Low Risk Aircraft Analysis

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Introduction

- **Purpose of this project** – To Identify the safest and most reliable aircrafts model for the aviation department, mitigating operational risks and enhancing safety

- **Background** – As the company ventures into aviation, choosing the right aircraft is crucial for the success of the company in the aviation sector.

Data Overview

- ▶ Data Source - Aviation accident data from national databases and U.S. state codes for geographic analysis.

- **Data Cleaning**: This involves Handling missing values in critical fields to facilitate the risk analysis.

- Integrating state codes for geographic consistency.

Analysis Methodology

Aggregation: Data grouped by aircraft make, model, and state.
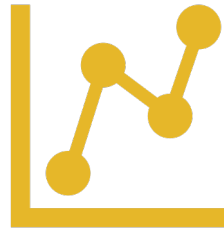
Filtering Criteria: Exclusion of models with fewer than 10 recorded accidents to ensure statistical reliability.

Key Metrics: Focus on total accidents, fatal accidents, and serious accidents.

Insights and Findings - Safest Aircraft Models

Visualization: Bar chart showing the top 10 safest aircraft models based on total accidents.

Discussion: We will Point out specific models that are significantly safer, potentially due to advanced engineering, newer models, or rigorous safety protocols.

Trends in Accidents Over Time

Visualization: Line plot of accident trends over time by state for a commonly used model, such as Cessna.

Analysis: Discuss any trends, spikes, or patterns observed. Highlight the effectiveness of safety measures or identify potential areas for concern.

Business Recommendations

Aircraft Selection: We will recommend specific models identified as low-risk.

Risk Management: Suggestion of strategies for continuous monitoring and analysis of aircraft performance will be made.

Future Analysis: A proposal for further studies on accident causation and evaluations of newer aircraft models entering the market shall be provided.

Conclusion

▶ **Summary**: Recap the key insights and their implications for our aviation strategy.

▶ **Impact on Business**: Emphasize how these recommendations align with our goals to ensure safety and operational efficiency.

▶ **Call to Action**: Next steps for the aviation division to implement the findings.

Q & A

Thank you