Aviation Accident Analysis

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Phase_1_Project

Introduction

- The project seeks to analyze aviation accident data from the provided dataset.

- The primary objective is to explore the patterns and prevalence of aviation accidents from 2010 to 2023.

- The findings will help inform the company on the need to diversify their portfolio.

Business Understanding

- The project targets the following stakeholders:

1) The company's Aircraft Executives
2) Aircraft safety specialists
3) Regulatory and quality assurance team.

Business Questions

- What types of aircrafts are likely to be involved in accidents?

- What's the trend and recent patterns of aircraft accidents as from 20210 to 2023?

- What's the fatality rate pattern of aircraft accidents from 2010 to 2023?

Data Understanding

- **Source of data**

- The data is from the Aviation_Data.csv.

- It is a dataset from the National Transportation Safety Board that includes aviation accident data from 1962 to 2023.

- The file talks about civil aviation accidents and selected incidents in the United States and international waters.
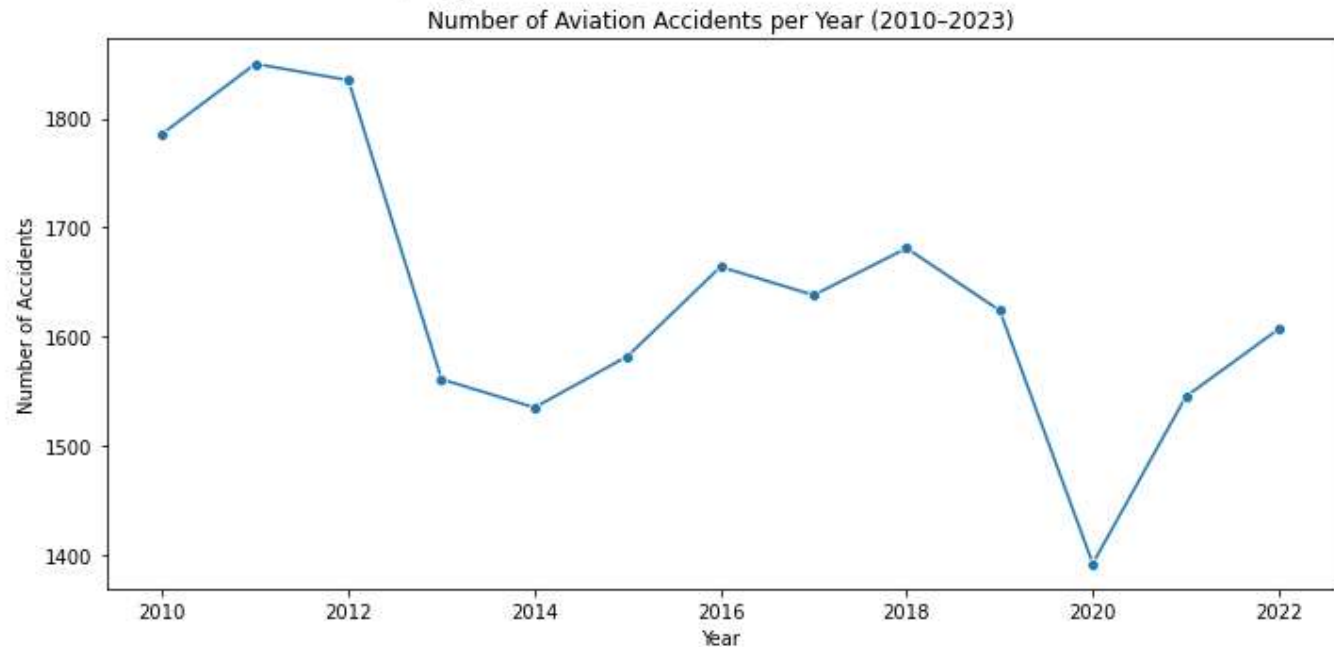
Libraries used

- Pandas
- Numpy
- Seaborn
- Matplotlib.pyplot

Description of data

- The data consists of civil aviation accidents from 1962 to 2023.

- The data highlights various features such as the date and locations of the accidents, the aircraft operators, the phases of flights ,number of fatalities, the causes of the accidents and the weather conditions.
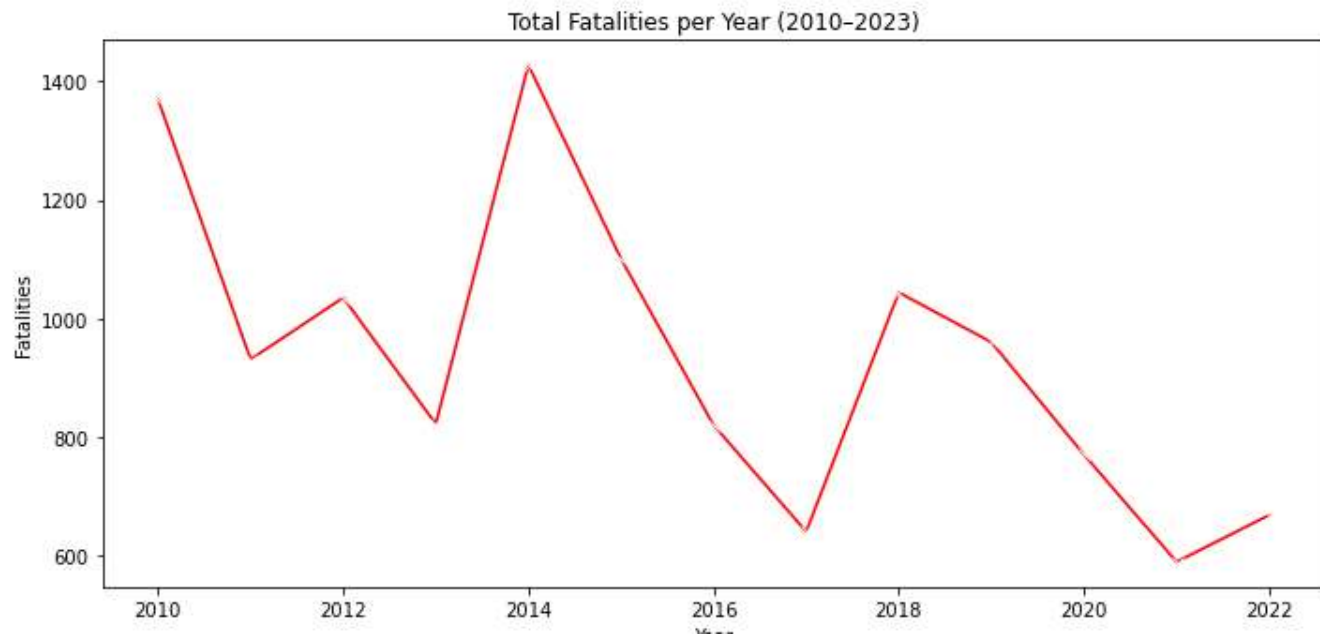
What's the trend and recent patterns of aircraft accidents as from 20210 to 2023?

Number of aviation accidents per year from 2010 to 2023

Number of Aviation Accidents per Year (2010–2023)

What's the fatality rate pattern of aircraft accidents from 2010 to 2023?

Total Fatalities per Year (2010–2023)

Conclusion

- In summary, aircraft accidents have been reducing over the years.

- The number of fatalities have reduced significantly since 2010 with the exception of 2014,before the continued reduction of fatalities.

- Airplanes are considered as the most types of aircrafts involved in accidents over the years.

Recommendations

- The company needs to focus on aircraft types that are less prone to accidents more so helicopters.
- The number of fatalities has been reducing in recent years which is a positive indicator to the company.
- The number of accidents has also decreased significantly.

Thank You

Any Questions