



Airline Risk Analysis



June 2, 2023

Team



Lillian Lakes
Technical Lead



Madeleine Smithers
GitHub Lead



Rajesh Reddy
Presentation Lead

Main Finding



A commercial airline passenger is 75.69% less likely to die in a deadly crash.



Agenda



1

Business Problem

2

Data Overview

3

Data Analysis

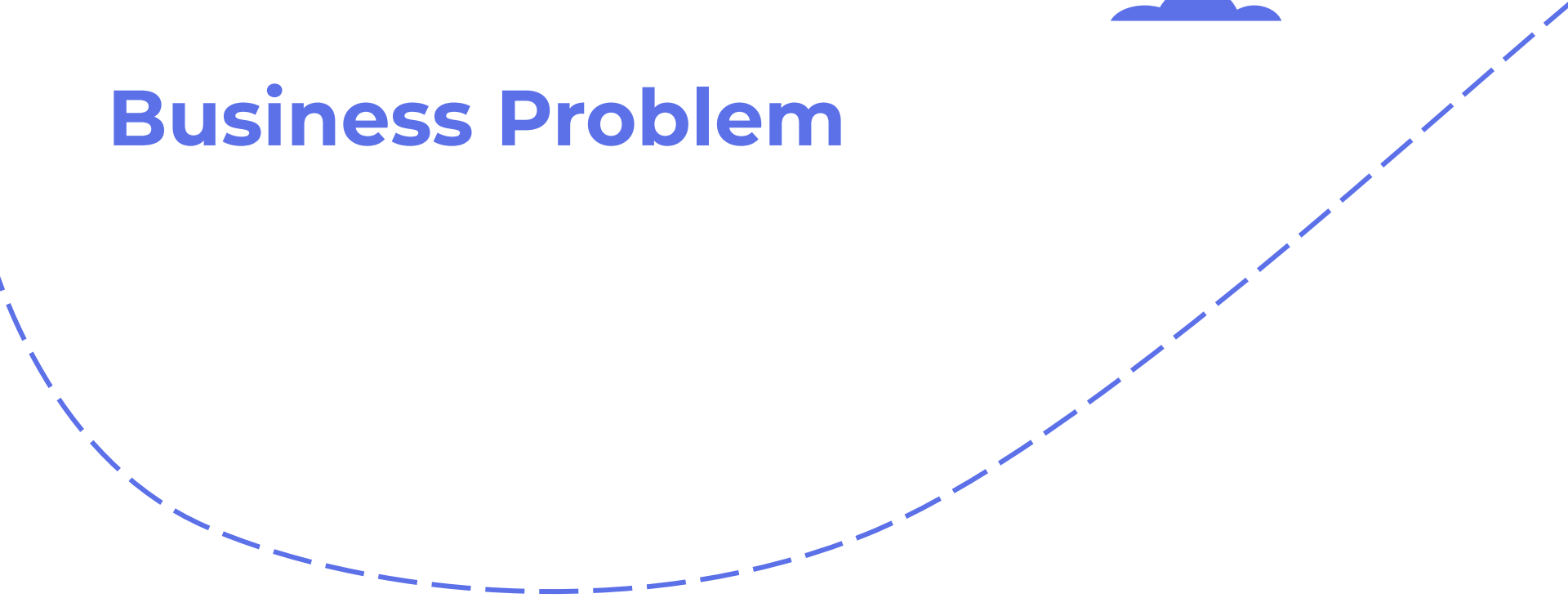
4

Recommendations

5

Further Steps

Business Problem



Business Problem



- Expand into Aviation Industries
- Understand the Risk of Commercial and Private Aviation

Data Overview

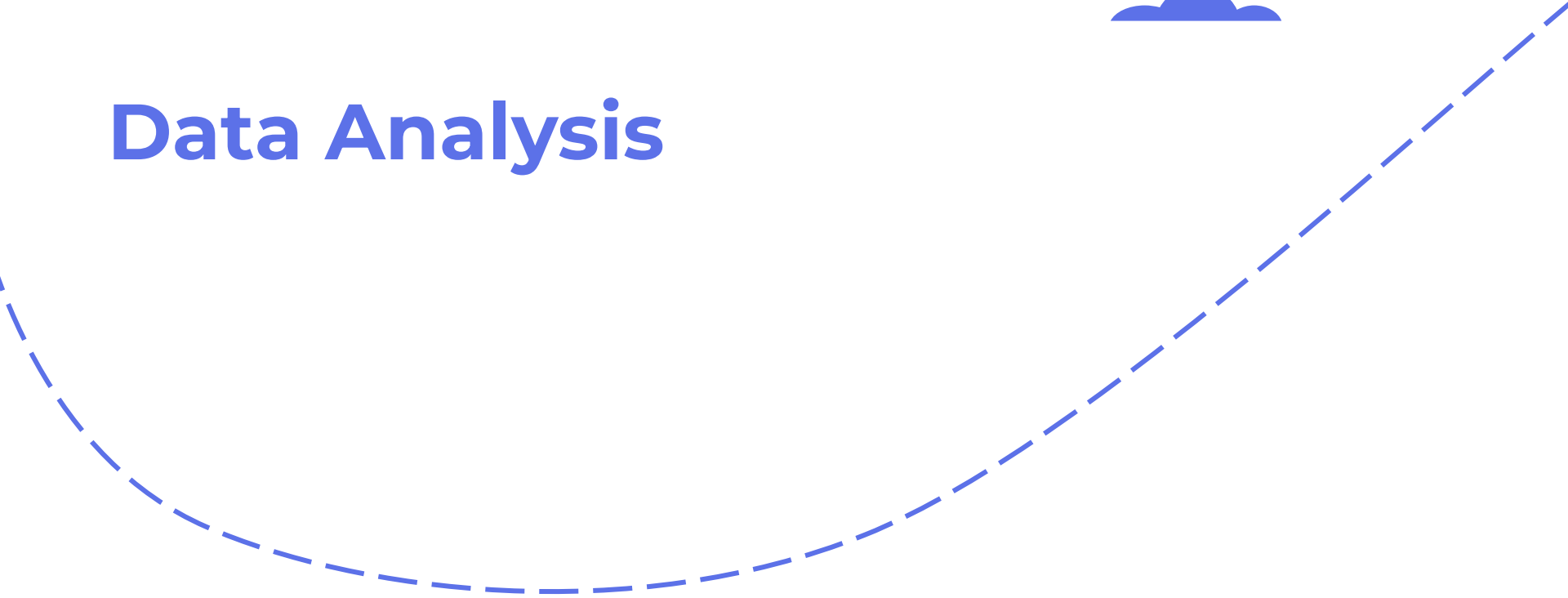


Data Overview



- Aviation Data from National Transportation Safety Board
- Data from 1962 - 2022 (88000+ data points)
- Filtered by airline accidents after 2009

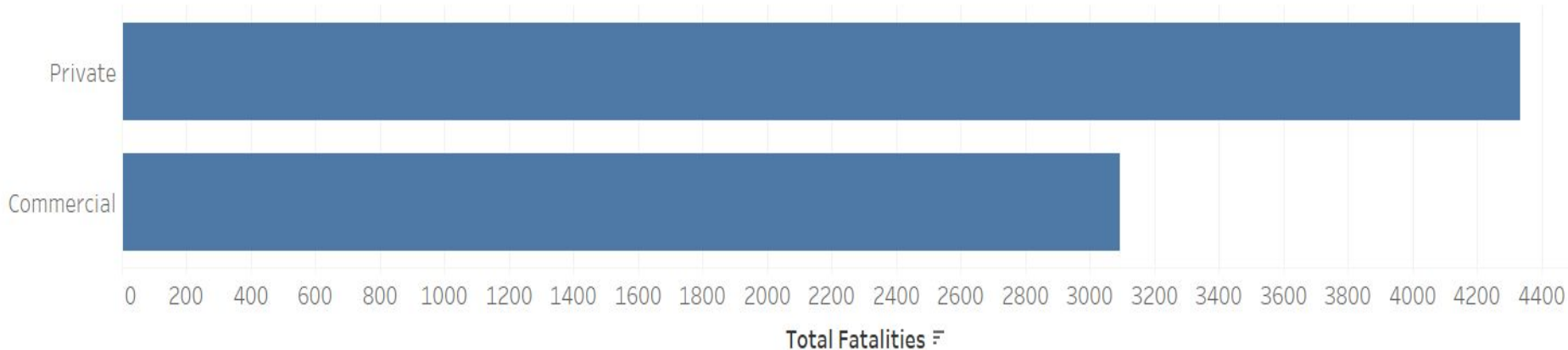
Data Analysis



Private Airlines Reported More Fatalities

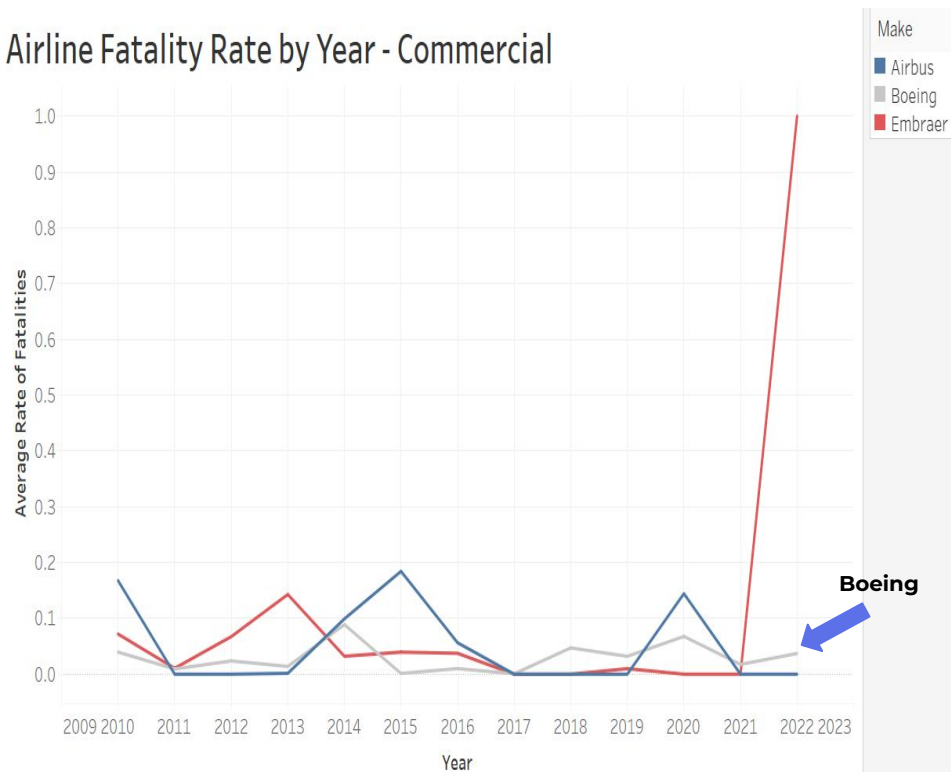


Commercial vs Private - Total Fatalities, 2010 -2022

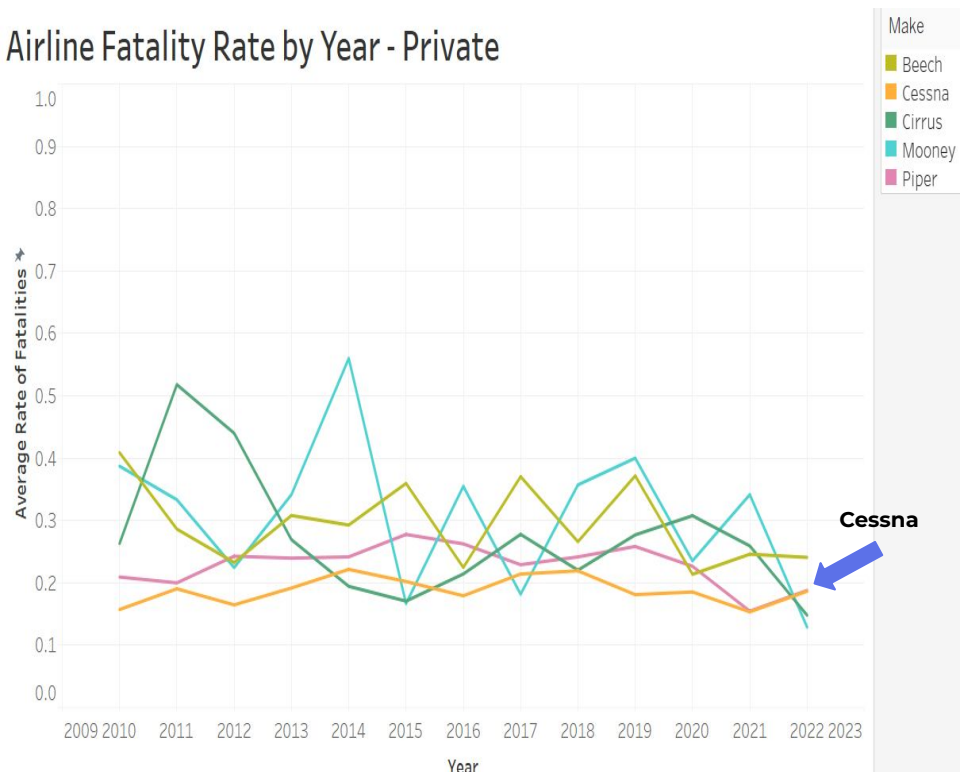


Fatality Rates are Lower in Commercial Airlines

Airline Fatality Rate by Year - Commercial

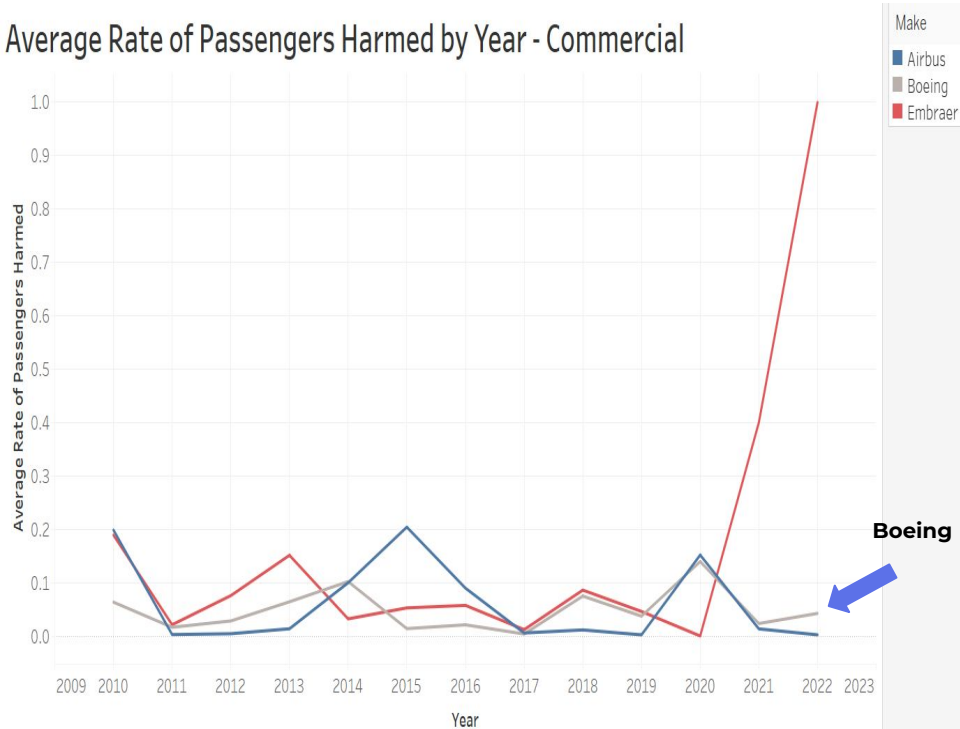


Airline Fatality Rate by Year - Private

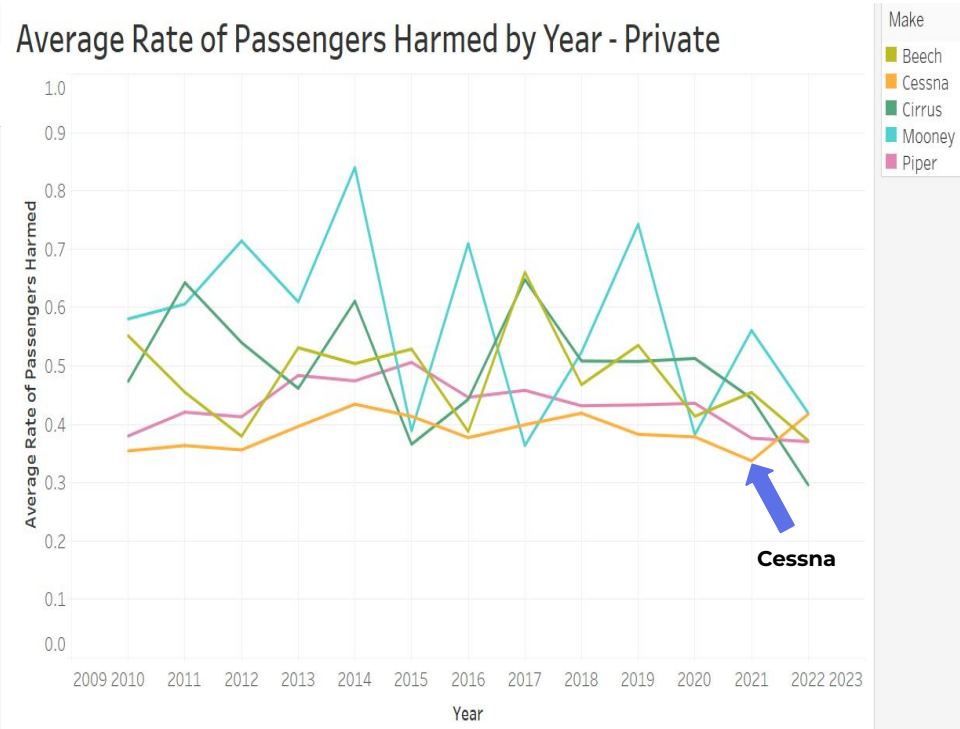


Injury Rates are Lower in Commercial Airlines

Average Rate of Passengers Harmed by Year - Commercial



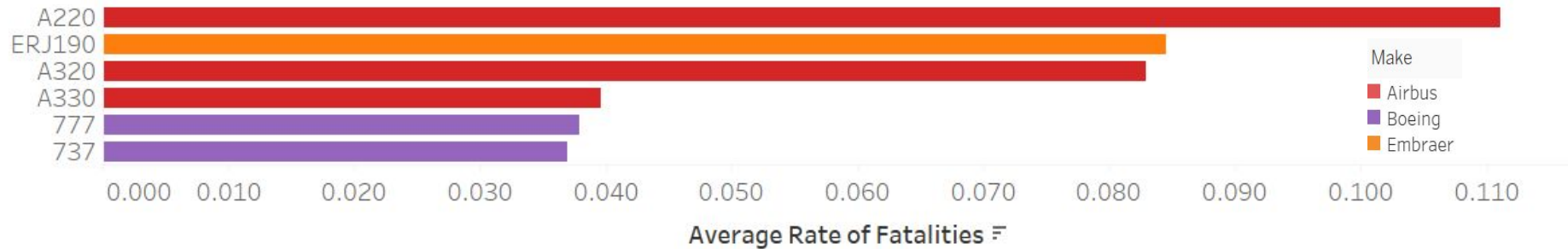
Average Rate of Passengers Harmed by Year - Private



Boeing Has the Lowest Fatality Rate Among Commercial Airlines



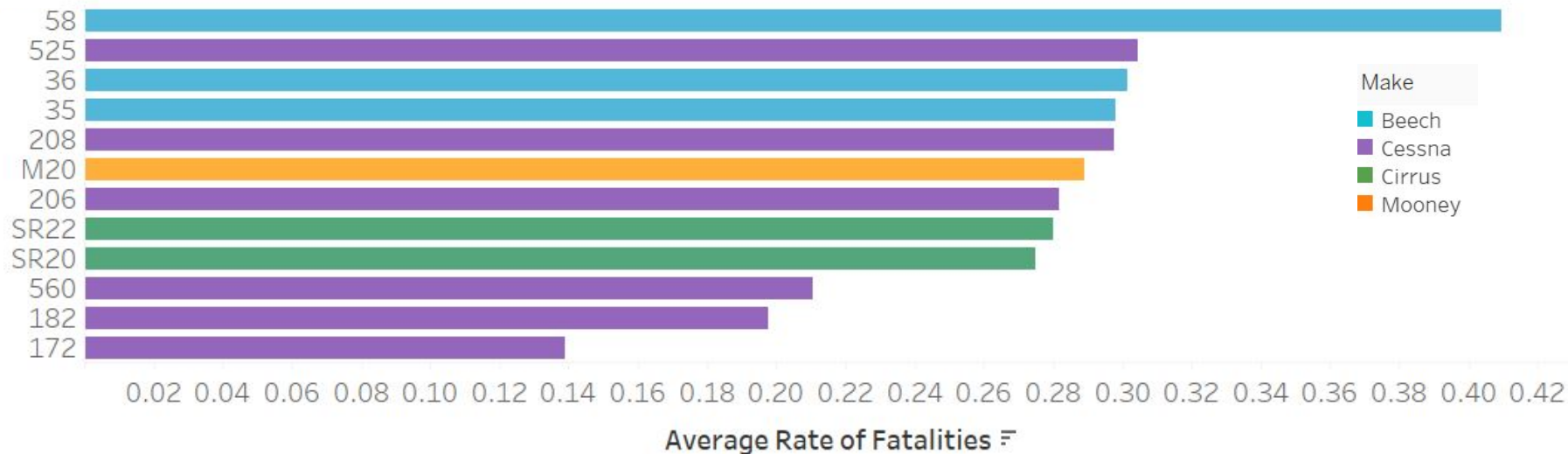
Fatality Rate by Model - Commercial, 2010 - 2022



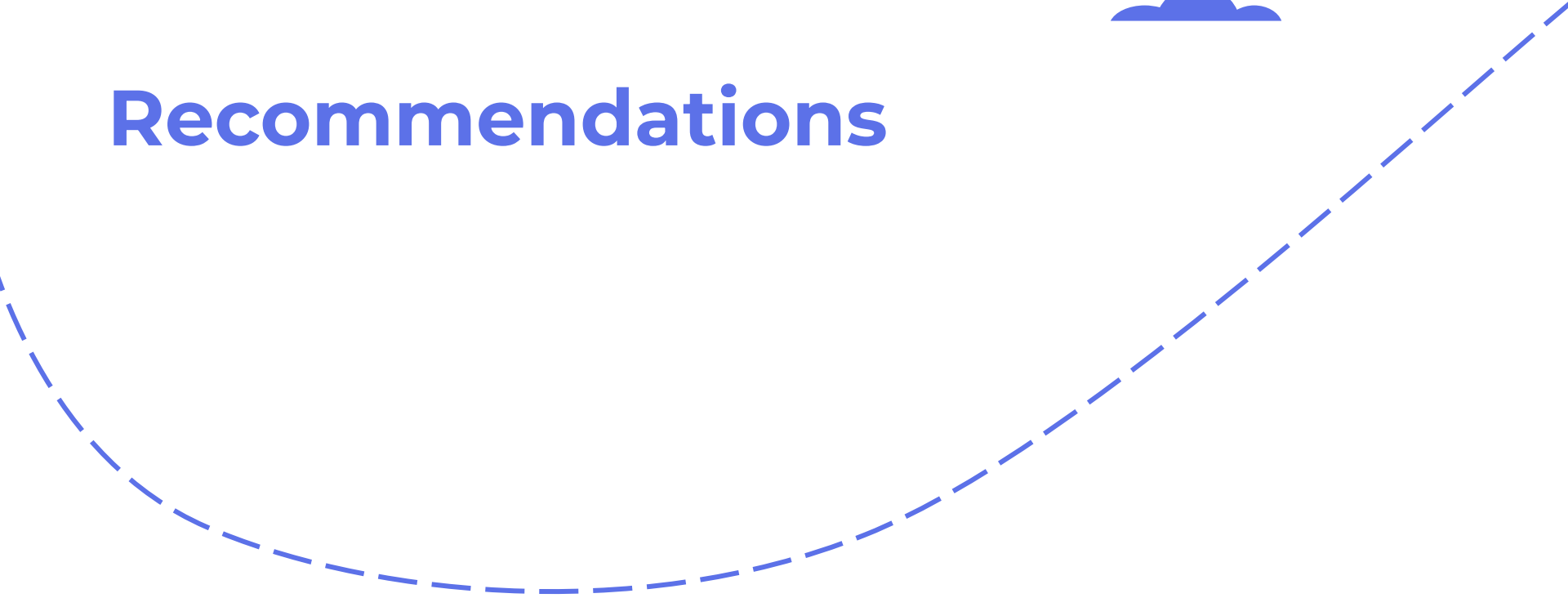
Cessna Has the Lowest Fatality Rate Among Private Airlines



Fatality Rate by Model - Private, 2010-2022



Recommendations



Go Commercial



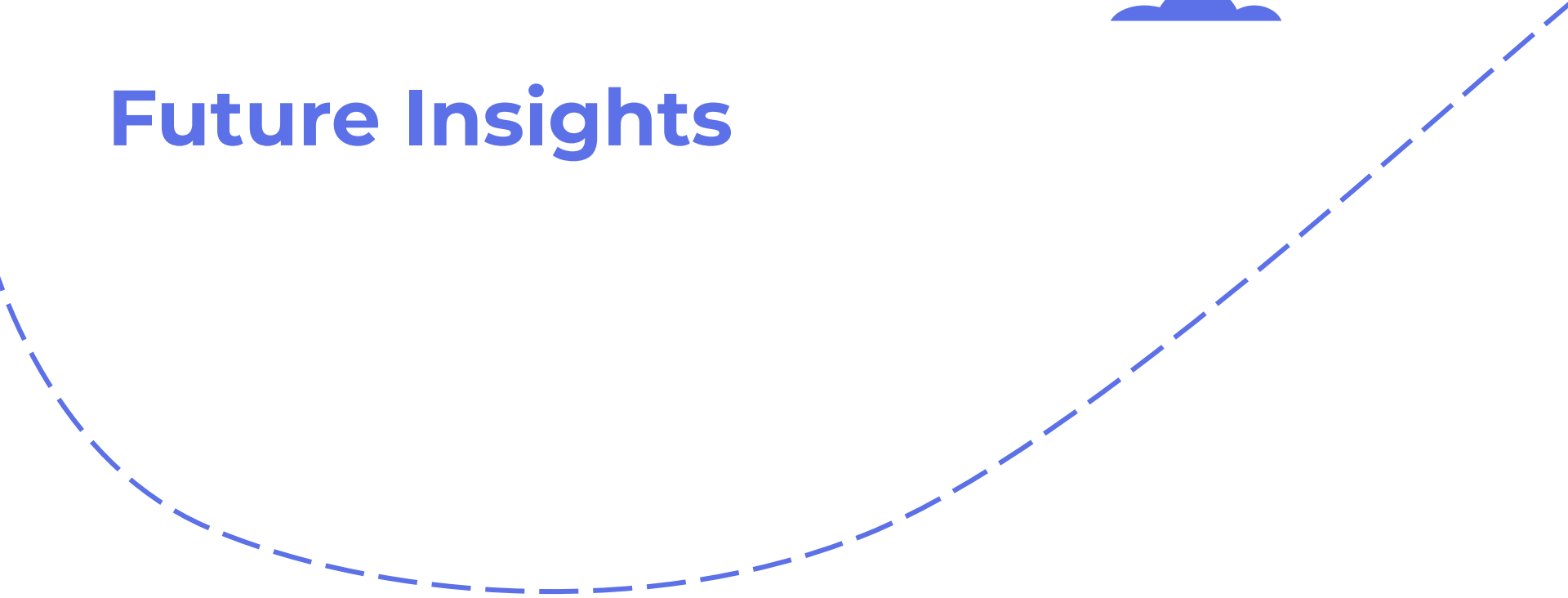
Boeing 737/777



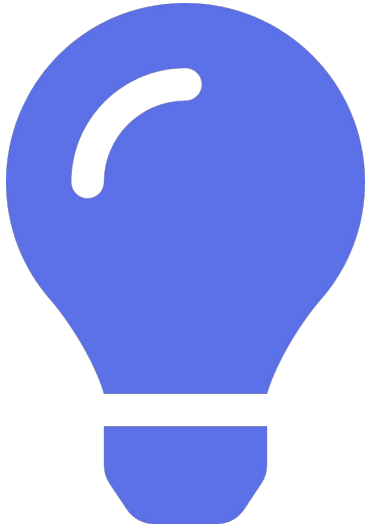
Private - Cessna 172/182
Alternate - Cirrus SR20/SR22



Future Insights



Future Insights



- Total number of flights
- Compare ROI between commercial and private planes
- Consumer demand for commercial vs. private

Thank You



Lillian Lakes

lillian.lakes@gmail.com



Madeleine Smithers

madeleinedsmithers@gmail.com



Rajesh Reddy

redd002@gmail.com



Questions?

