JemmyKuria /
dsc-phase1-project

Code Issues Pull requests Actions Projects Wiki Security Insights Setting

0 stars 0 forks 1 watching Branches Activity
Tags

Public repository

1 Branch 0 Tags Go to file t Go to file Add file Code

JemmyKuria Modified the README c79a316 · now

Data	Created a folder that contains the d...	4 days ago
Best choice of Aircraft.twb	Tableau dashboard	22 minutes ago
Index.ipynb	Modified the file	20 minutes ago
README.md	Modified the README	now
presentation.pdf	Added presentation pdf	21 minutes ago
top_5_safest_aircraft.csv	Added a csv file that is better for vis...	2 hours ago
top_5_safest_aircraft.xlsx	Added an xlsx file to be used in tabl...	2 hours ago

README

Aircraft Safety Analysis & Business Recommendations

Project Overview

This project analyzes aviation accident data to identify the safest aircraft models for acquisition. The objective is to provide data-driven insights into aircraft safety, focusing on accident trends, manufacturer reliability, and fatality rates per model.

Data Sources

https://www.kaggle.com/datasets/khsamaha/aviation-accident-database-synopses/data

Aviation accident reports from verified databases

Key attributes analyzed:

Aircraft make and model Number of accidents Fatal and serious injuries Accident trends over time (1980-2023)

Methodology

Data Cleaning & Preprocessing:

Removed entries with missing aircraft make/model.

Standardized manufacturer names.

Extracted accident year from event date.

Data Analysis:

Identified aircraft models with the lowest fatality rates.

Analyzed manufacturer safety records.

Evaluated accident trends over time.

Visualization & Insights:

Count plots for accident trends.

Box plots for manufacturer safety comparison.

Bar charts highlighting safest aircraft models.

Key Findings

Safest Aircraft Models: Boeing 777, Boeing 737 Classic, Piper PA-18.

Accident Trends: Declining accidents over time due to better safety protocols.

Manufacturer Insights: Boeing and Airbus models demonstrate consistent safety performance.

Business Recommendations

Preferred Aircraft Models: Prioritize acquiring Boeing 777, Boeing 737 Classic, and Piper PA-18 due to their low fatality rates.

Deliverables

Presentation Slides: Summary of analysis, visualizations, and recommendations.

Jupyter Notebook: Contains data cleaning, analysis, and visualization code.

Interactive Dashboard (if applicable): For further exploration of accident trends

Releases

No releases published
Create a new release

Packages

No packages published
Publish your first package

Languages

- **Jupyter Notebook** 100.0%