Elky-bett / **Phase-1-Project--Analysis-of-Aviation-data**

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README

Project Title

Aviation Incident Analysis: Key Insights for Safer Operations

Overview

In this project I will analyze accident data to identify low-risk aircraft types and provide business recommendations that guide investment decisions. This will provide the organization and investors with information to enter the aviation industry.

Data Understanding and Analysis

Data Preparation- Exploratory data analysis

```
- Deleted one column
- Deleted duplicate data
- new index set
- renamed 4 columns
- changed crush_date and fatalities column datatypes
```

Data analysis

The data anysis used comprised the fo

- Column Chart of Top 5 Most Common Aircraft Types
- Column Chart of Fatalities by Operator
- Bar Chart of Damage Classification Distribution

Data visualization

The following visualizations were done: - Barchart of top 5 Most Common Aircraft Types - Bar chart of fatalities by Operator - line chart of accident frequency overtime - damage clasification distribution - Fatal vs. non-fatal accidents - Top accident locations

Conclusion

From the analysis it is conluded that;

- Incident reporting is concentrated among a handful of aircraft types.
- A few operators account for most fatalities.
- Severe damage categories drive nearly all fatal outcomes.
- Missing or inconsistent data highlights the need for stronger reporting standards.

Recommendations

```
- There is need to investigate high-incident aircraft types to distinguish between usage volume and design vulnerabilities.
```

- Conduct operator specific audits targeting those with disproportionate fatalities.
- Strengthen reporting standards to reduce missing or unknown classifications.

Links to Data sources

This project had been prepared with data and literature from the following sources;

- Link to Tableau Dashboard source: https://public.tableau.com/app/profile/eliud.kibet/vizzes
- Link to Templates: https://github.com/learn-co-curriculum/dsc-project-template
- Link to Templates: https://github.com/learn-co-curriculum/dsc-phase-1-project-v3
- Loink to Data source:https://www.kaggle.com/datasets/anandkushawaha/aviation-crashed-flights-data?resource=download

Navigating the repository

Releases

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Languages

- **Jupyter Notebook** 100.0%