ANALYZING AIRCRAFT ACCIDENTS TO GUIDE PURCHASE DECISIONS

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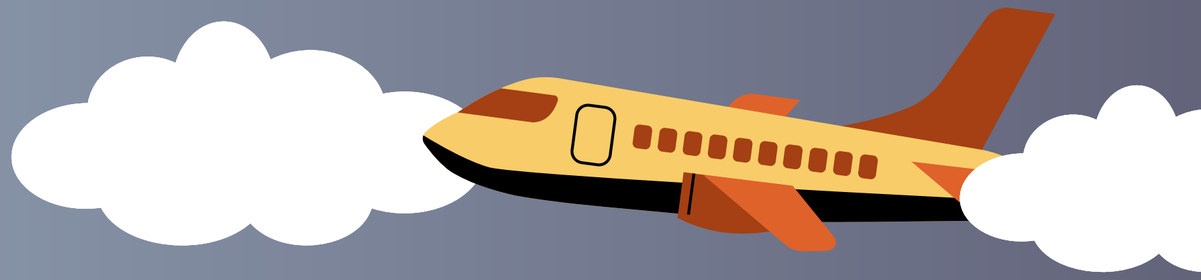
Project Overview

- Identify the lowest-risk aircraft for a company's new aviation business, and translate these findings into actionable insights to guide the head of the new aviation division in purchase decisions.

OBJECTIVES



1.
Identify the aircraft with high risk and low risk of accidents

2 .
Identify the manufacturers and models of the aircrafts mostly involved in accidents.

3.
Identify the Engine types of the aircrafts that are mostly and least involved in accidents .

4.
Identify the Phase of Flight the aircrafts were in when the accidents took place

AIRCRAFT ANALYSIS

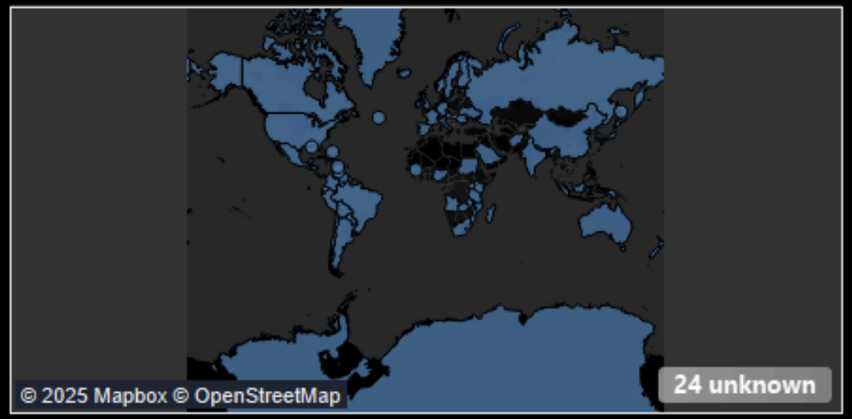
aircraft Damage
Substantial

Event Date
2007

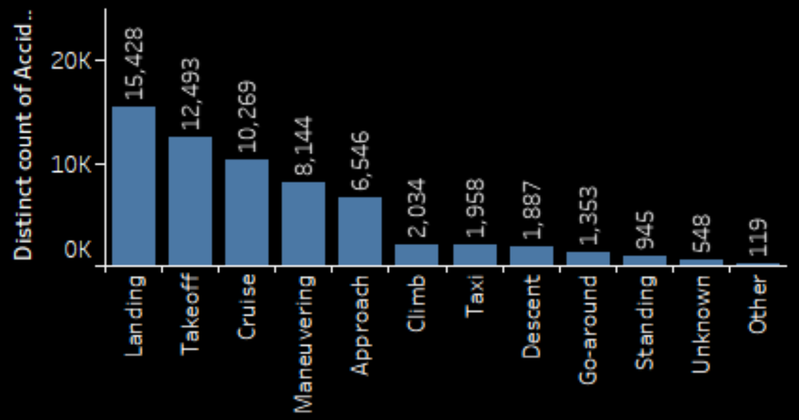
airport name

Accident.Number
ANC07CA089

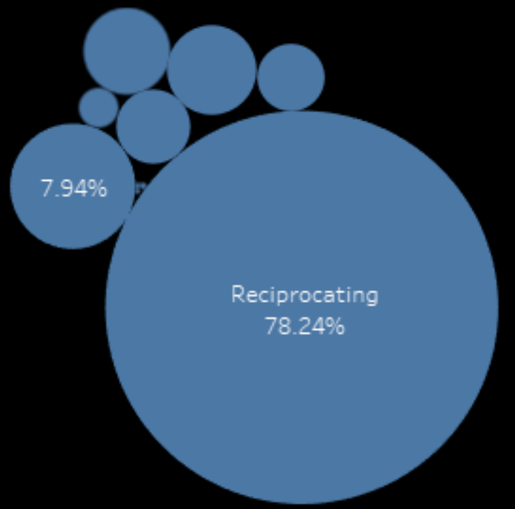
Distribution of accidents by country



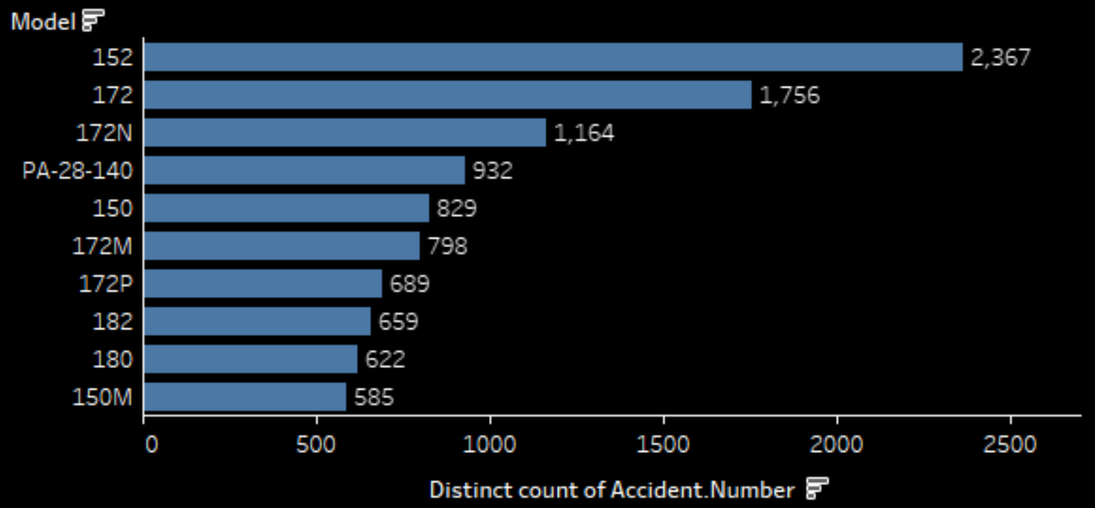
Phase of flight by count of accidents



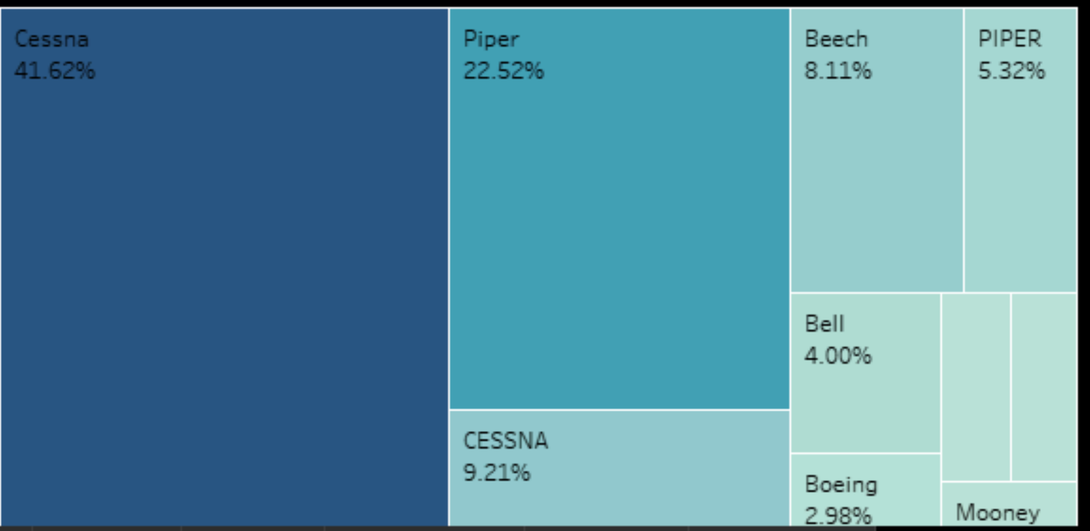
Engine type by Count of accidents



Top 10 models by Count of Accidents



Top 10 Makes by Count of Accidents



Conclusions

1. **Aircraft Involvement*:** High accident rates for airplanes and helicopters.WSFT has lower
2. **Location*:** Most accidents in the United States.
3. **Manufacturers*:** CESSNA and PIPER frequently involved.
4. **Risky Models*:** 152, 172, and 172N models.150M is less involved
5. **Flight Phases*:** Takeoff and landing are critical.
6. **Engine Types*:** Reciprocating engines often involved.Electric is least involved.
7. **Damage*:** Mostly complete or substantial destruction.
8. **Weather*:** Most accidents occured in VMC.Accidents occured in IMC .

RECOMMENDATIONS.

- - * *Manufacturer Choice*: Avoid CESSNA and PIPER; prioritize low-accident manufacturers.
- *Engine Selection*: Favor electric engines; avoid high-risk reciprocating engines.
- *Model Selection*: Avoid 152, 172, and 172N; consider models with fewer accidents like 150M.
- *Pilot Training*: Focus on takeoff and landing phases.
- *Maintenance*: Invest in robust inspection protocols to minimize damage .
- *Technology*: Use advanced avionics and weather monitoring systems, especially for IMC conditions.
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THANKYOU!