BEP Aviation Recommendations

July 14th, 2023

Meet the Team

Paul Justafort - Overview and Business Problem

Bobby Daly, Data Scientist - Data Understanding and Analysis

Em Jager - Recommendations and Next Steps

Overview

Aviation Data Analysis:

- Industry Insights
- Accident Trends
- Risk Factors

Business Problem

- New Aviation Company
- Lessons Learned
- Safety Priority

Data Understanding and Analysis

NTSB Data

85,000+ Aviation Accidents from 1980 - 2022

Focus

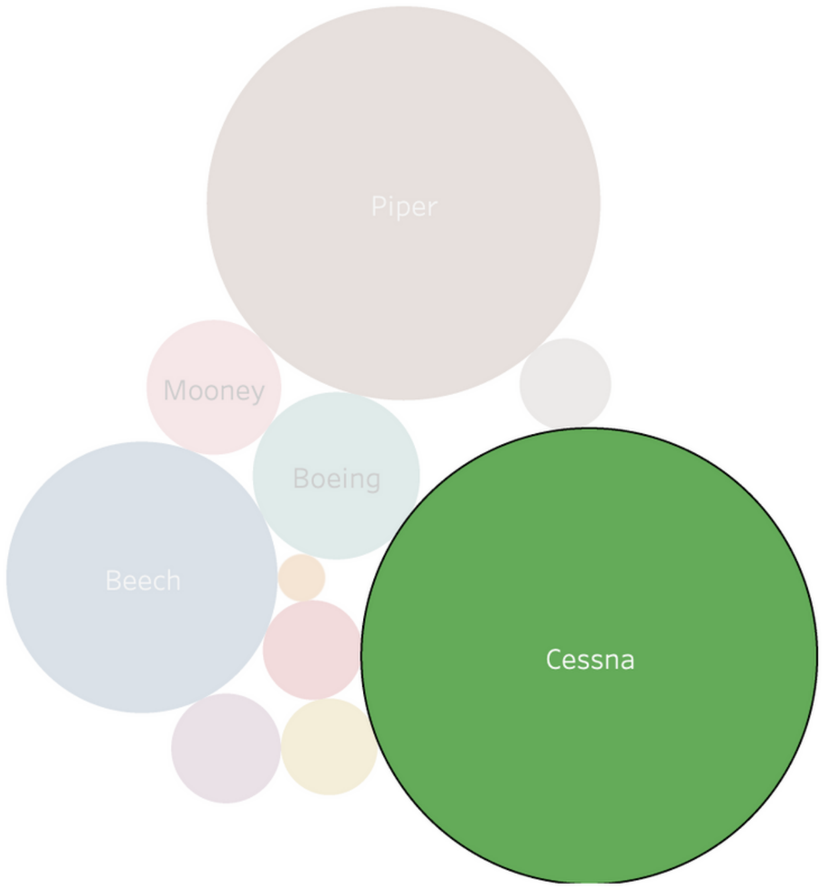
Total Fatalities by:

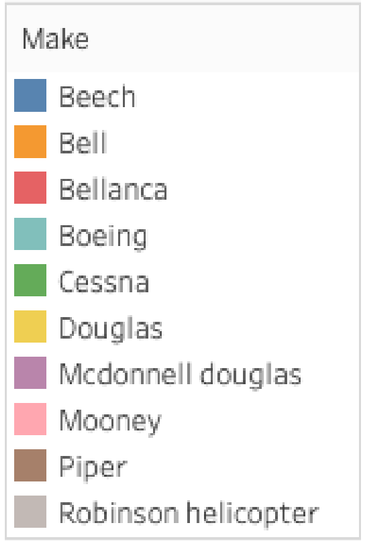
- Airplane Make
- Engine Type
- U.S. Region for Flights

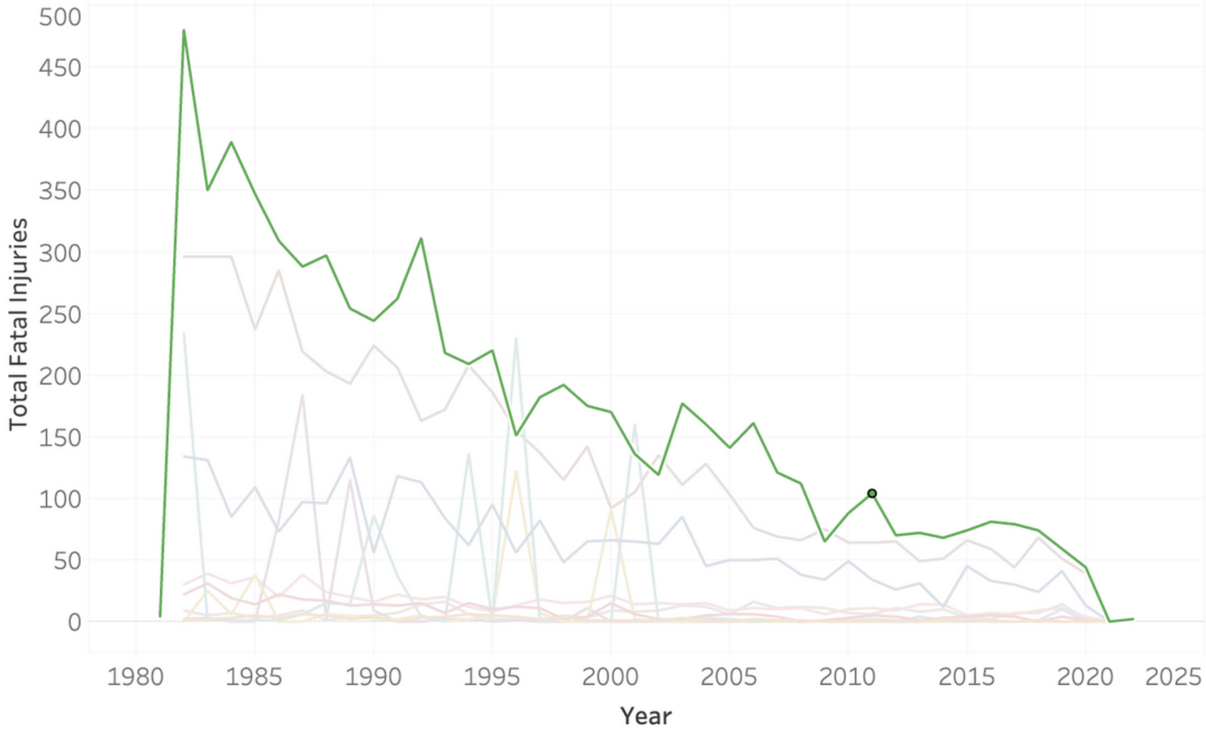
Airplane Make

Two Different Stories

Fatalities by Airplane Make



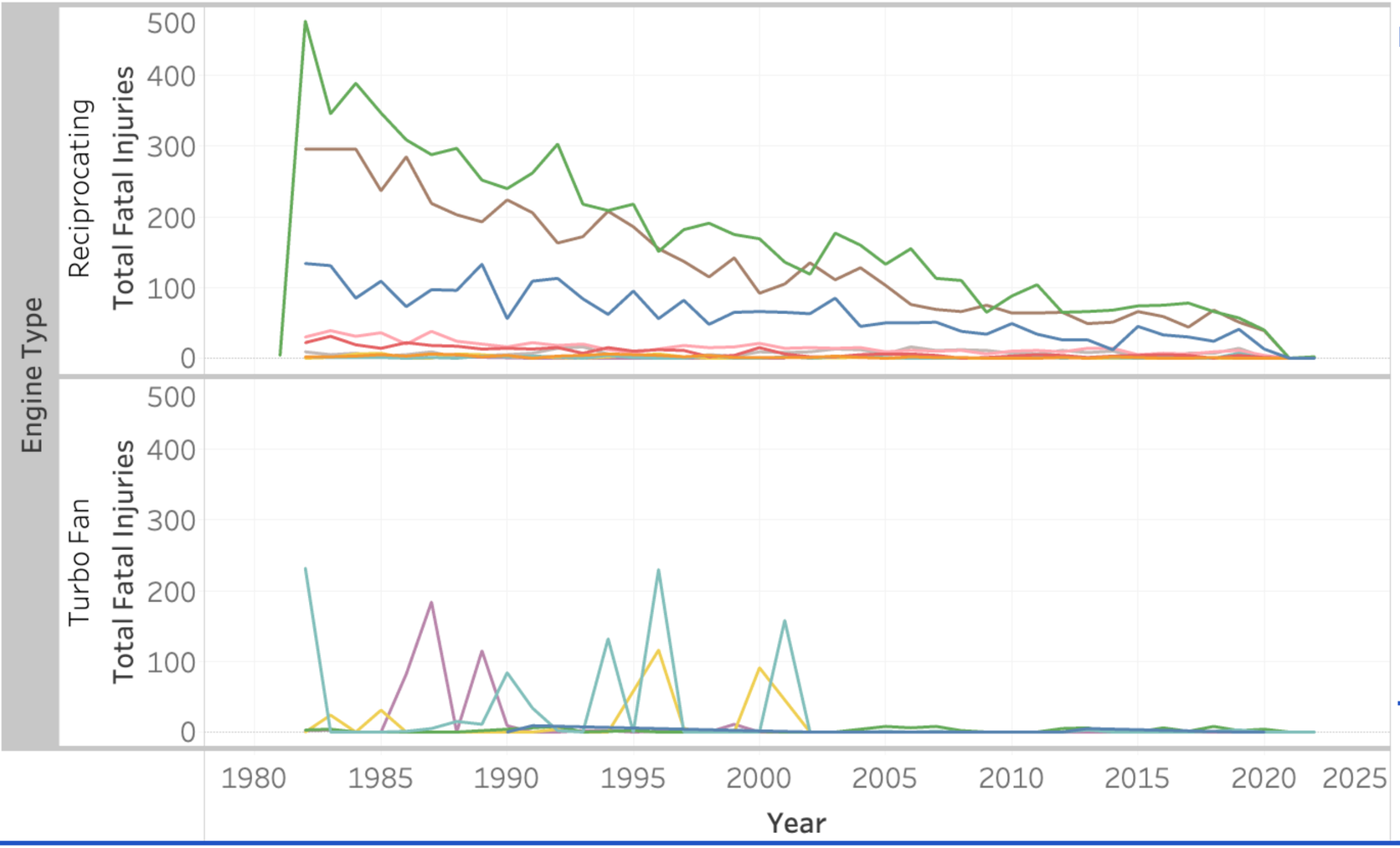




Summation

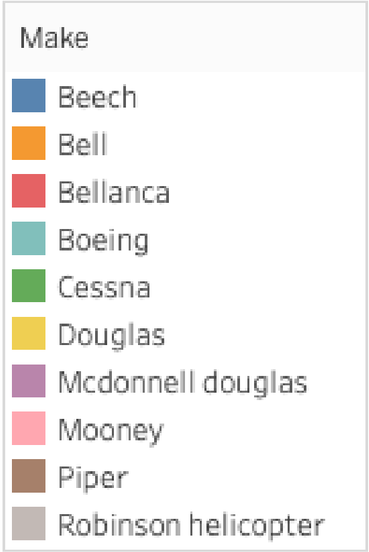
Over Time

Engine Type



Reciprocating Engine:

- Wide spread usage across Airplane Makes
- Clear downward trend in fatalities



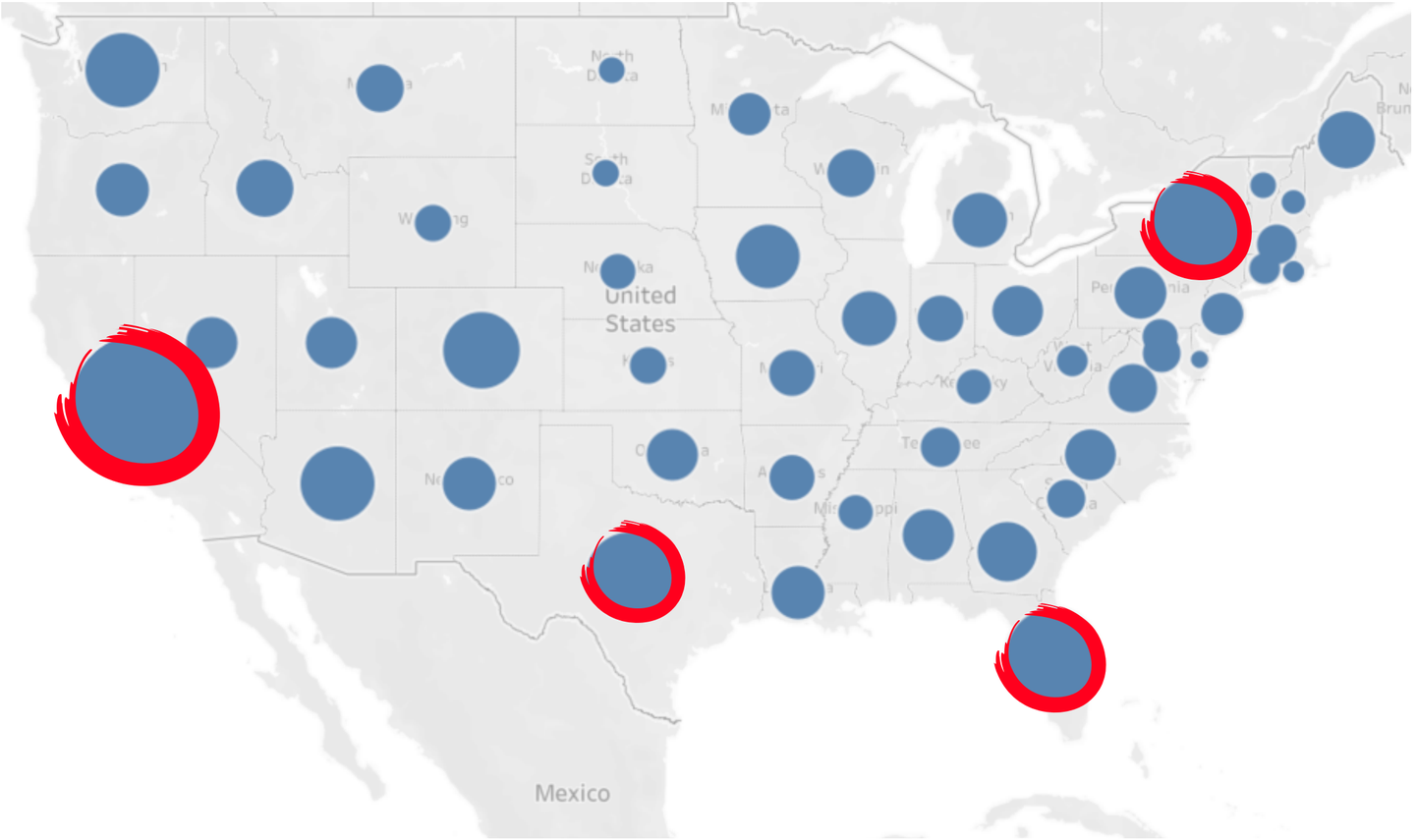
Turbo Fan Engine:

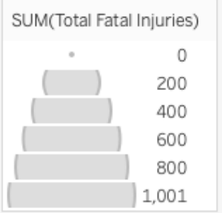
- Sporadic fatalities pre 2005
- Consistently few fatalities post 2005

U.S. State for Flights

Fatalities by State

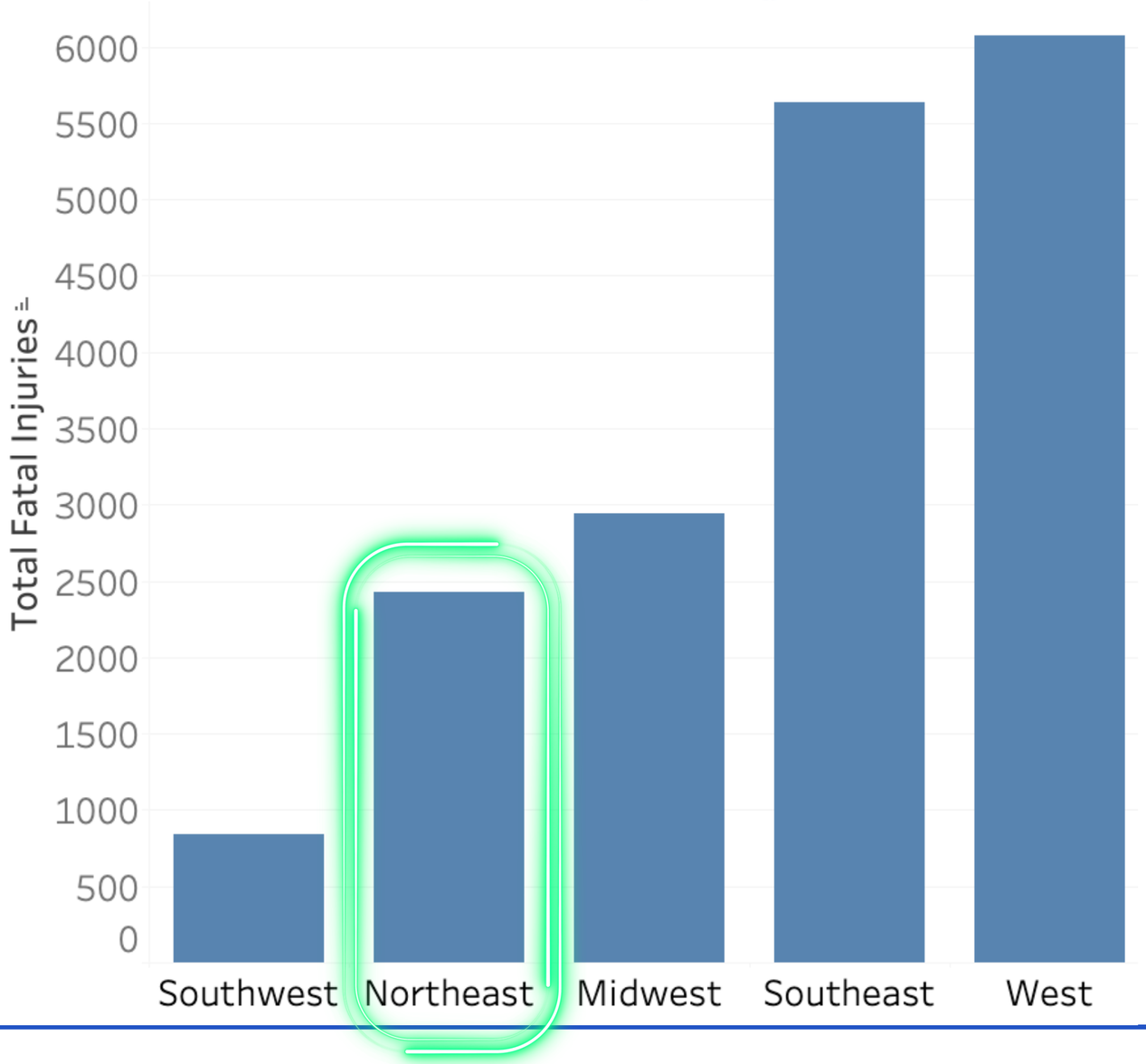
Large Cities -> Large # of Fatalities



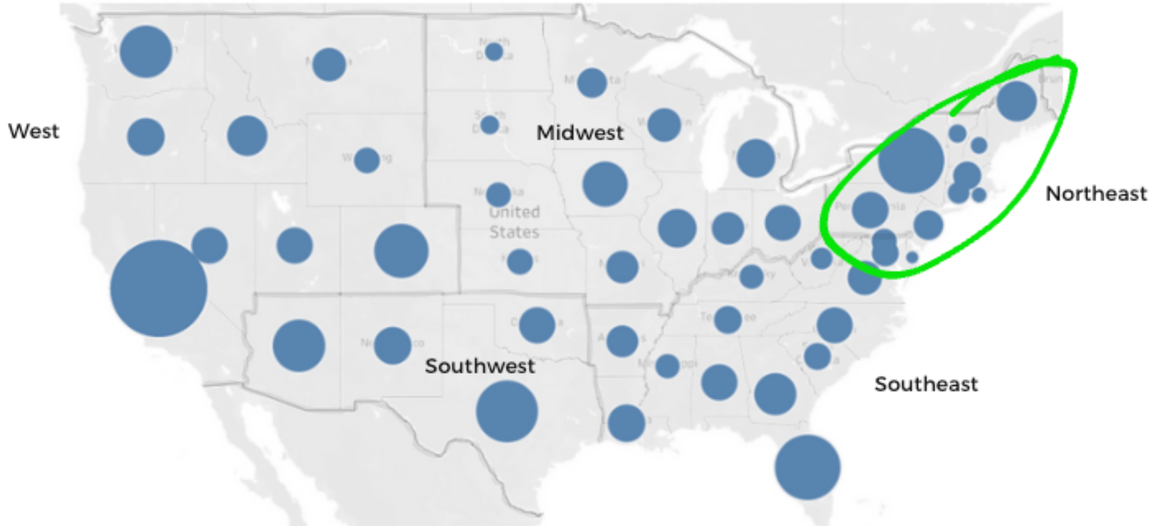


U.S. Region for Flights

Fatalities by Region



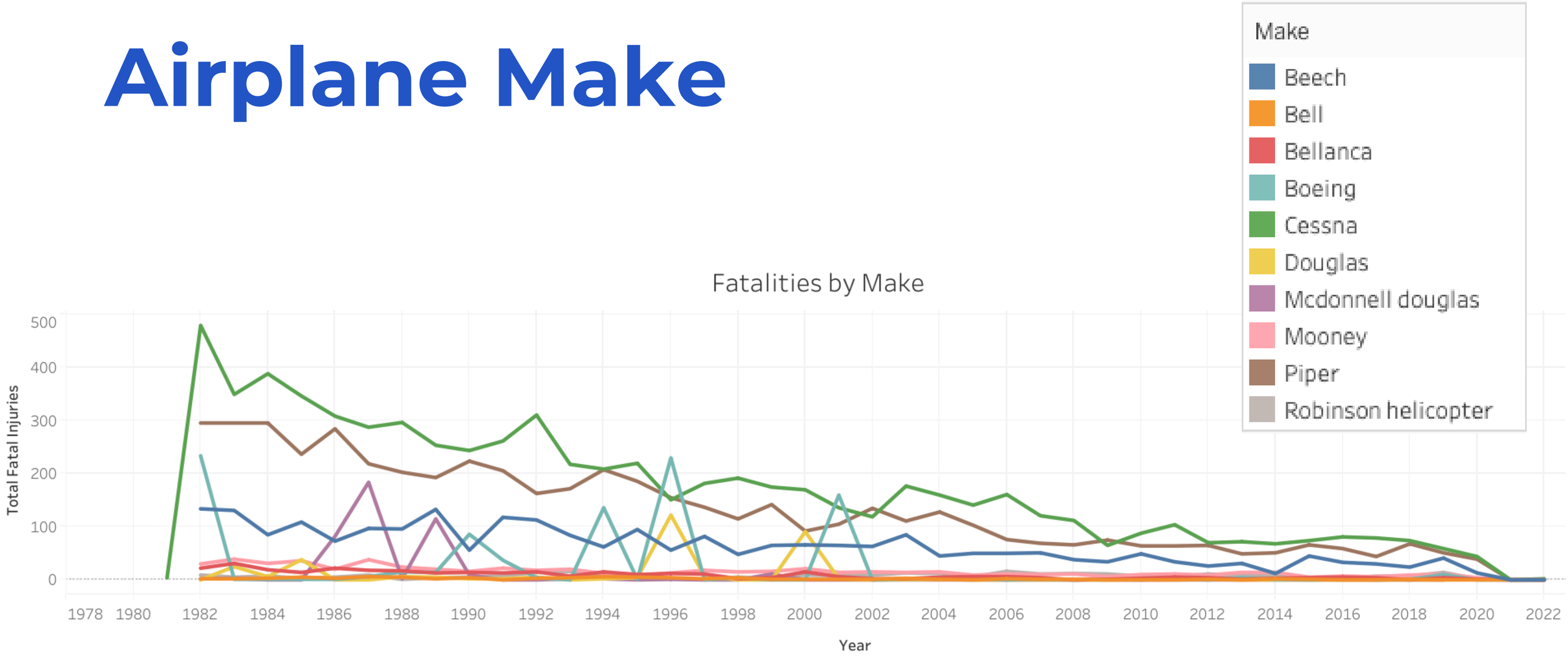
Fatalities by State



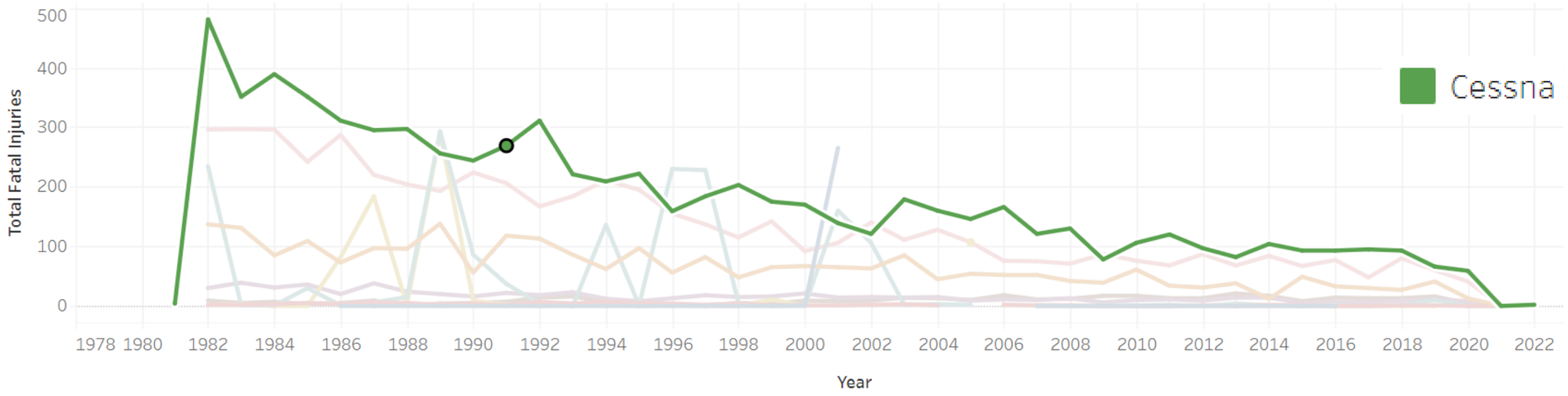
Recommendations

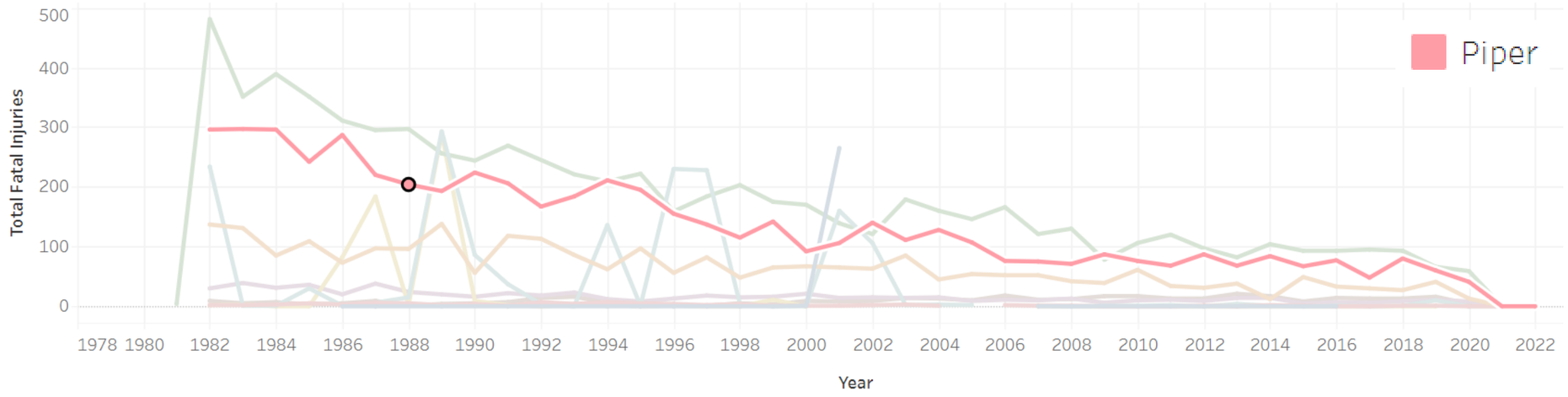
1. Airplane Make
2. Engine Type
3. U.S. Region for Flights

Airplane Make



Top Airplane Makes with an improvement over time

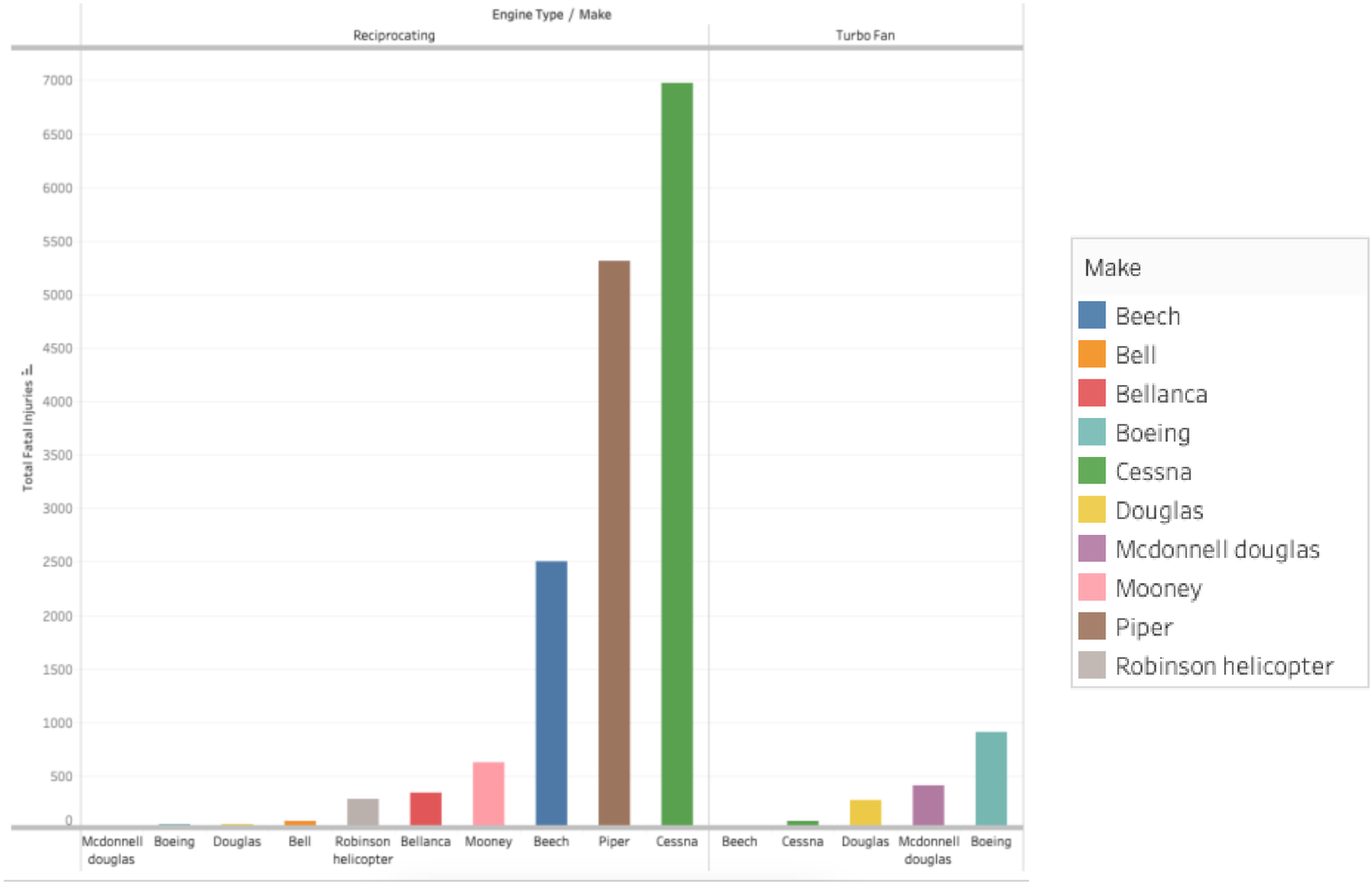




Reciprocating vs. Turbo Fan engines

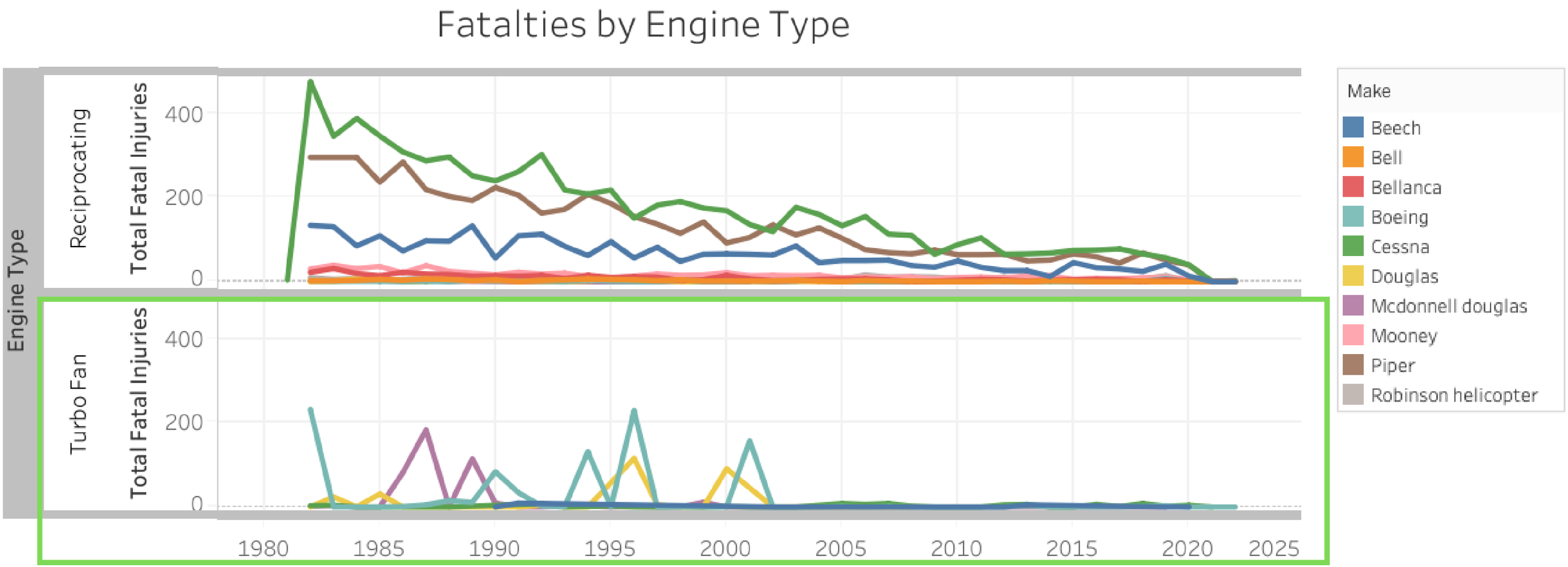
Reciprocating engines are a preferred engine type for smaller planes

Turbo Fan engines power most commercial flights



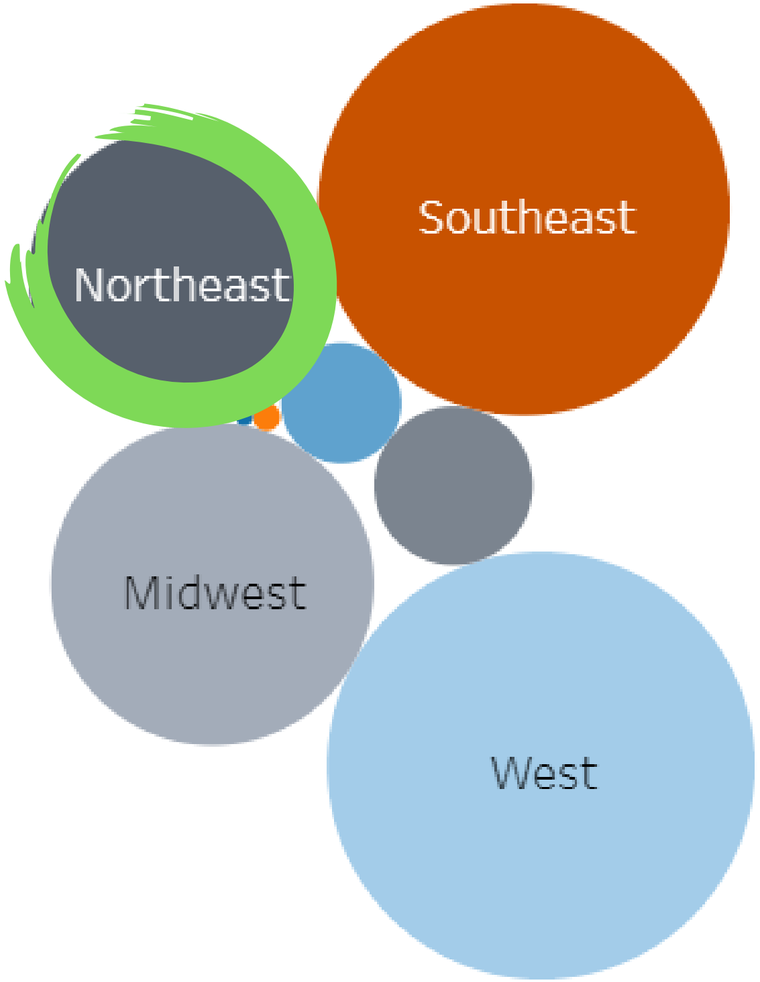
Fatalities by Engine Type

Turbo Fan engines have very low risk since 2005



Major U.S. Region with lowest risk

The Northeast region is a large and growing market in air travel



Fatalities by Region by Year

Next Steps...

More Data

- Market share of each make of airplane
- Fatalities compared to number of successful flights
- Weather patterns by region

Thank you

Any questions?

Em Jager

Bobby Daly

Paul Justafort

For more information on these recommendations, feel free to view our GitHub Repo!