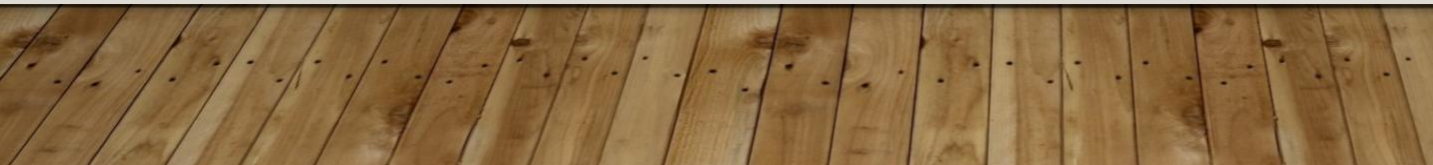


# IDENTIFYING LOW- RISK AIRCRAFT USING AVIATION SAFETY DATA

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PRESENTED BY: CATHERINE GACHIRI

DATE: JULY 2025



# PROJECT OBJECTIVES

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## Main Objective:

- Identify low-risk aircraft models using historical NTSB accident data to support informed aviation investment decisions.

## Sub-Objectives:

- Analyze accident trends from 1962 but focusing on 2013-2022.
- Clean and standardize aviation safety data.
- Develop a risk scoring model based on incident frequency.
- Visualize trends using Python generated & Tableau dashboards.
- Recommend low-risk aircraft models.
- Propose future improvements using broader and predictive data.



# WHY AIRCRAFT RISK MATTERS IN AVIATION INVESTMENT

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Key Aviation Themes:

- Safety → Insurance
- Risk → Cost
- Reputation → Profitability



# AVIATION ACCIDENT DATASET OVERVIEW

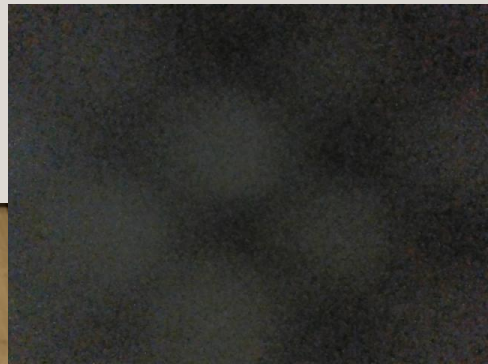
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Attribute	Details
Years Covered	1962 – 2023 Filter of $\geq 2013$ in Some Cases
Total Records	47,248
Key Fields	Event Year, Aircraft Make/Model, Average Risk Score, Total Fatalities, Location, Weather Condition

# DATA ANALYSIS WORKFLOW

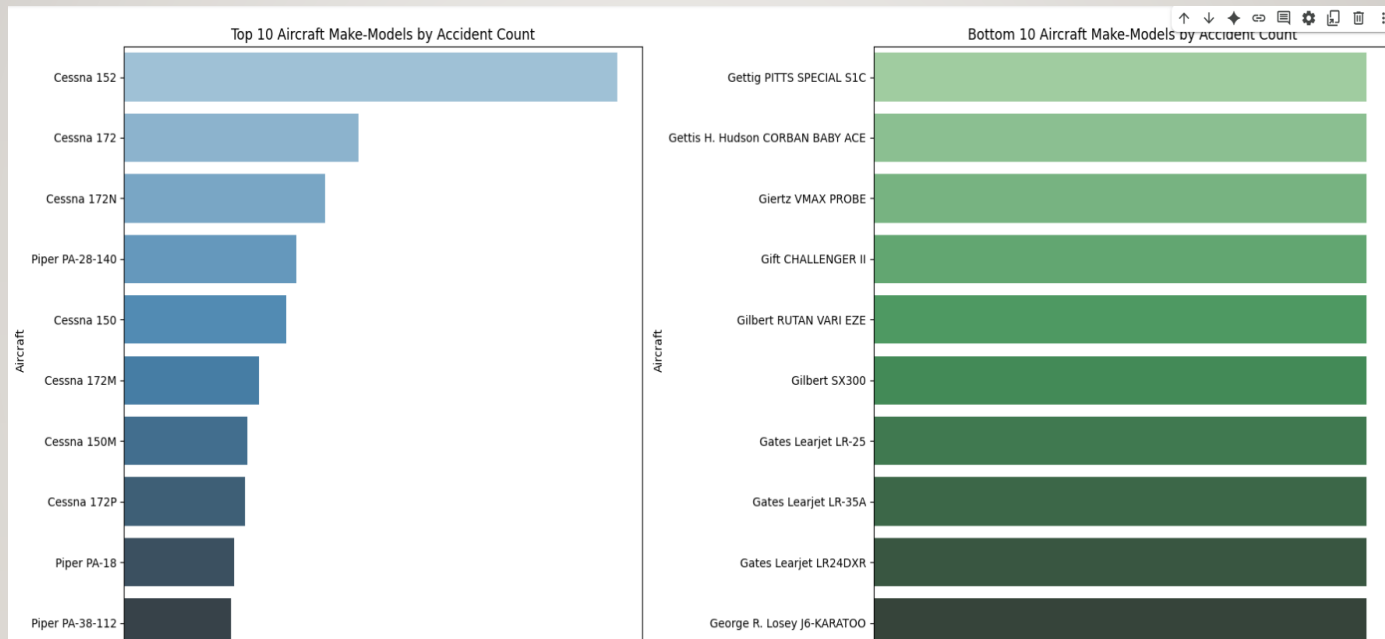
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- Data Cleaning
- Exploratory Data Analysis (EDA)
- Risk Scoring
- Visualization
- Recommendations

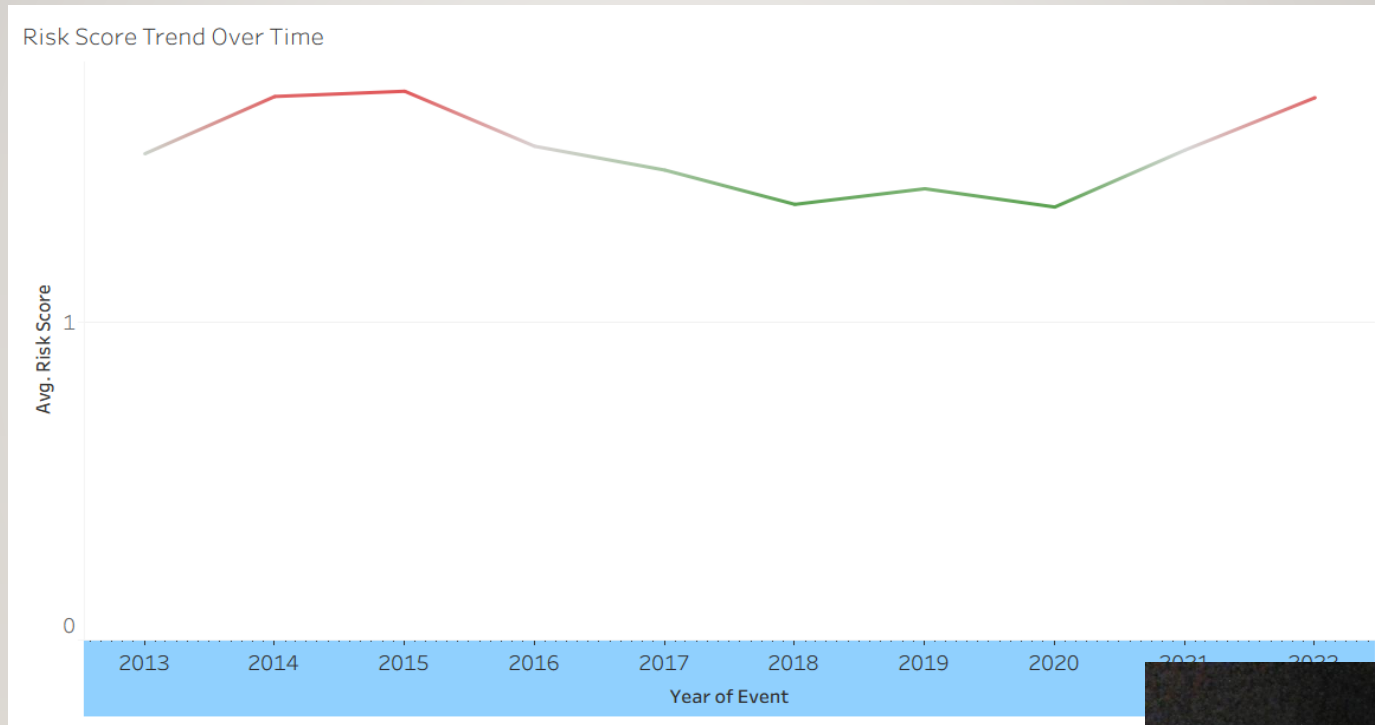




# TOP LOW-RISK AIRCRAFT MODELS



# PROJECT EVALUATION AND FUTURE DIRECTIONS



# LET'S CONNECT

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- Any Questions?
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