Jabs-Phase-1-Project

Phase one project: Aircraft Safatey Analysis Project

Overview

This project analyzes aviation safety using a dataset containing records of aircraft accidents. The goal is to identify trends, risk factors, and the safest aircraft models based on accident data.

Dataset

The dataset used for this analysis is AviationData.csv, which includes details on accident dates, locations, aircraft types, causes, and injury severity.

Key Features of the Dataset:

Event Date – Date of the accident. Aircraft Model – The specific aircraft model involved. Total Fatal Injuries – Number of fatalities per accident. Weather Conditions – Visibility conditions at the time of the accident. Broad Phase of Flight – The phase of flight when the accident occurred. Aircraft Damage – Level of damage sustained by the aircraft.

Analysis & Findings

1. Data Cleaning Missing values was dealt with Inconsistent categorical data (e.g., "UNK" vs. "Unknown") were standardized.

2. Exploratory Data Analysis (EDA)

The most common weather conditions during accidents. Fatality rates per aircraft model. Accident occurrences by flight phase.

3. Visualizations

Accident per year, per model and per make, and average fatalities per phase of the flight and per weather condition were analysed through bar and line graphs

Technologies Used

Python (Pandas, Matplotlib and Tablue) – Data processing and visualization.

Jupyter Notebook – Code development and execution.

Git & GitHub