

# Aircraft Safety Analysis

*Insights and Strategic Directions*

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## Outline

- Project Goals
- Data & Methods
- Results
- Conclusion

# 1. Project Overview

*Entering the aviation industry*

- How does the type of aircraft or engine influence accidents frequency or severity?
- Are there specific regions or countries that exhibit higher accident or severity rates?



## 2. Data & Methods

## Data:



- AviationData.csv: Detailed accident records.
- Aircraft\_data.csv: Information on aircraft production.
- World\_population.csv: Global population statistics.

## Methods:

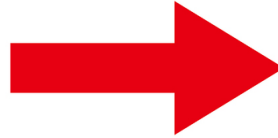
- Data cleaning for accuracy.
- Exploratory data analysis to uncover trends.
- Conclusive insights & recommendations.



## Scoring System:

### Damage Score

Minor: 1  
Substantial: 2  
Destroyed: 3



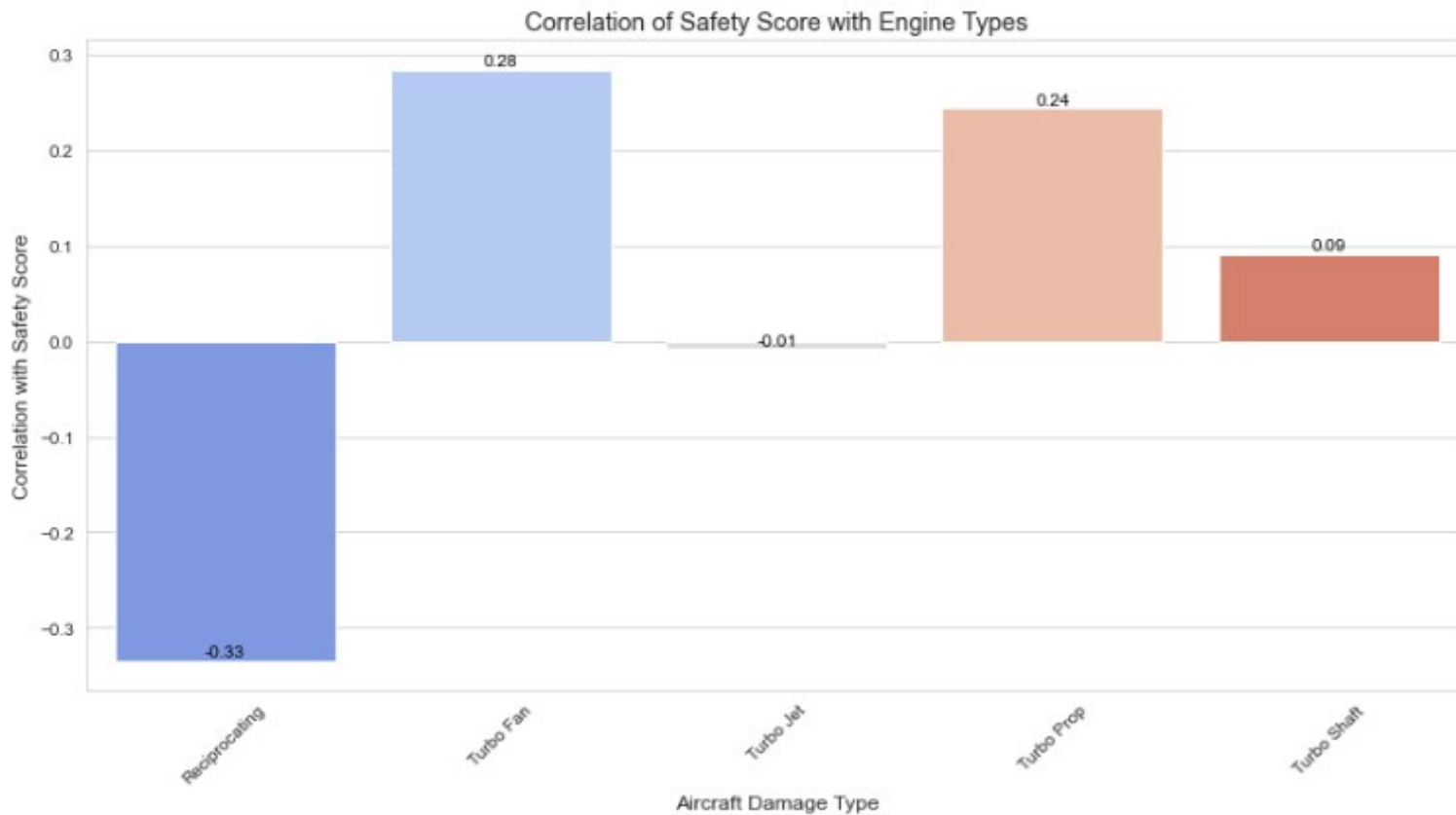
### Safety Score

Total Fatal Injuries  
+  
Aggregated Damage Scores

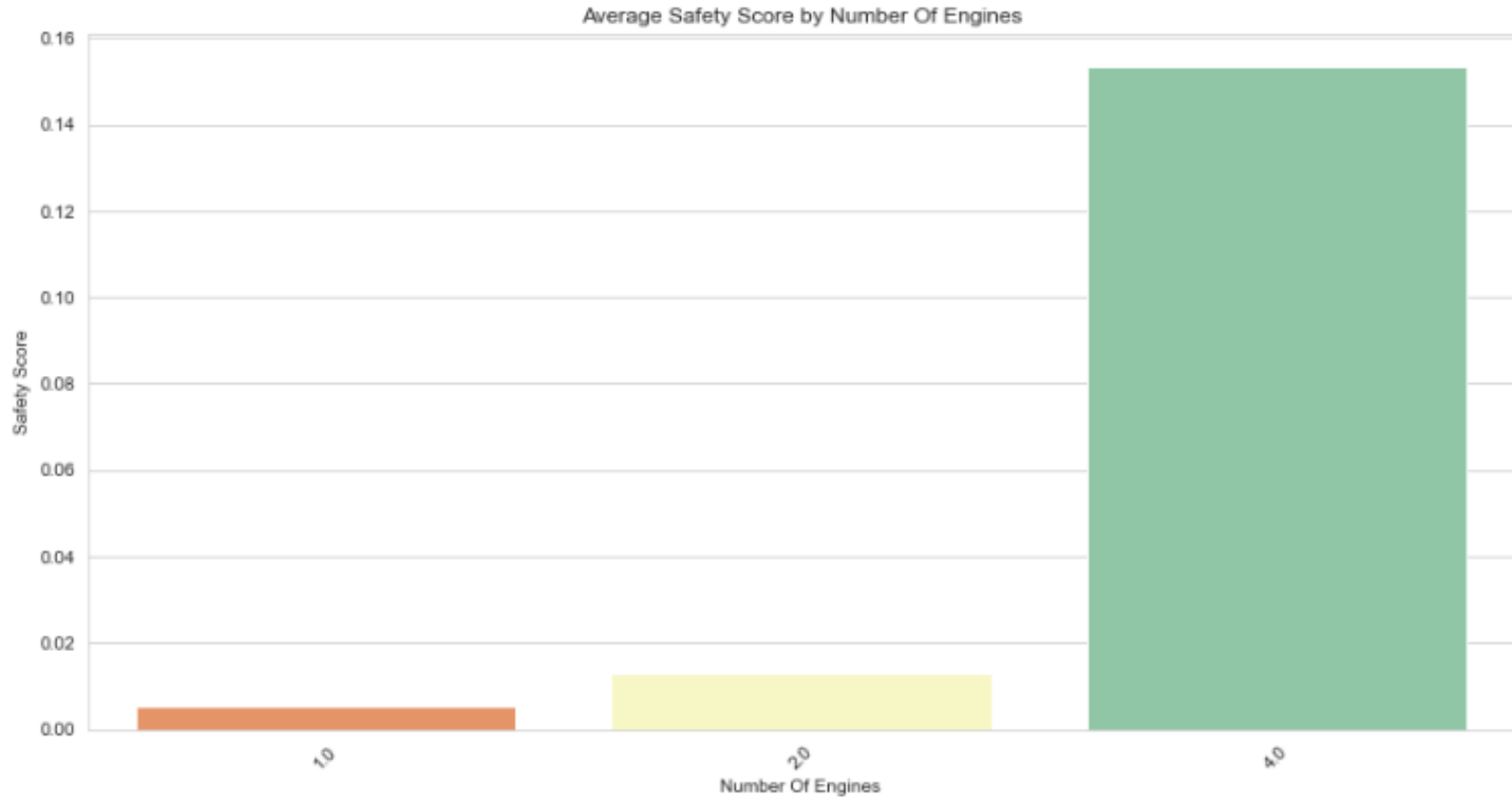


# 3. Results

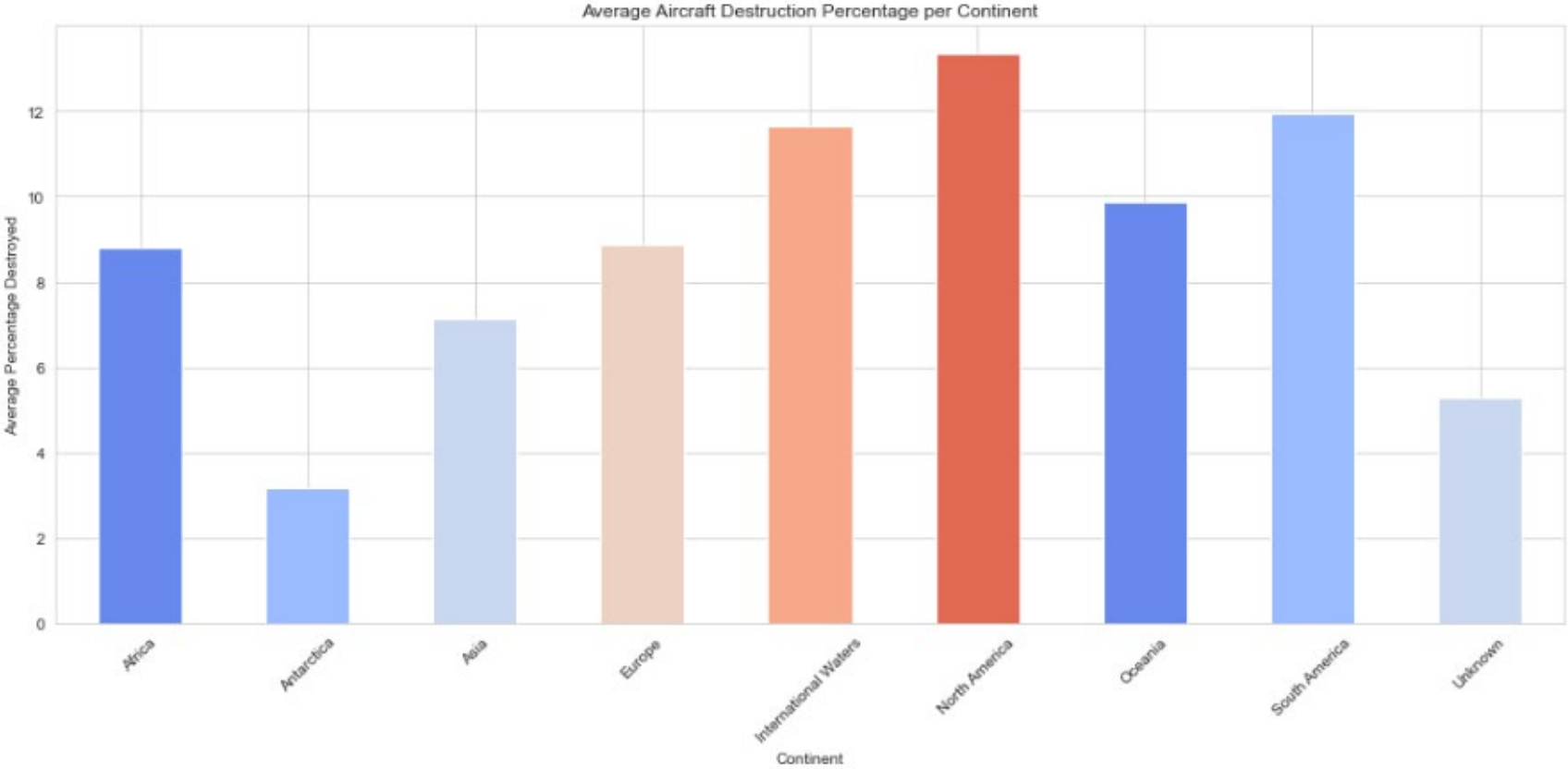
**Turbo Fan:** Aircraft with turbofan or turboprop engines tend to have a higher safety scores.



## Number of Engines: 4-engine aircraft may enhance safety outcomes.



**Regional Risk Assessment:** International Waters & South America pose significant risk to aircraft.



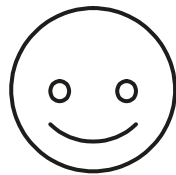


*conclusion*

## Recommendations:

- **Prioritize Turbofan and Turboprop Engines**
- **Invest in 4-Engine Aircraft**
- **Emphasize Domestic Routes Initially & Develop Comprehensive Training for Pilots**





*thanks!*

# Any questions?

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