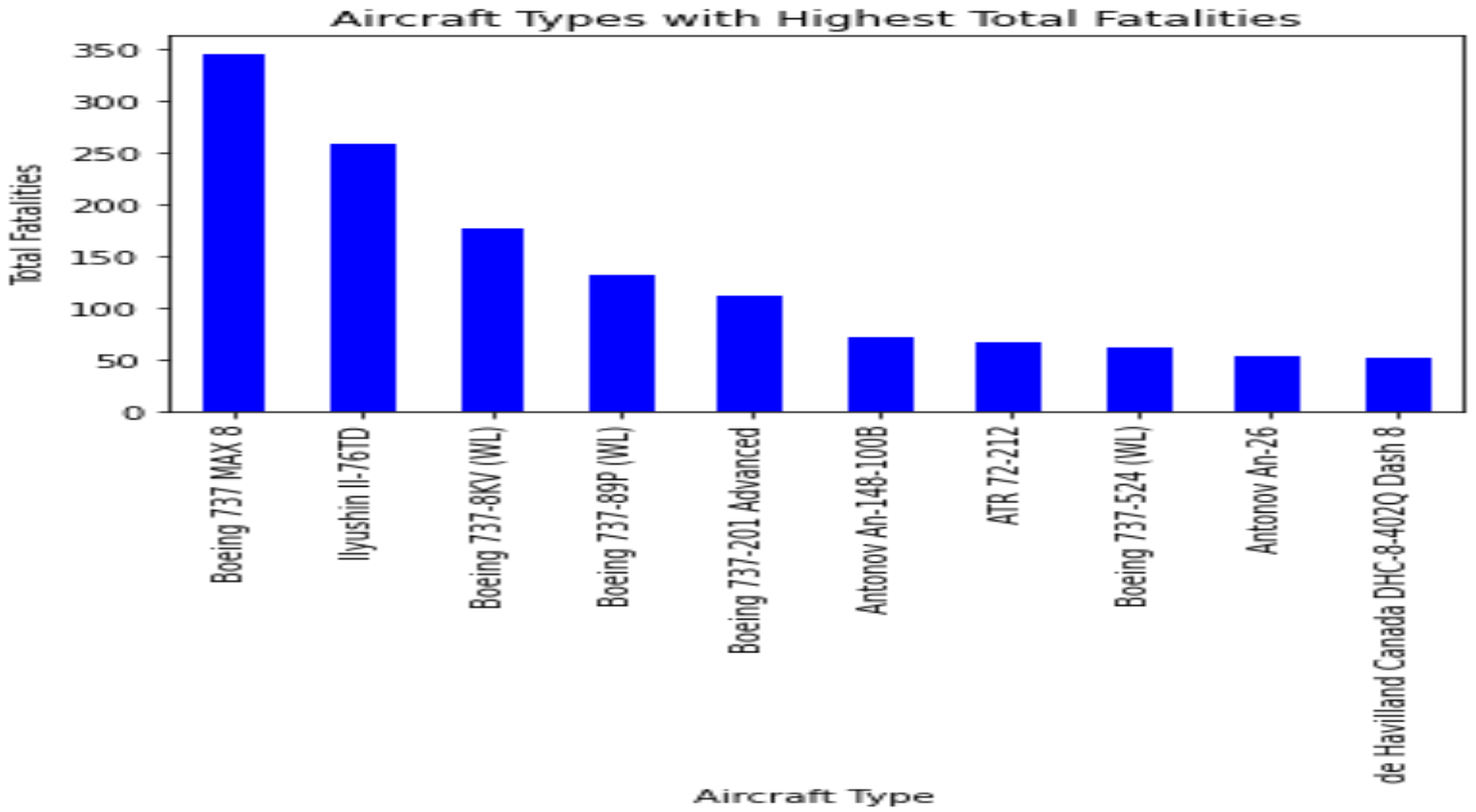
Phase 1 Project

JOEL ANDREW

Project Overview and Business Understanding

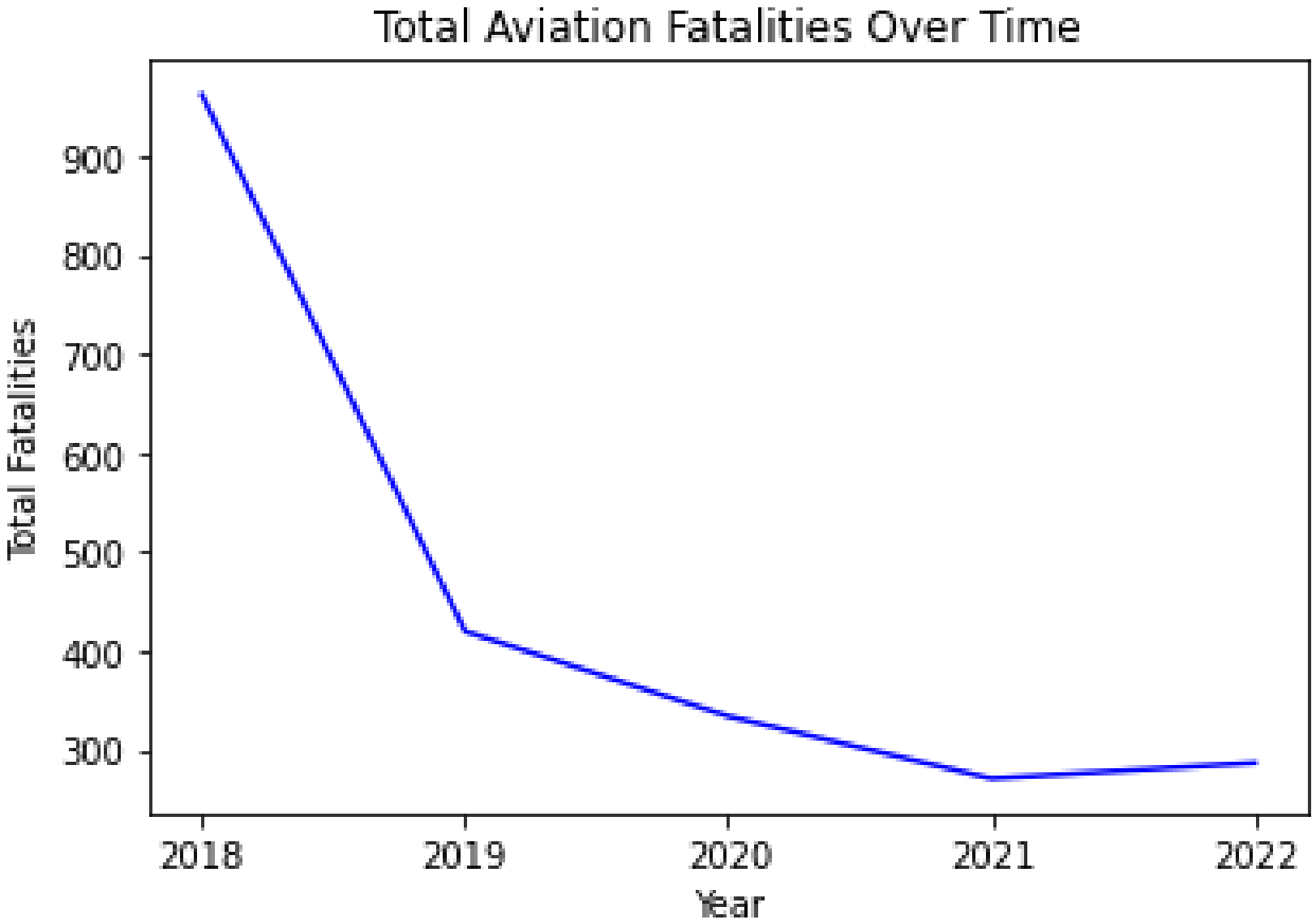
- This project analyzes decades of U.S. aviation accident data to identify key safety patterns and inform smarter aviation business decisions.
- The analysis supports the company's entry into the aviation industry by identifying lower-risk aircraft using historical accident data.

Data Visualizations



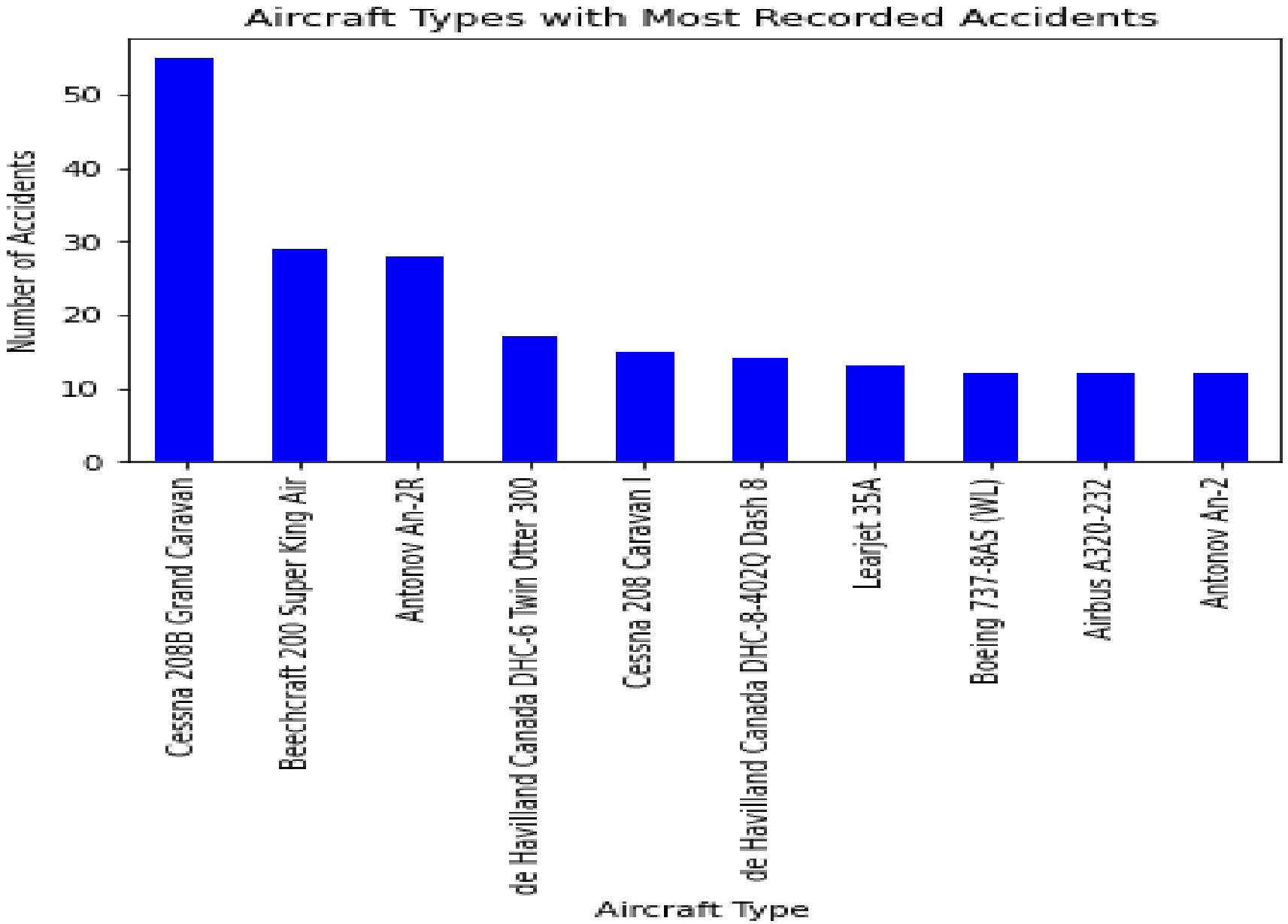
Key Insight

- A small number of aircraft types account for a disproportionately high number of fatalities
- Larger commercial and older aircraft models appear more frequently among high-fatality incidents
- Fatality counts reflect severity, not frequency of accidents


Total Aviation Fatalities Over Time
Total Fatalities
900
800
700
600
500
400
300
2018
2019
2020
2021
2022
Year

Key Insight

- Aviation fatalities show a clear downward trend over recent years
- This suggests improvements in safety standards, technology, and regulations
- A slight recent increase highlights the need for continued safety focus


Aircraft Types with Most Recorded Accidents
Number of Accidents
0
10
20
30
40
50
Cessna 208B Grand Caravan
Beechcraft 200 Super King Air
Antonov An-2R
de Havilland Canada DHC-6 Twin Otter 300
Cessna 208 Caravan I
de Havilland Canada DHC-8-402Q Dash 8
Learjet 35A
Boeing 737-8AS (WL)
Airbus A320-232
Antonov An-2
Aircraft Type

Key Insight

- Some aircraft types are involved in accidents more frequently
- High accident counts may reflect higher usage rather than higher risk
- Frequency of accidents does not always correlate with fatal outcomes

Recommendations

- Prioritize aircraft models with lower fatality rates, and accident counts
- Favor newer or well-regulated aircraft types with strong safety records
- Combine accident frequency and severity data when making aircraft investment decisions