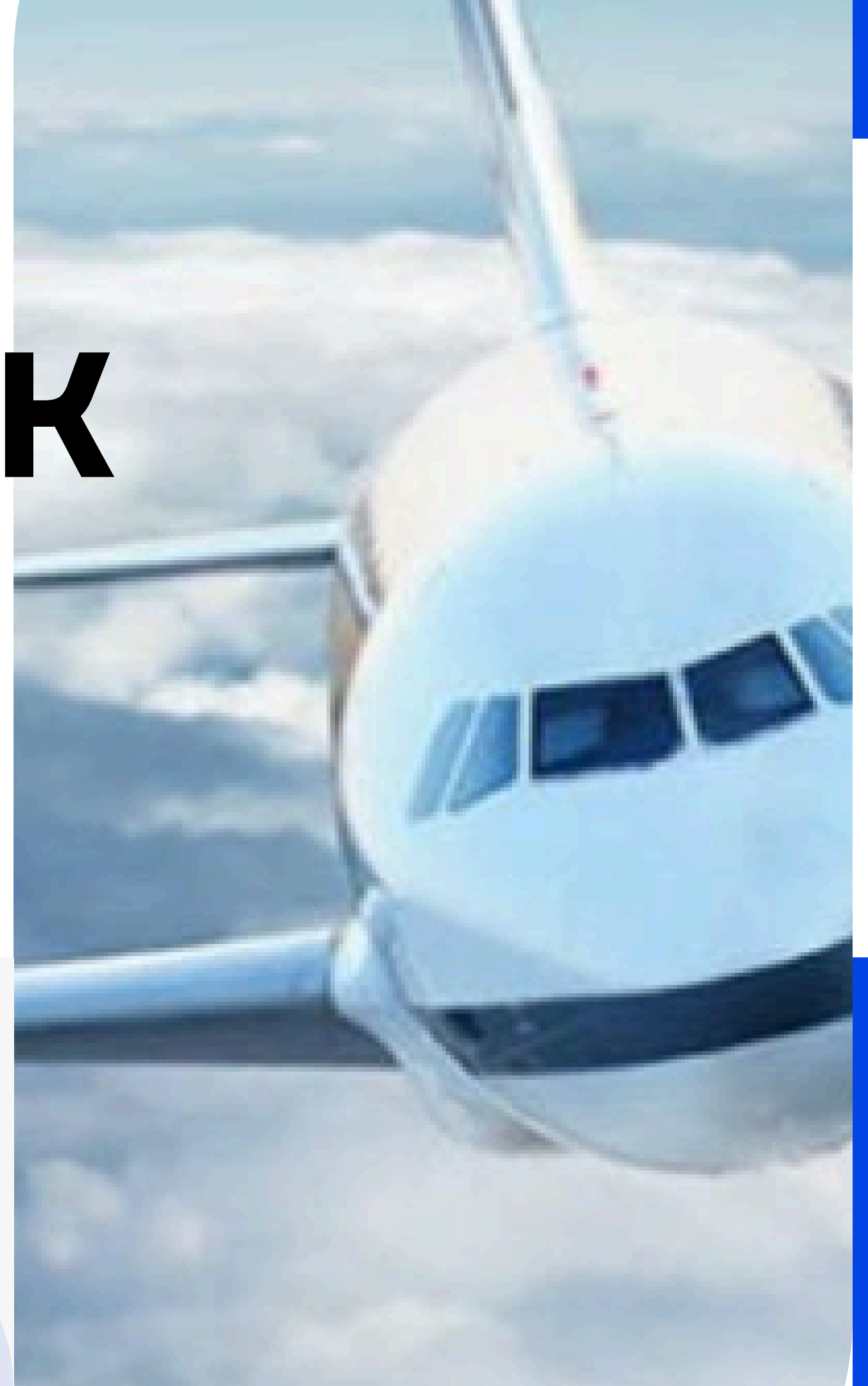


# AIRCRAFT RISK ANALYSIS

Sharon Wachinga Wathiri

June 2025



# BUSINESS UNDERSTANDING

The company is venturing into the aviation sector and requires a proper analysis into the business venture

The goal is to purchase a low risk reliable aircraft that will serve for both private and commercial purposes

An informed decision needs to be made to avoid and reduce aircraft accidents

# DATA UNDERSTANDING

The NTSB aviation accident database contains information from 1962 to 2022 on civil aviation accidents

From the data, majority of the accidents were aircraft accidents in the United States.

The data contains the level of injuries sustained by passengers, the engine type, make, model, date and location among other variables.

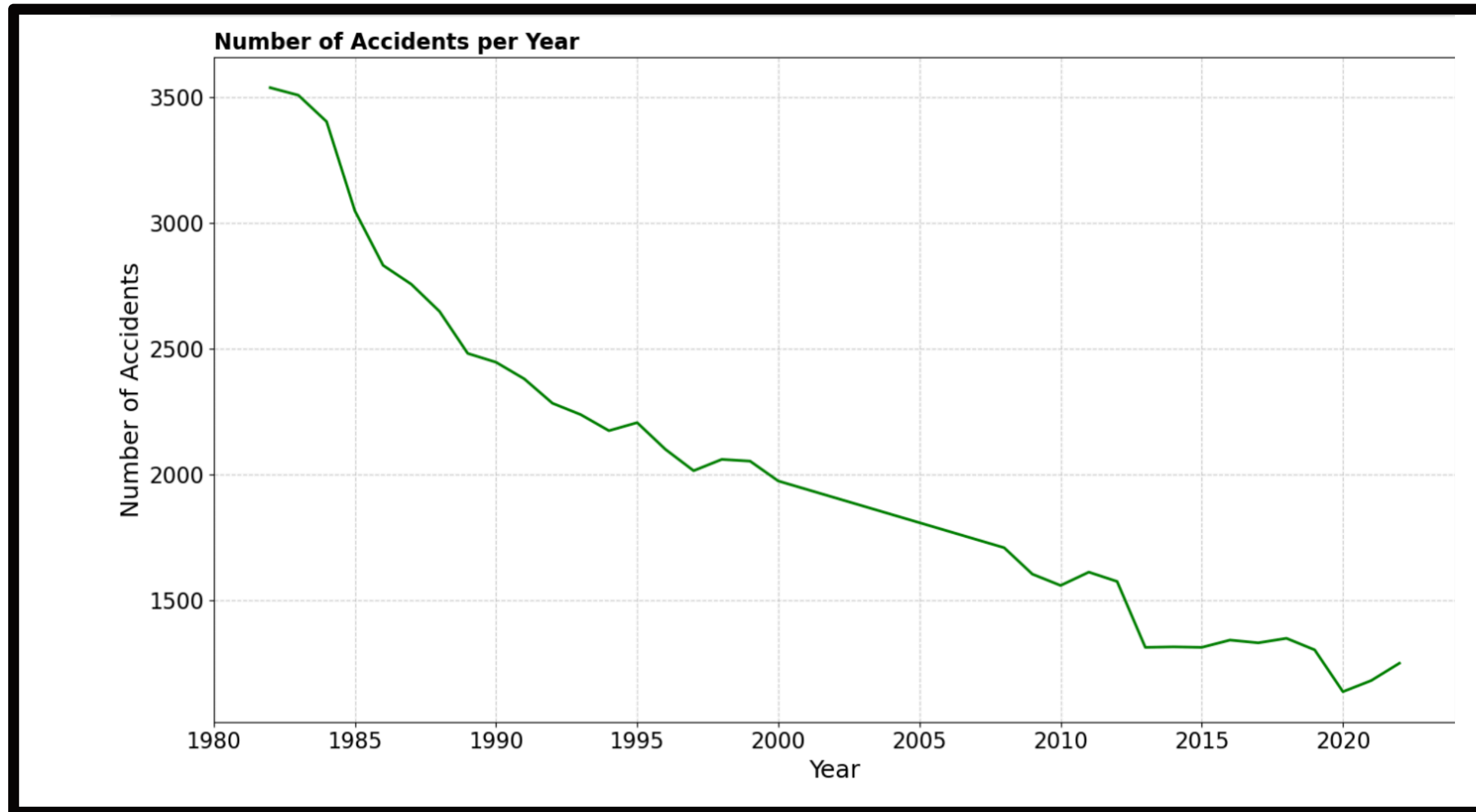
# OBJECTIVES

**Identify aircraft  
make with the  
lowest accident risk**

**Visualize findings in  
a clear, actionable  
format**

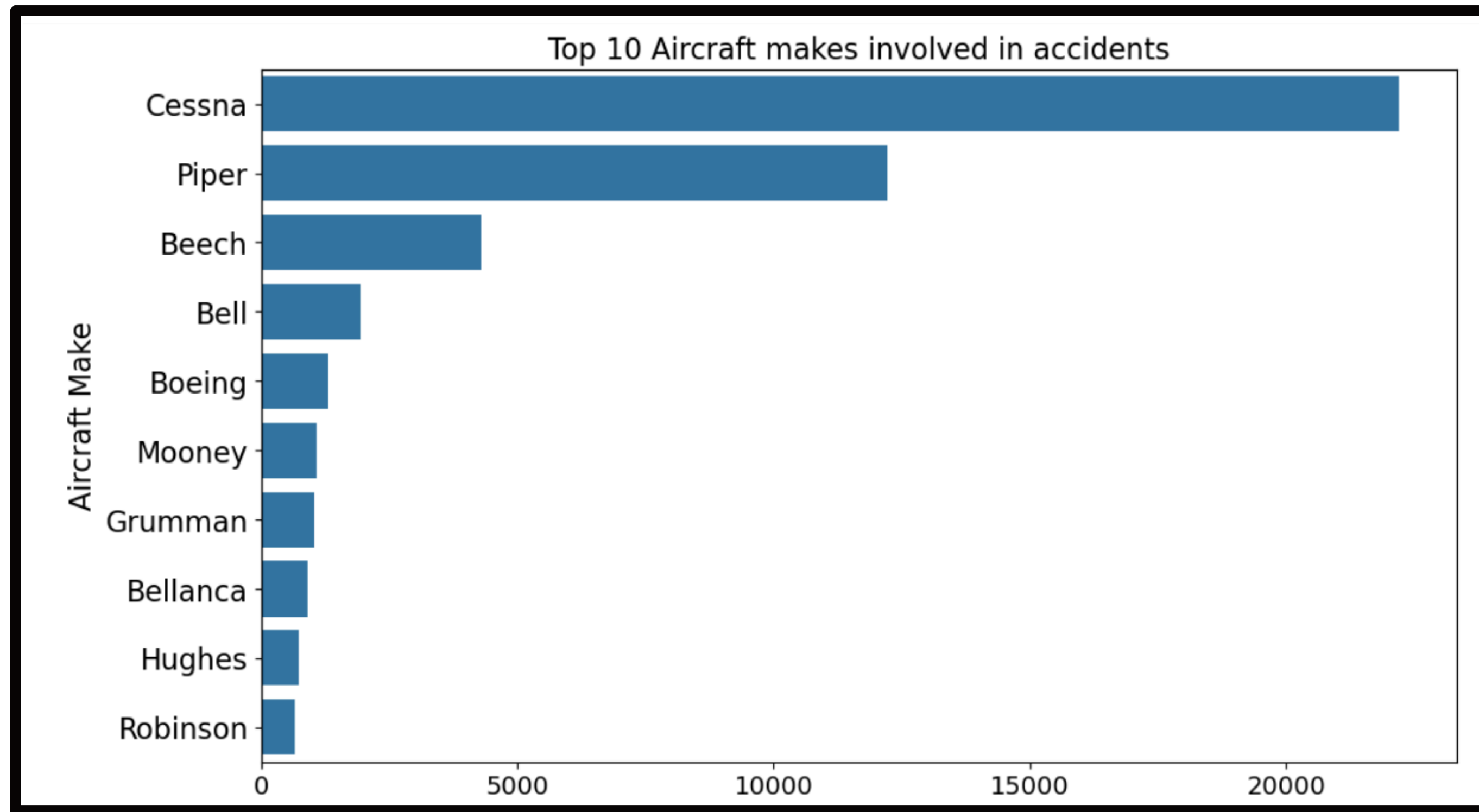
**Provide  
recommendations  
on what aircraft to  
purchase**

# NUMBER OF ACCIDENTS PER YEAR



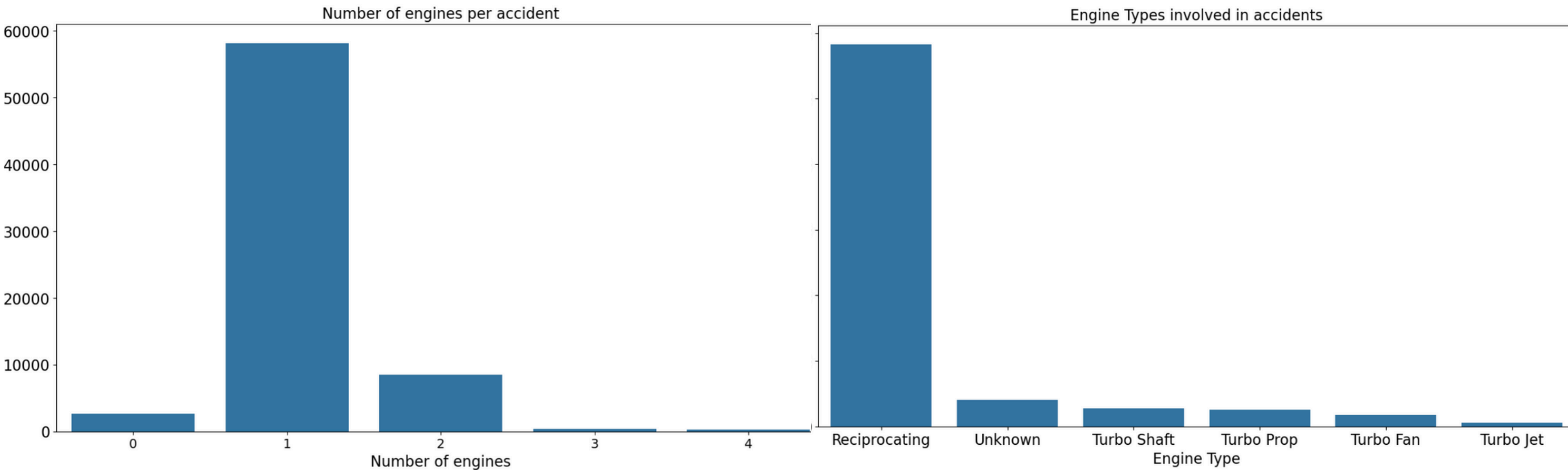
From the line graph, enhancements in technology have reduced the number of aircraft accidents drastically making it a good venture to invest in.

# NUMBER OF ACCIDENTS PER YEAR



The Cessna and Piper aircraft makes' registered the highest number of accidents, and therefore the company needs to consider a make such as Boeing for their purchase.

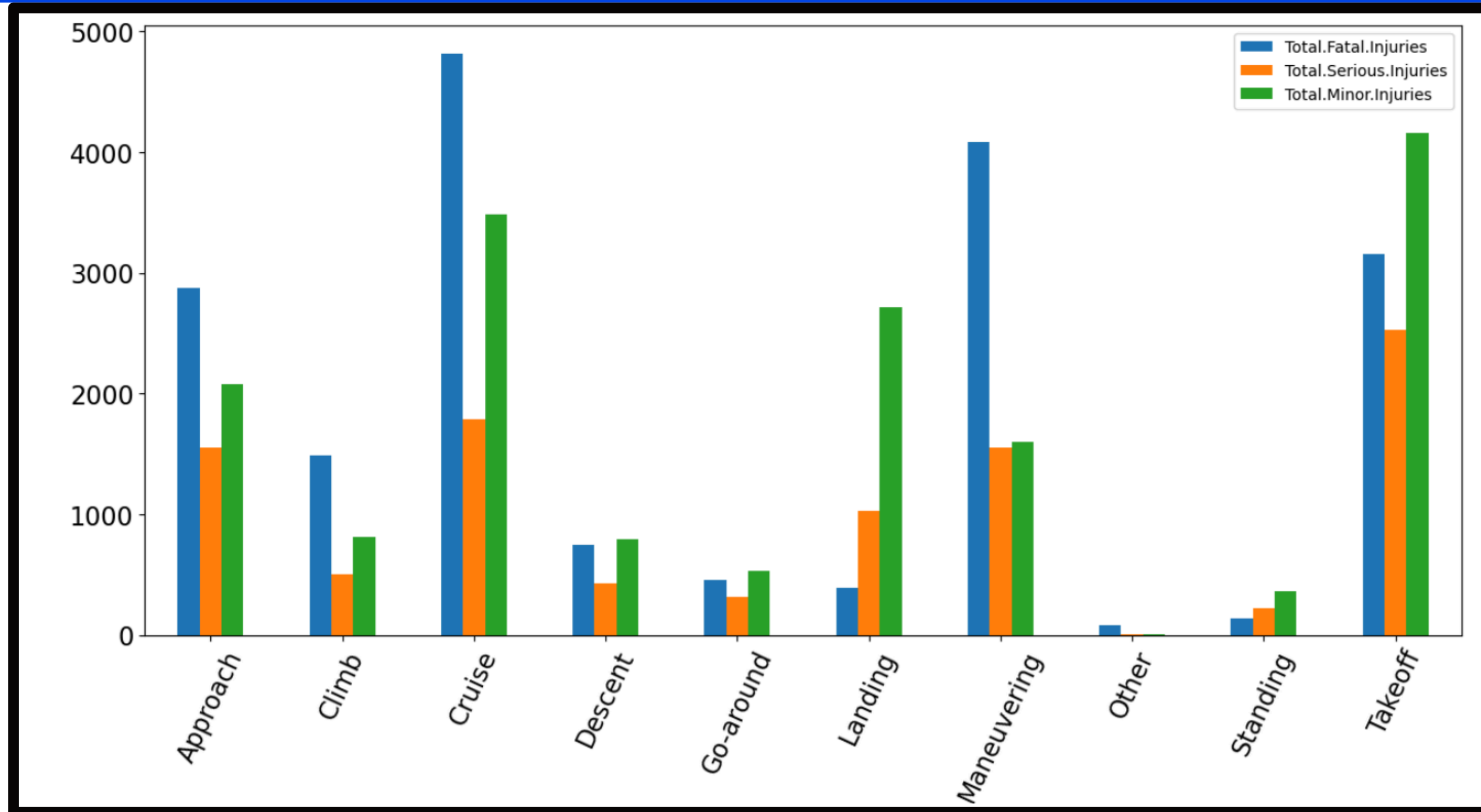
# ENGINE TYPE AND NUMBER OF ENGINES



Aircrafts that had one engine had the highest number of accidents.

The reciprocating engine had the highest number of accidents. While the turbo engines had the least

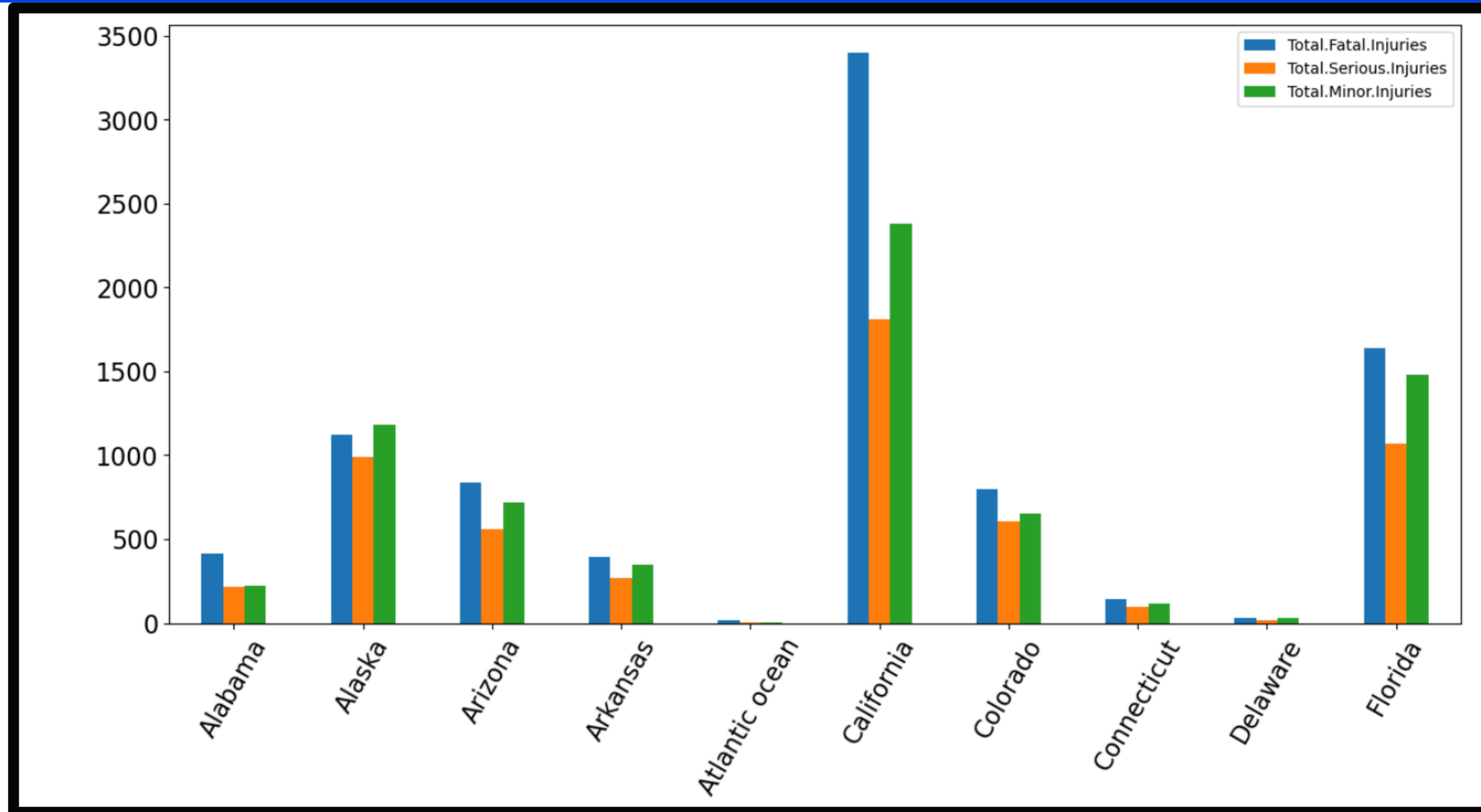
# NUMBER OF ACCIDENTS PER YEAR



Most of the fatal, serious and minor injuries took place when the plane was either cruising, maneuvering or taking off.



# NUMBER OF ACCIDENTS PER YEAR



The state of California had the most number of fatal, serious and minor injuries while Delaware had the least.



# CONCLUSION



There are various risk factors that can inform the purchase of an aircraft, such as the number of engines, the make and model of the aircraft, and weather.

All this risks need to be weighed to determine the best aircraft to purchase.





# RECOMENDATIONS

**Purchase an aircraft with more than one engine, to reduce the risk of accidents.**

**Purchase an aircraft make such as Boeing that has among the lowest number accidents.**

**The Turbo engines should be considered since they have the least involvement in the accidents.**

# THANK YOU

FOR YOUR ATTENTION

June 2025

