

Problem Statement:

This internship project focuses on conducting a comprehensive analysis of airplane crashes and fatalities spanning from 1980 to 2023. The dataset contains crucial information such as crash dates, locations, operators, flight details, aircraft types, and fatality statistics. The goal is to leverage Power BI for interactive visualizations and in-depth insights to understand patterns, contributing factors, and trends in aviation incidents. The analysis aims to provide stakeholders with valuable information for enhancing aviation safety and mitigating risks.

Dataset Description:

1. Date: Date of the airplane crash.
2. Time: Time of the airplane crash.
3. Location: Location where the airplane crash occurred.
4. Operator: Operator or airline involved in the incident.
5. Flight #: Flight number associated with the incident.
6. Route: Planned route of the flight.
7. AC Type: Aircraft type involved in the crash.
8. Registration: Registration details of the aircraft.
9. cn/ln: Construction or serial number of the aircraft.
10. Aboard: Total number of individuals aboard the aircraft.
11. Aboard Passengers: Number of passengers aboard the aircraft.
12. Aboard Crew: Number of crew members aboard the aircraft.
13. Fatalities: Total fatalities in the incident.
14. Fatalities Passengers: Number of passenger fatalities.
15. Fatalities Crew: Number of crew member fatalities.
16. Ground: Casualties on the ground, if any.
17. Summary: Brief summary or description of the incident.

Project Objectives:

1. Temporal Analysis:
 - Explore temporal trends in airplane crashes over the years.
 - Identify patterns in the frequency and severity of incidents.
2. Geospatial Analysis:
 - Visualize crash locations on a map to identify hotspots.
 - Analyse the distribution of incidents across different regions.

3. Operator Performance:

- Evaluate the safety records of different operators and airlines.
- Identify operators with higher incident rates.

4. Aircraft Analysis:

- Analyse the involvement of specific aircraft types in incidents.
- Examine the relationship between aircraft registration and crash occurrences.

5. Fatality Trends:

- Explore trends in passenger and crew fatalities.
- Investigate factors contributing to fatalities.

6. Route Analysis:

- Analyse incident patterns on specific flight routes.
- Identify routes with a higher likelihood of incidents.

Deliverables:

- Interactive Power BI dashboards presenting visualizations of temporal, geospatial, and operational analyses.
- Reports on operator performance, aircraft involvement, and fatality trends.
- Insights into potential risk factors and recommendations for improving aviation safety.

This project provides interns with hands-on experience in analysing aviation data, enabling them to contribute insights to the ongoing efforts aimed at enhancing aviation safety worldwide.