AVIATION DATA ANALYSIS PRESENTATION

OVERVIEW

This dataset covers aviation events from early 1982, many occurring in the United States, with 465 accidents resulting in 731 fatalities and 355 injuries. Most accidents involved personal flights in general aviation Reciprocating models and intense weather conditions accounted for lots of fatal accidents.

Business Understanding: Aviation Data Analysis

1. Safety Performance Assessment
Understanding historical aviation safety trends to benchmark current performance.

2. Identifying risk factors
Pinpointing the most significant contributors to accidents and incidents to prioritize safety .

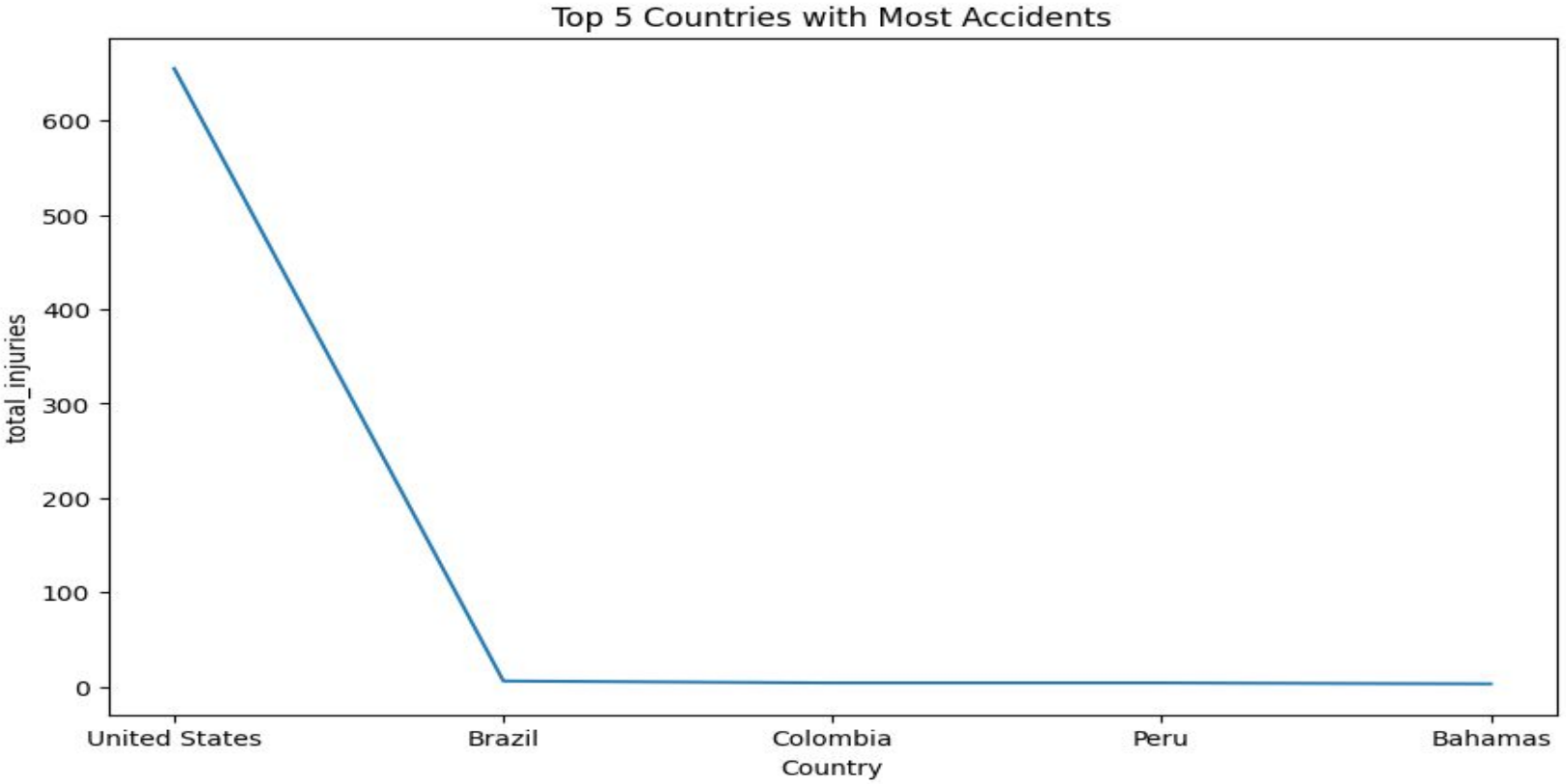
3. Regulate Analysis
Evaluating how different regulatory affect safety outcomes to inform policy improvements strategies.

4. Training Programs
especially for weather-related and emergency scenarios.

5. Insurance Risk Modeling
Providing historical data for actuaries to refine risk assessment models and underwriting criteria for aviation insurance.

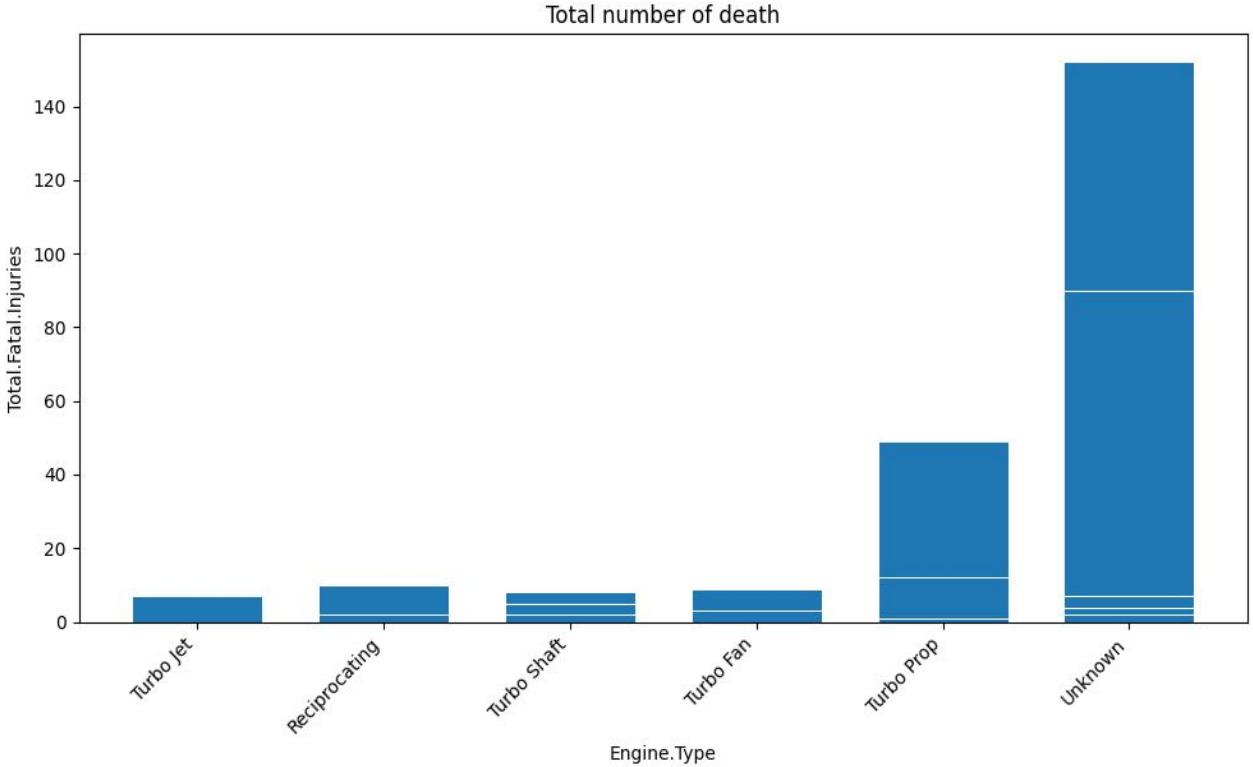
6. Industry Benchmarking
Establishing historical baselines for safety metrics to measure progress, foster industry-wide safety culture development.

This line graph presents the total number that occurred from the year 1982 . the data mainly show the top 5 most countries that lead in occurrence of most accident

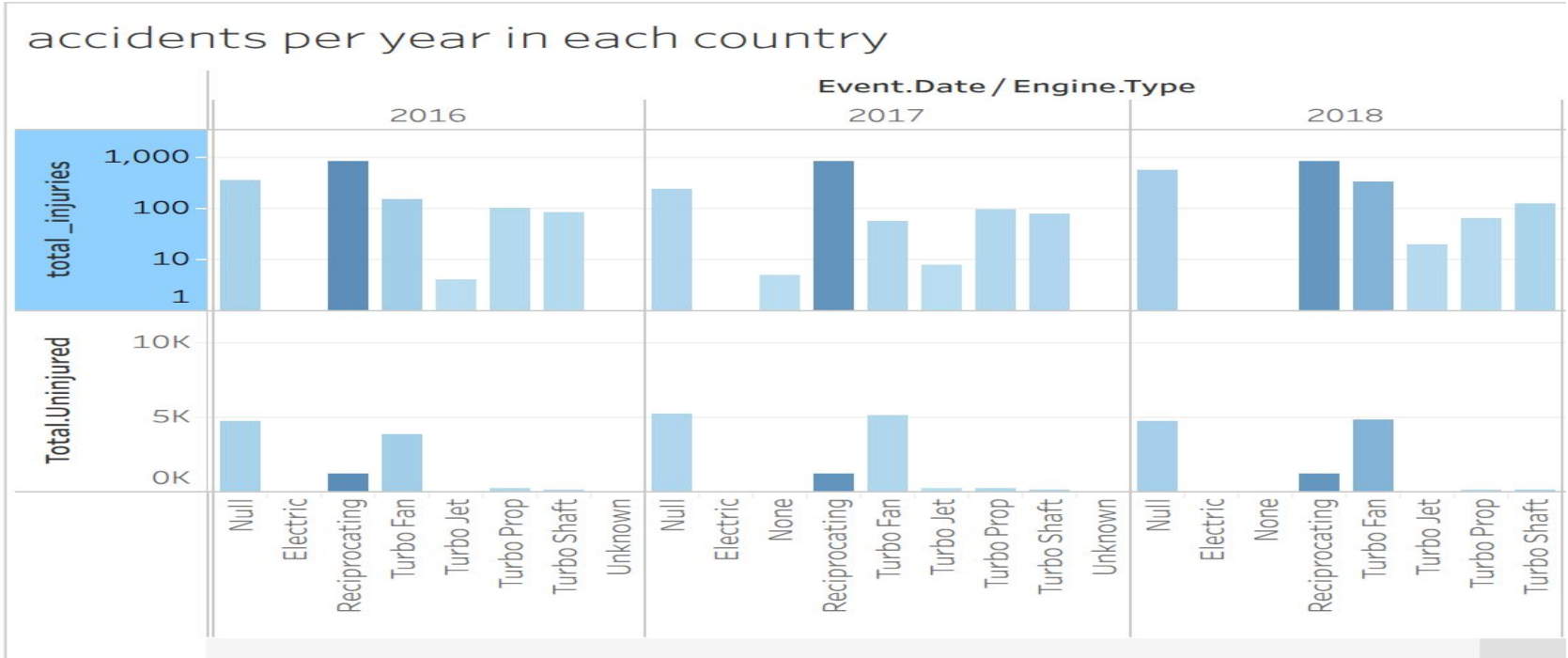


The histogram represents relationship of the total fatal injuries against the engine type . the total injuries occurred mostly due to a make of a particular make Reciprocating leading with over accidents leaving a total 46,248 people injured and others dead

Engine.Type	
Null	11,190
Electric	3
Geared Turbofan	0
Hybrid Rocket	2
LR	24
NONE	0
None	21
Reciprocating	46,248
Turbo Fan	7,919
Turbo Jet	1,305
Turbo Prop	3,321
Turbo Shaft	3,681
UNK	2
Unknown	5,206



This histogram shows the relationship between the injured and the uninjured against event on which the accident took place and the engine type that the plane was using . the data set is between the year 2016 and 2018



Recommendations

1. Weather Decision-Making
implement mandatory pre-flight weather decision tools for general aviation pilots

2. Enhanced Takeoff/Landing Safety
Develop standardized takeoff and landing checklists

4. Aircraft Maintenance Oversight
Increase surveillance and maintenance requirements for general aviation aircraft over 20 years old, particularly focusing on engine and structural components. .

5. Proficiency Maintenance
Require annual instrument proficiency checks for all pilots exercising IFR privileges, not just during biennial flight reviews.