Introduction

- Overview of the Aviation Accident Analysis Project.

- Goal: Analyze aviation accident data to uncover trends, understand causes, and provide data-driven safety insights.

Business Context

- Aviation safety is critical for both public and private sectors.

- The project supports decision-making by identifying factors contributing to accidents, helping prevent future incidents and potential investments on quality aircrafts.

Data

- Dataset Columns:
- - EventId, AccidentNumber, EventDate, Location, Country
- - InjurySeverity, AircraftDamage, Make, Model, PurposeofFlight, WeatherCondition, Year

- Data Source: National and international aviation safety databases.

Process Steps

- 1. Data cleaning: Handle missing values, fix data types, parse dates.
- 2. Exploratory Data Analysis: Identify trends and correlations.
- 3. Visualization: Accident maps, injury distributions, yearly trends.
- 4. Insights: Determine patterns and relationships.

Results & Business Application

- Key Findings:

- Certain aircraft makes/models show higher risk frequency.

- - Seasonal trends impact accident rates.
- Business Application: Inform aviation safety policies and risk management strategies.

Evaluation & Future Improvement Ideas

- Limitations:
- - Missing or inconsistent data for some years.

- Future Improvements:
- - Implement predictive analytics for accident likelihood.
- - Integrate real-time flight and weather data.
- - Build an interactive dashboard for monitoring trends.

Contact Information

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