# Aircraft Risk Assessment

Analyzing Aviation Data to Identify Safe Aircraft Models for Business Expansion

# Introduction

- The company is diversifying into aviation and requires risk insights for safe operations.
- This project involves analyzing aviation accident data to determine aircraft with minimal risk.
- Insights will guide investments in models ensuring safety and cost-efficiency.

# Business Understanding

- The company aims to purchase and operate aircraft for commercial and private enterprises.
- Key objective: Identify aircraft with the lowest operational risks.
- Focus: Minimize accidents, fatalities, and financial liabilities.

# Data Understanding

Dataset Overview:

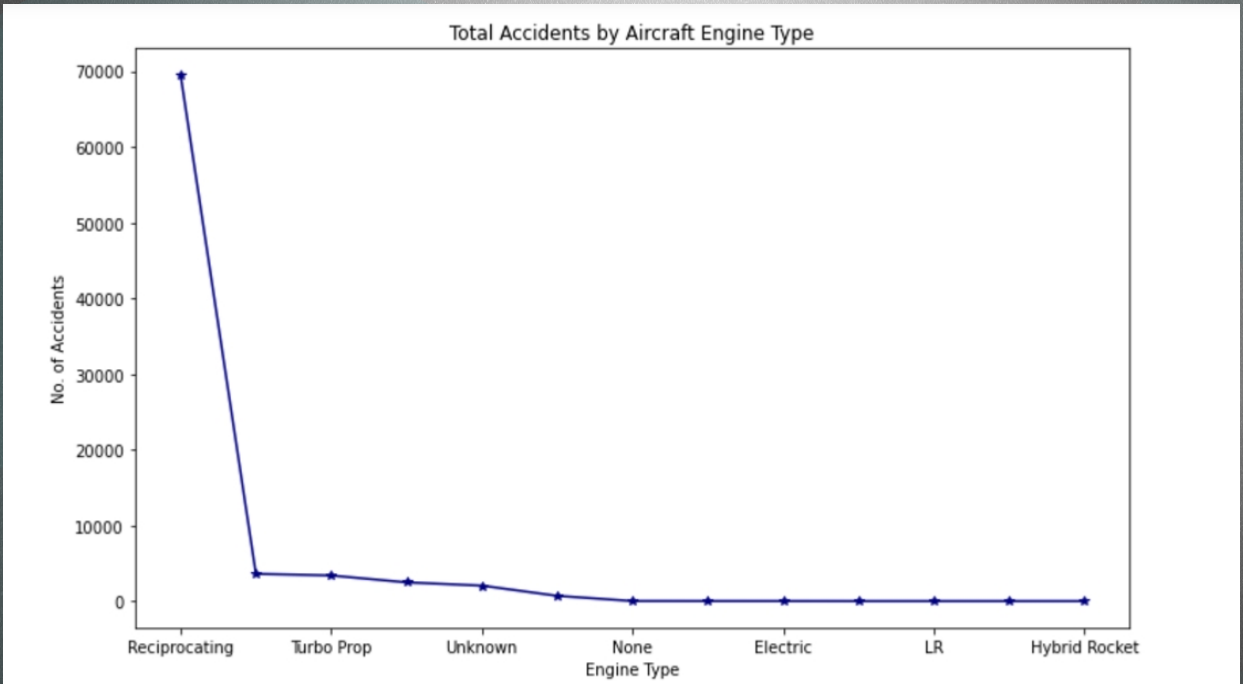
- 88,889 rows, 31 columns
- Key columns: Aircraft Make, Model, Weather Conditions, Accident Severity, etc.
- Goal: Understand accident trends to recommend safe aircraft models.
- Focus: Identify factors influencing accident rates and severity.

# Data Analysis

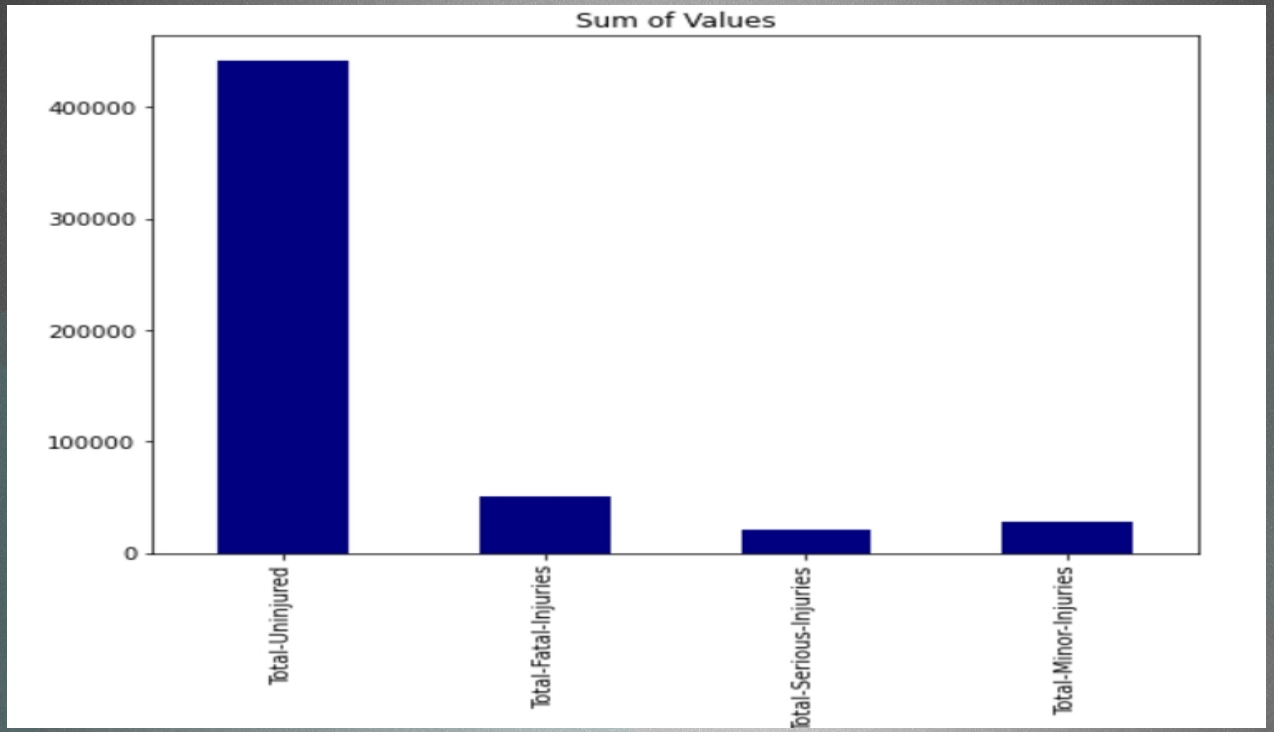
- Applied descriptive and inferential statistics to analyze accident data.

Key Insights:

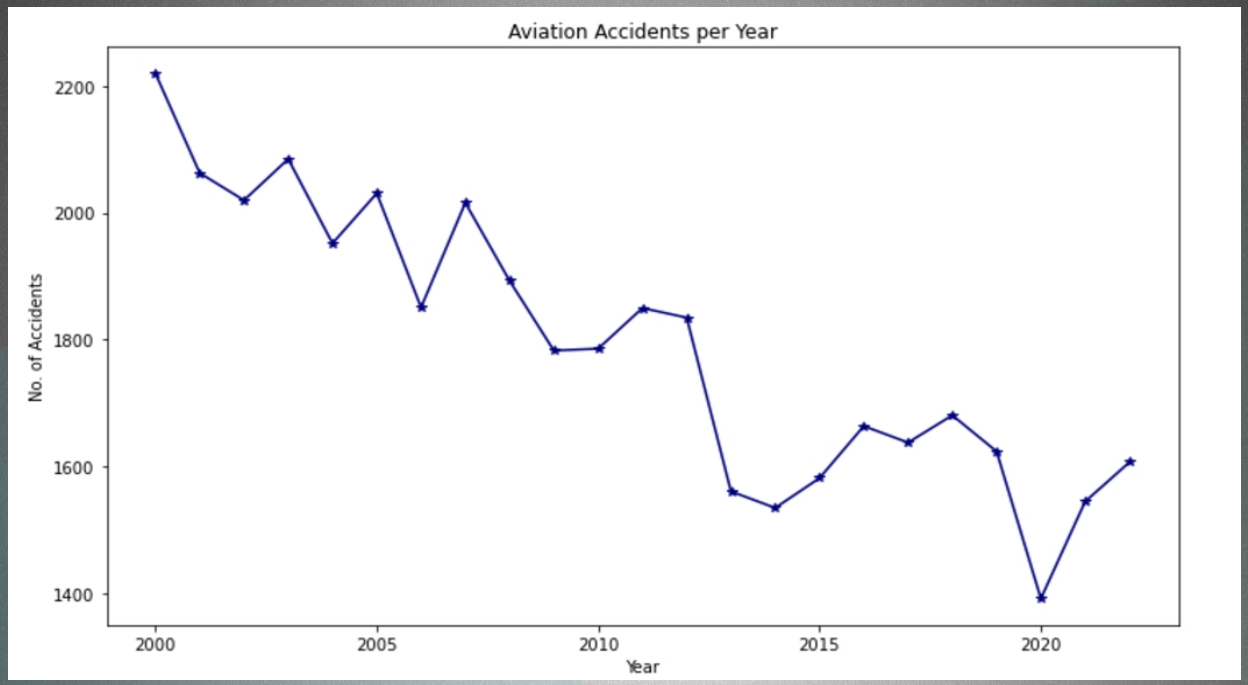
- Total Accidents by Aircraft Engine Type.



- Total Injuries incurred over the years due to the accidents .



- Aviation Accidents per Year.



# Recommendations

- Focus on aircraft engines with fewer accidents.
- Prioritize manufacturers with a better safety track record.
- Invest more on passenger safety in the airplane to reduce the number of injuries.

# Evaluation & future improvement ideas

- Perform operational cost analysis for recommended aircraft models.
- Engage vendors and manufacturers for acquisition.
- Collect additional data on pilot experience, maintenance history, and routes.

Thank You.

# Contact information

- Name: Stanley Macharia.
- LinkedIn profile: https://www.linkedin.com/in/stanley-macharia-60a439240/