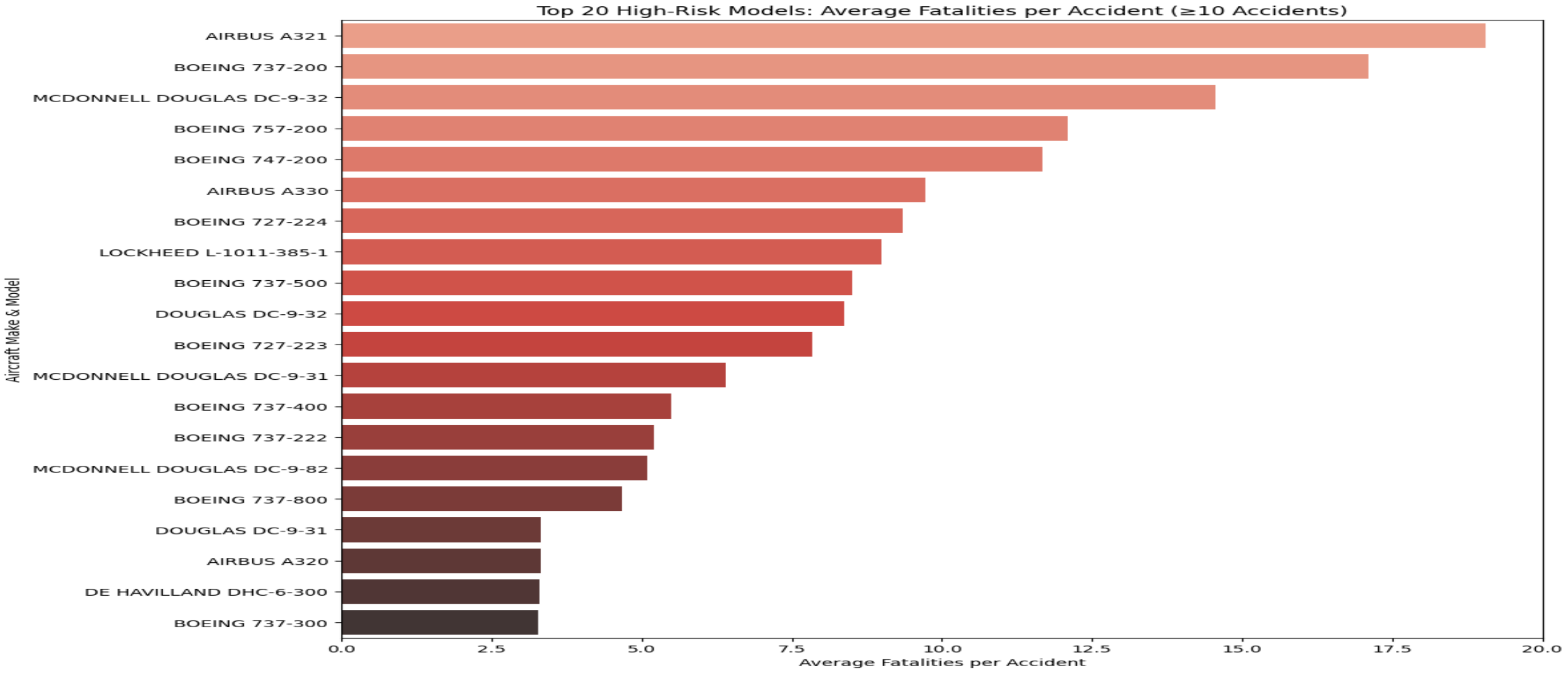
Provide data-driven insights on aircraft model safety risks for regulators, insurers, and pilots.

Which models pose the highest risks based on historical accidents?

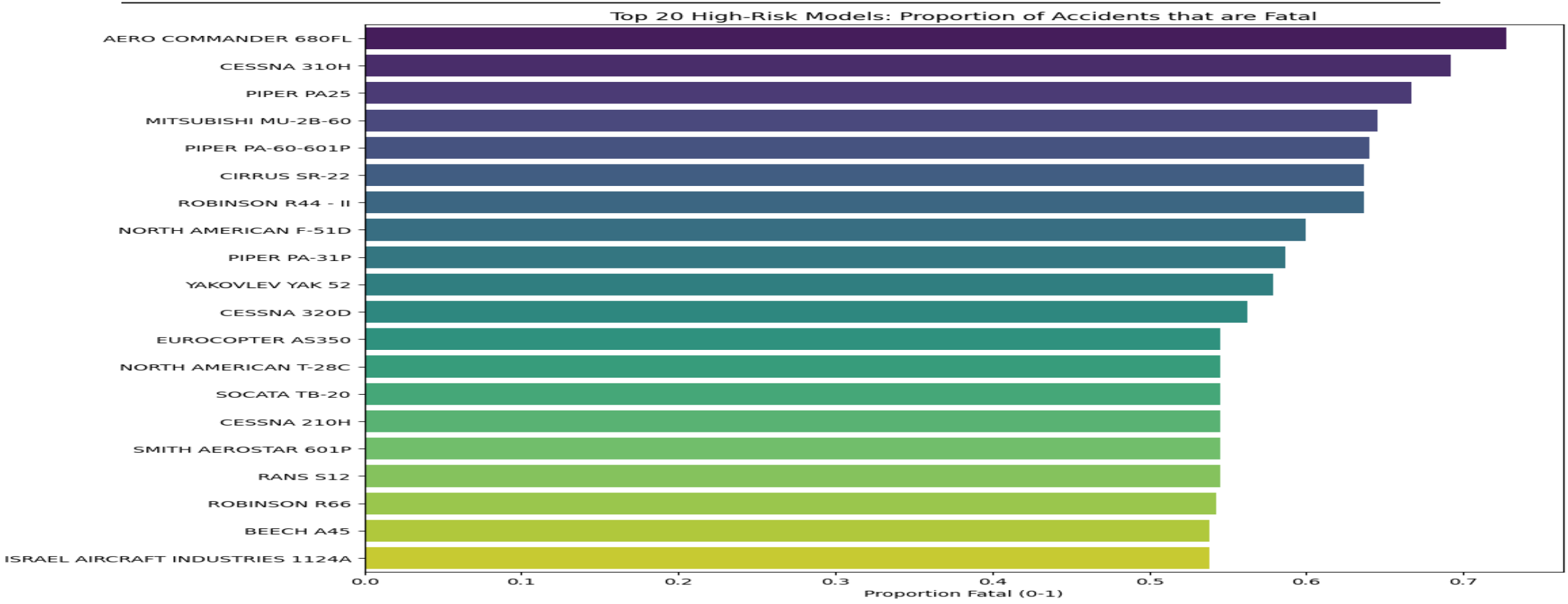
Data Overview

- NTSB Aviation Accident Database (~90,000 incidents, 1948–2022)
- Filtered: Models with ≥10 accidents for statistical reliability
- Metrics: Total Accidents, Total Fatalities, Average Fatalities per Accident, Proportion Fatal

Highest Average Fatalities per Accident



Highest Proportion of Fatal Accidents



Accidents vs. Severity

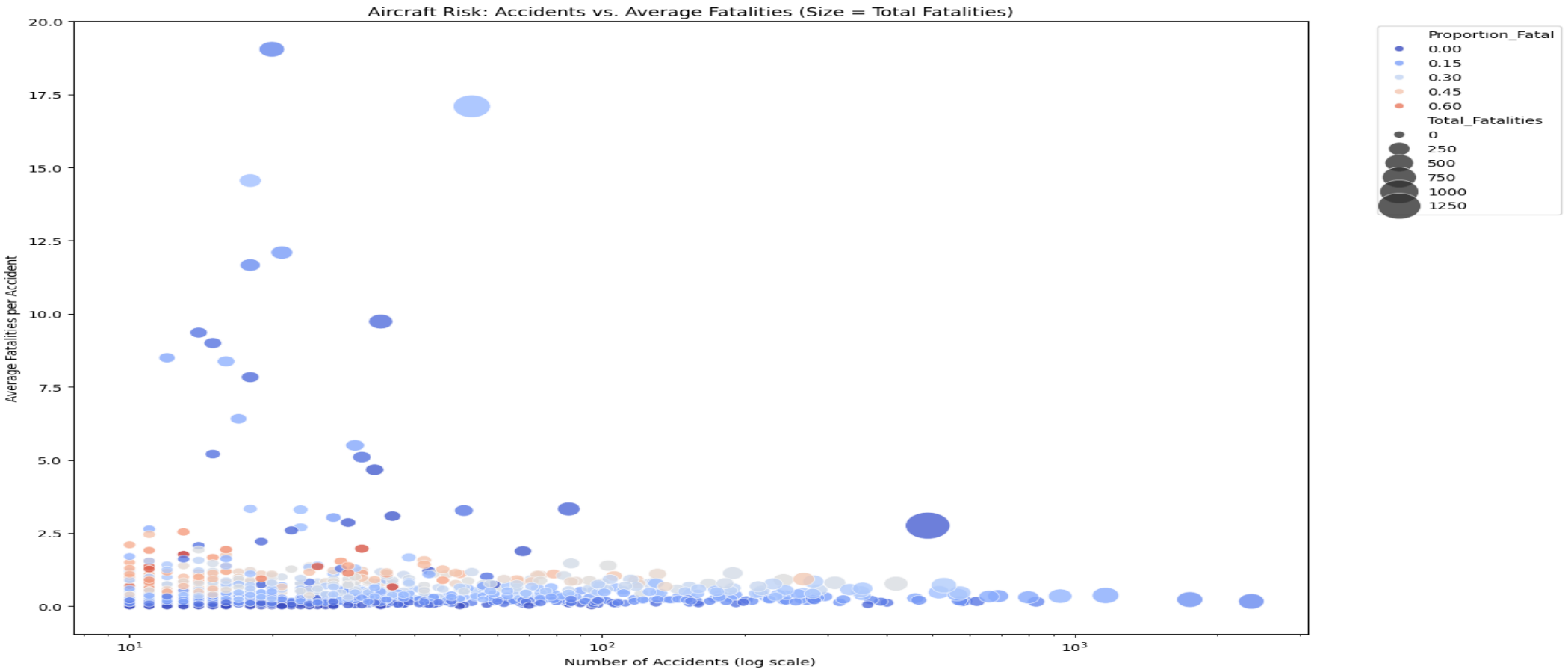


Tableau Public - Aviation_Risk_Dashboard

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Tableau Desktop Public Edition Buy Tableau

Entire View Show Me

Dashboard Layout

Default
Phone
Device Preview

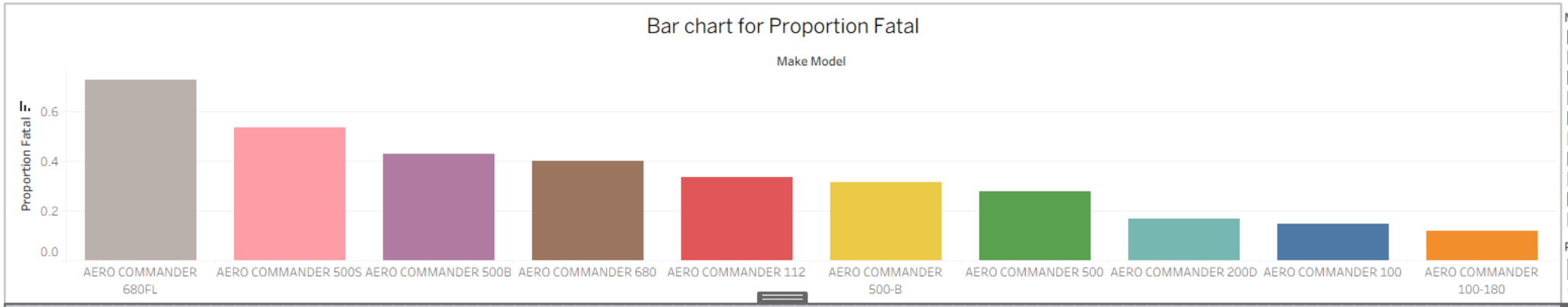
Size
Automatic

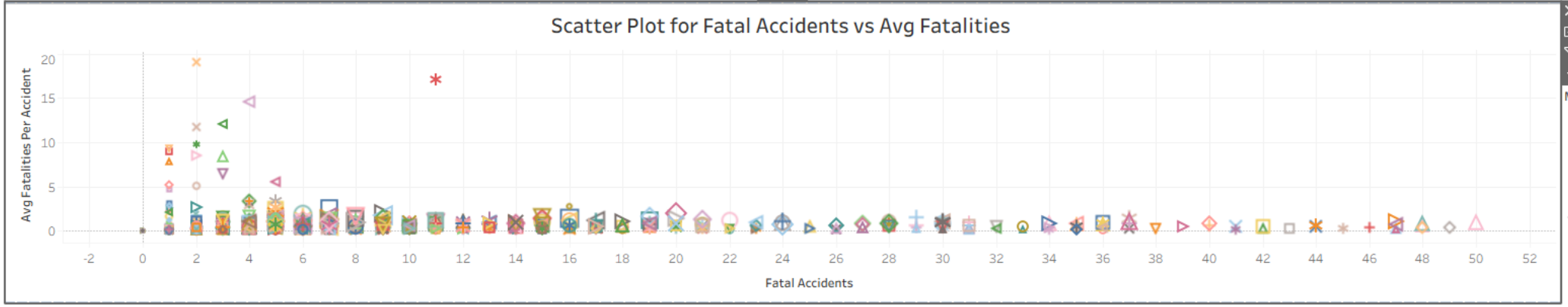
Sheets
Sheet 1
Sheet 2
Sheet 3

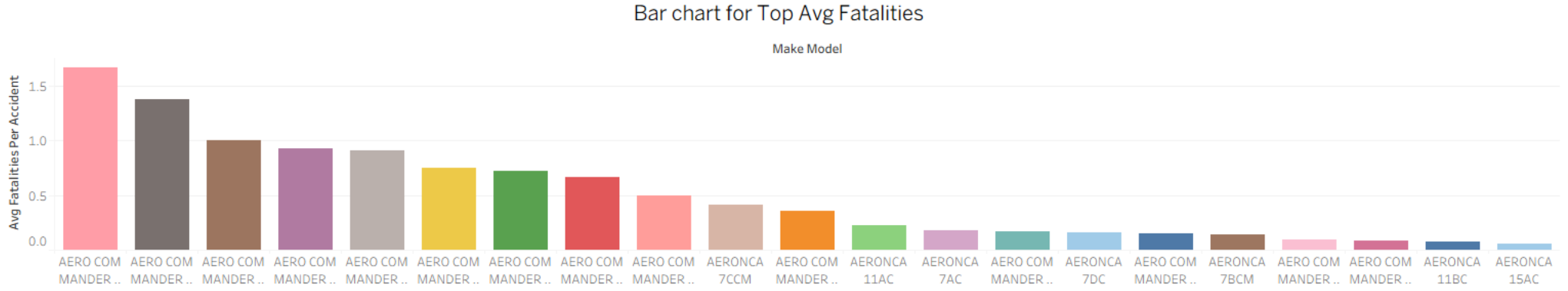
Objects
Horizontal Container
Vertical Container
Text
Extension
Pulse Metric
Image
Blank
Workflow
Web Page

Tiled Floating

Show dashboard title







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Parameter 1
10

ke_Model Param

Max. Make Model
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AERONCA 7AC
AERONCA 7BCM
AERONCA 7CCM
AERONCA 7DC

Proportion Fatal
0.0000
0.2000
0.4000
0.6000
0.7273

Data Source Sheet 1 Sheet 2 Sheet 3 Dashboard 1

995 marks 1 row by 1 column SUM(Fatal Accidents): 7,913

Recommendations

- Enhance training/regulations for high-proportion models (e.g., certain twins/helicopters)
- Monitor high-volume fleets despite lower per-accident rates
- Limitation: Rates per accident (no flight-hour exposure data available)

Key Takeaway

Nuanced risks—scale in commercial jets vs. consistency in smaller aircraft

Thank you, Questions?