Phase-1-project
Overview

Your company is expanding in to new industries to diversify its
portfolio. Specifically, they are interested in purchasing and operating
airplanes for commercial and private enterprises, but do not know
anything about the potential risks of aircraft. You are charged with
determining which aircraft are the lowest risk for the company to start
this new business endeavor. You must then translate your findings into
actionable insights that the head of the new aviation division can use to
help decide which aircraft to purchase.

Business Understanding

The goal of this analysis is to evaluate the risk profiles of different
aircraft to help the aviation company decide which aircraft to purchase.
We will:
1. Understand the incident and accident data.
2. Identify the highest and lowest risk aircraft.
3. Provide actionable recommendations based on risk scores

Data Understanding and Analysis

Our dataset is sourced from kaggle and is fron the National
Transportation Safety Board that includes aviation accident data from
1962 to 2023 about civil aviation accidents and selected incidents in the
United States and international waters.

THE BOTTOM 10 MODELS BASED ON AVERAGE INJURIES
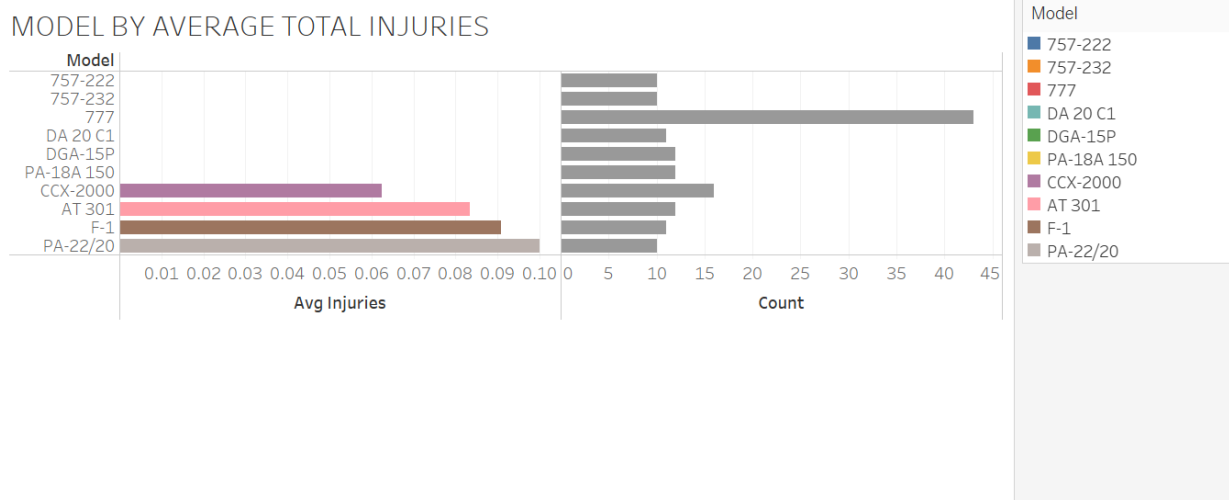
* The safest model is the Boeing 777 and it is followed by the Howard
DGA-15P and Piper PA-18A 150 models.
* Models like Boeing 757-222 and 757-232 are also strong candidates for
safe aircraft investments.
* Even with multiple reported events, these aircraft maintain low injury
severity.

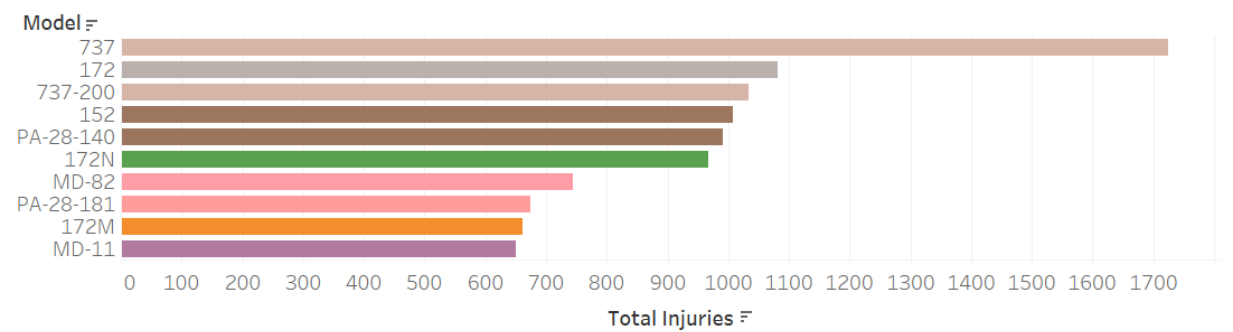THE SAFEST MAKES ACCORDING TO AVERAGE TOTAL INJURIES

MAKE BY AVERAGE TOTAL INJURIES
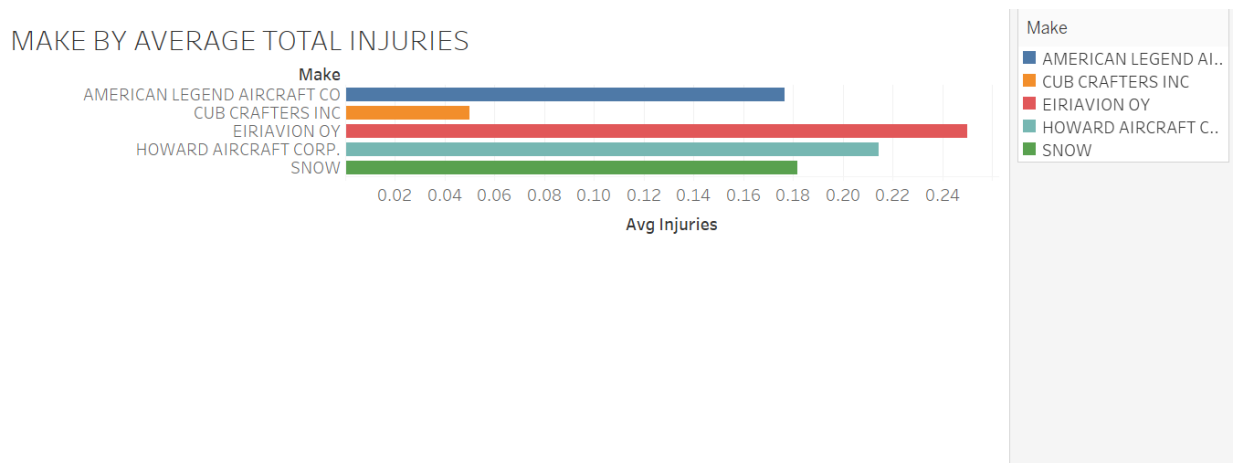
EIRIAVION OY and HOWARD AIRCRAFT CORP in general are the safest makes.

THE RISKIEST MODELS IN TERMS OF TOTAL INJURIES

MODEL BY TOTAL INJURIES

* Models like 737, 172, and 737-200 have the highest total injuries.
* These models are best to be avoided even though popularity may have played a part in the statistic.

Recommendations
* Shortlist low-risk aircraft: Boeing 777, Howard DGA-15P, Piper PA-18A
150.
* CESSNA is the aircraft make to avoid due to its aircrafts' huge
involvement in accidents/incidents.
* For a more informed decision this data should be combined with
maintenance and operational feedback.