DIVING INTO THE AVIATION INDUSTRY: A DATA-DRIVEN APPROACH

OBJECTIVE

This project aims to identify airplane makes and models with the lowest risk profiles

BUSINESS UNDERSTANDING

Our company seeks to expand into the air travel sector for both business and personal purposes

Making data-driven decisions ensures that informed decisions are made during fleet acquisition

DATASET OVERVIEW

- Data source: NTSB Aviation Accident Synopsis(Kaggle)

- Key Variables for analysis:
  - Event Id
  - Make
  - Model
  - Number of Engines

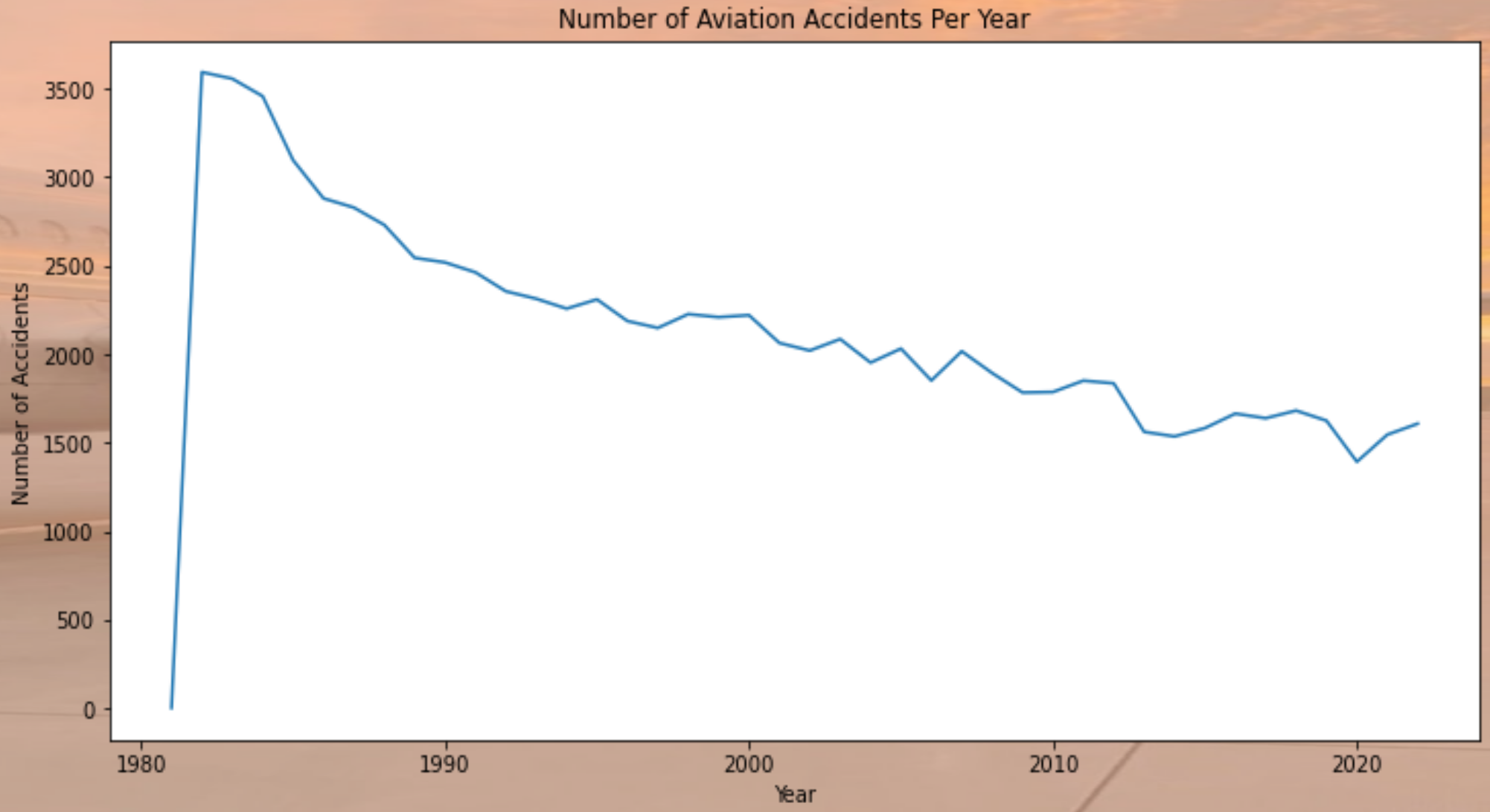
METHODOLOGY

Data cleaning and preparation

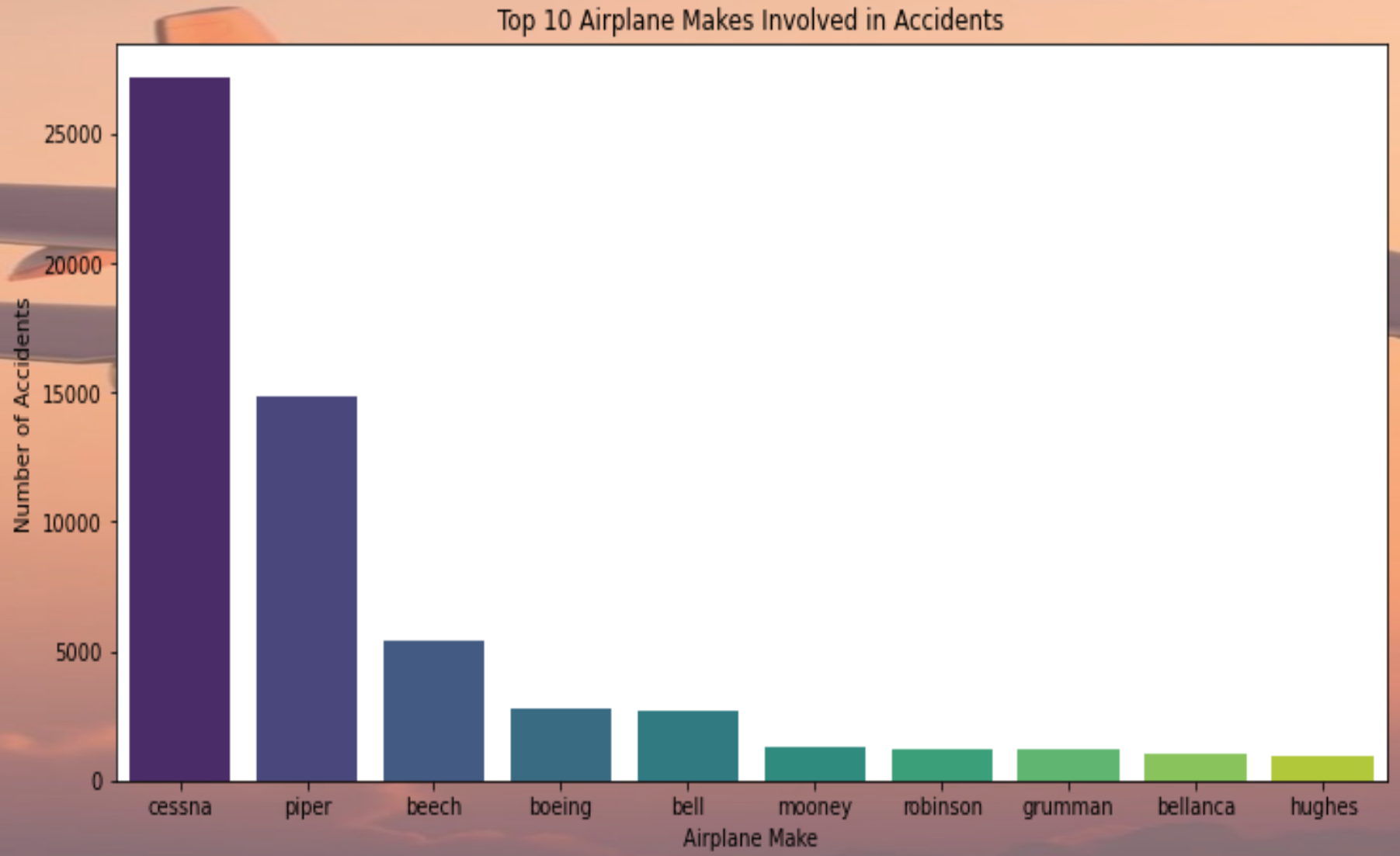
- Dropped columns with too many missing values that were not key for analysis(Latitude, longitude, Airport name, Airport Code)
- Dropped duplicate values
- Selected columns that would be used in analysis(Even Id, Make, Model, Number of Engines)

VISUALIZATION

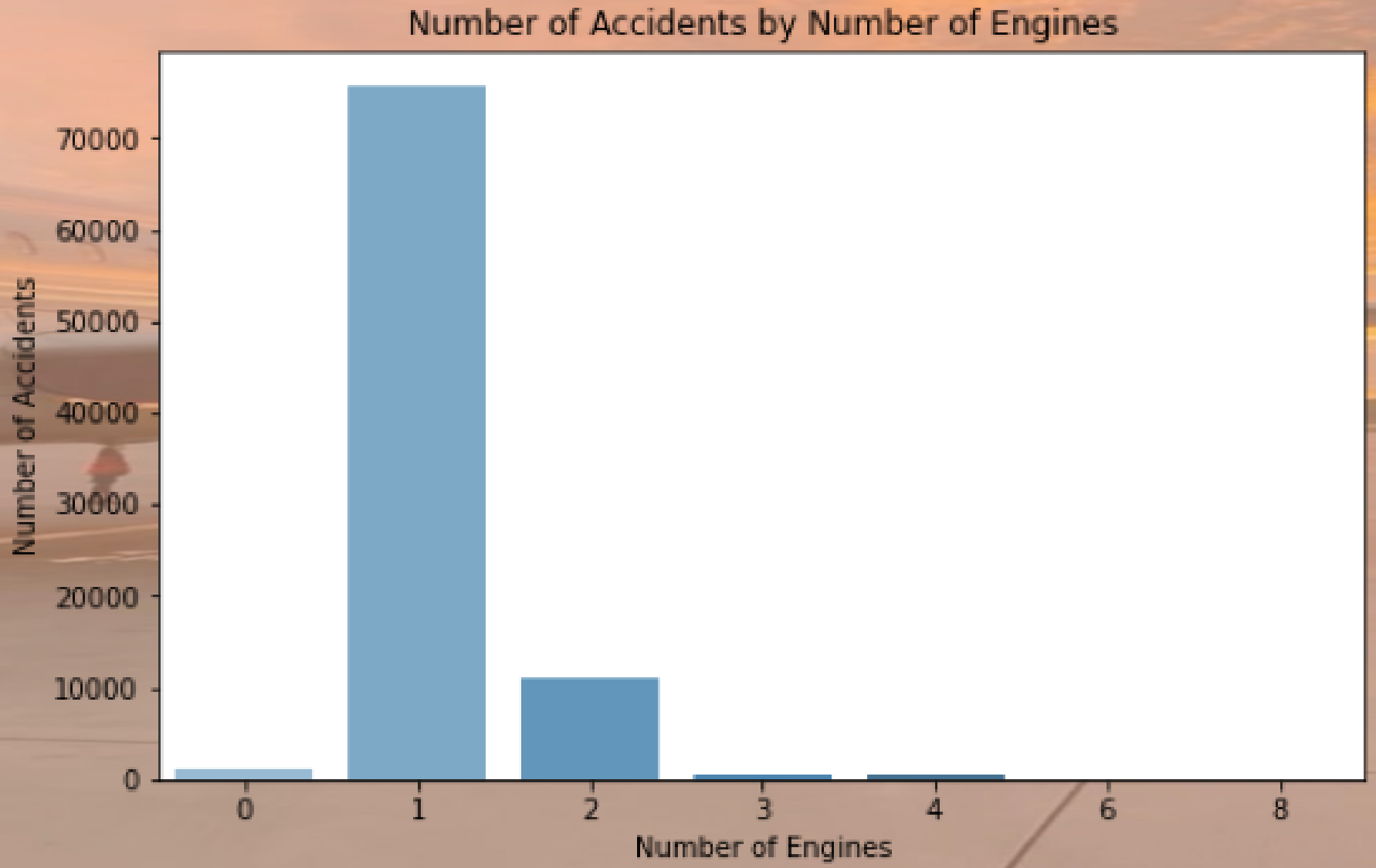
Line chart showing the number of aviation accidents over the years



Bar chart showing the top 10 airplane makes with the most accidents



Bar chart showing the number of accidents by number of engines



RECOMMENDATIONS

A number of aircraft makes and models were identified to have the least number of accidents and lowest number of fatal injuries.

Aircrafts with more that two engines are highly unlikely to experience technical difficulties and subsequently accidents during flights.

Recommendation

- Prioritize low risk airplane makes and models for initial purchases.
- Constantly monitor aviation safety data as operations continue to expand.


QUESTIONS?

THANK YOU.

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