Aviation Business: Opportunities and Risks

Data Analysis

Why Consider the Aviation Market in the US?

Market Size

The US has one of the largest aviation markets in the world, with a vast network of airports and air routes. This extensive infrastructure supports the growth of new aviation business lines.

Growing Demand

There is a steady increase in demand for air travel services, including both business and leisure flights.

Technological Advancements

Innovations in aviation technology have made air travel safer, more efficient, and more cost-effective. This opens up new possibilities for offering specialized services like charter flights, helicopter travel, and adventure tourism.

Exploring New Aviation Business Lines

Charter Business Flights with Airplanes

- Market Demand: High demand for private and corporate travel.
- Target Audience: Business executives, corporate teams, high-net-worth individuals.
- Benefits: Flexibility, time-saving, personalized services.

Business Flights with Helicopters

- Market Demand: Growing need for quick, short-distance travel in urban areas.
- Target Audience: Business professionals, emergency services, tourists.
- Benefits: Access to remote locations, reduced travel time, scenic routes.

Flights for Skydiving Enthusiasts

- Market Demand: Increasing interest in adventure and extreme sports.
- Target Audience:
 Thrill-seekers, tourists,
 adventure sports enthusiasts.
- Benefits: Unique
 experience, growing
 adventure tourism market,
 potential for partnerships with
 skydiving schools.

Data used

The National Transportation
Safety Board aviation
accident dataset



National Transportation Safety Board The National Transportation
Safety Board website ntsb.gov

Process Steps

Data Cleaning and Preparation

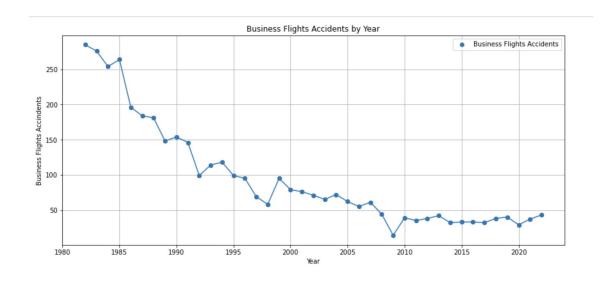
Market Segmentation

Exploratory Data Analysis (EDA)

Recommendations and Reporting

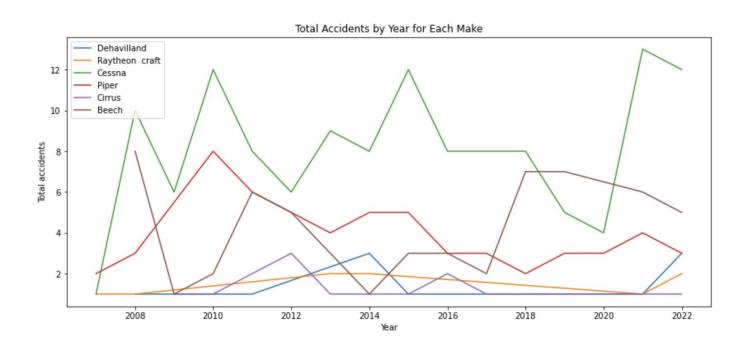
Analysis

Business flights

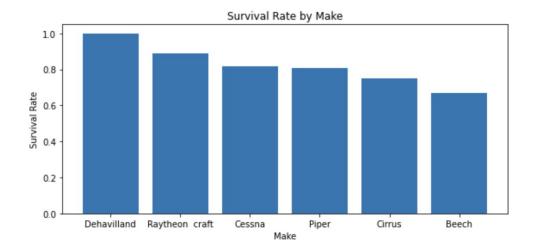


- Business aviation industry in the U.S. is \$150 billion
- Employs over 1.2 million people.
- Compound annual growth rate (CAGR) of 4.46%

Business flights - Airplanes



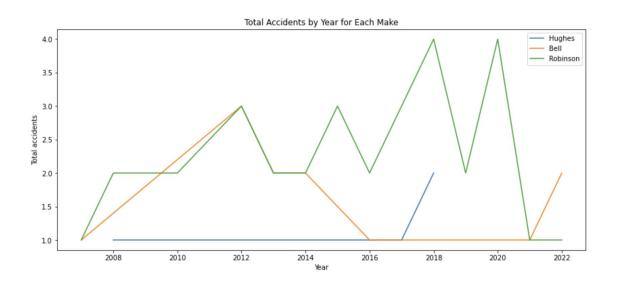
Business flights - Airplanes



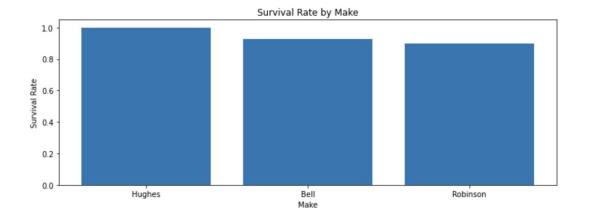
Airplanes Models to consider:

- Piper M350 and M500 (formerly PA-46).
- Cessna Citation line, Model 525 and 700.
- Cirrus SR 22.

Business flights - Helicopters



Business flights - Helicopters

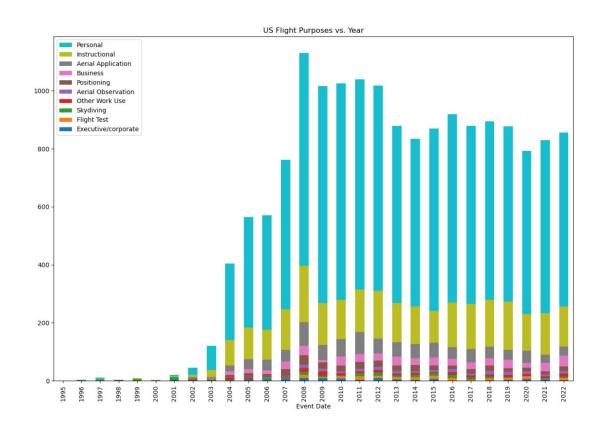


Helicopters Models to consider:

- Robinson R44 and R44 II.
- Bell 407.

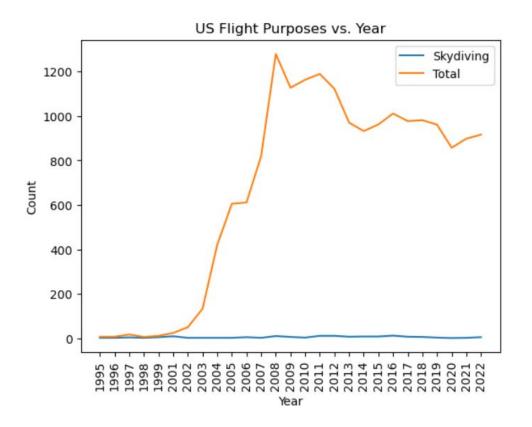
Market Share

8th most common flight purpose in the dataset



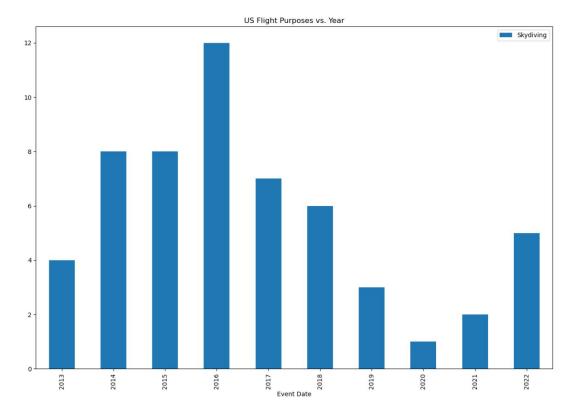
Market Share

 The skydiving market has not seen a significant increase in flights when compared to the rest of our dataset.



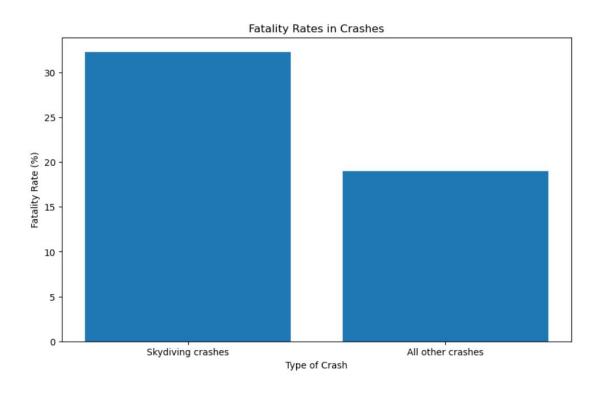
Market Share

- Increased growth since 2020.
- No noticeable growth in the last decade



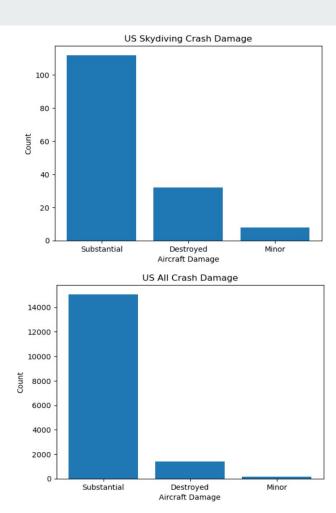
Fatalities

- Significantly higher fatality rates when compared to the rest of the flight purposes.
- Skydiving crashes have a fatality rate of 32.3%.
- All other crashes combined have a fatality rate of 18.96%.
- Skydiving accidents result in 1.7x more fatalities than all other crashes combined.



Crash Damage

- Skydiving crashes result in 21% destroyed aircraft
- All other crashes result in 8.3% destroyed aircraft



What's next

Market Research

In-depth analysis of market trends and customer preferences

Profitability

Evaluation of potential revenue streams and cost management

Operational Feasibility

Assessment of logistics, safety, and regulatory requirements.

Analysis extension ideas

Additional data

Analyze the total flight hours to understand accident rates per flight hour/mile flown.

Additional subjects

Look at the correlation between the age of the aircraft and accident rates.

New opportunities

Explore other business ideas within given data set

Thank you!

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