Datalink. ltd

Data link is an Investment company that focus on investing in unique diversified portfolio. With the leverage of data to make accurate insight and finding new opportunities.

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INTRODUCTION

With changing market, diversification isn’t just a strategy – it’s a necessity. By broadening our portfolio across sectors we not only reduce risk but also unlock new opportunities for wealth creation

We are focusing as an organization to diversify in to the Airplane market..

Business Understanding

what are potential risks of aircraft?

which aircraft are the lowest risk for the company to start this new business endeavor?

whats your recommendation on findings into actionable insights ?

Data Understanding

The Data In the data folder is a dataset links to an external site. from the National Transportation Safety Board that includes aviation accident data from 1962 to 2023 about civil aviation accidents and selected incidents in the United States and international waters. In this lab, we'll work with a version of the comprehensive Aviation data Dataset, which can be found on Kaggle

The data is contained one CSV files:

Aviationdata.csv: About Dataset Content The NTSB aviation accident database contains information from 1962 and later about civil aviation accidents and selected incidents within the United States, its territories and possessions, and in international waters.
Acknowledgements Generally, a preliminary report is available online within a few days of an accident. Factual information is added when available, and when the investigation is completed, the preliminary report is replaced with a final description of the accident and its probable cause.

The dataset has 31 columns and 88889 rows
It’s dataset has strings as the majority datatype followed by floats data type

Data Analysis

- Below are graphs for Location and Country with accident recorded
- Phase of Flight vs Total fatal injuries
- Accident over years vs Type of injuries
- Type of Air craft vs Fatality

Pages

Columns AVG(Longitude)

Rows AVG(Latitude)

Filters

Marks

Automatic

Color Size Label

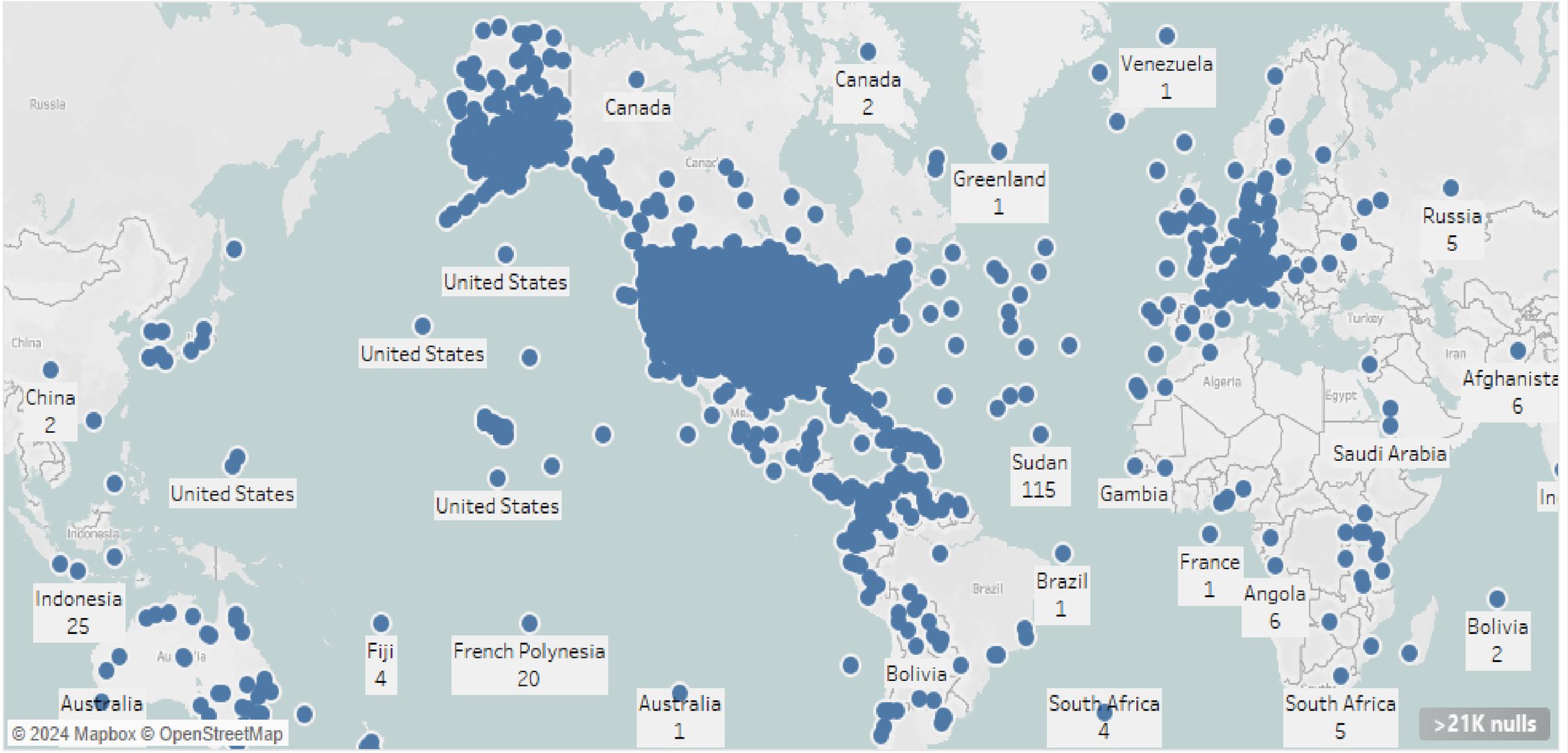
Detail Tooltip

Country

SUM(Total.Fat..

Location

Sheet 2



Pages

Columns | Aircraft.Category

Rows | CNT(Aircraft.Catego..

Filters

Aircraft.Category

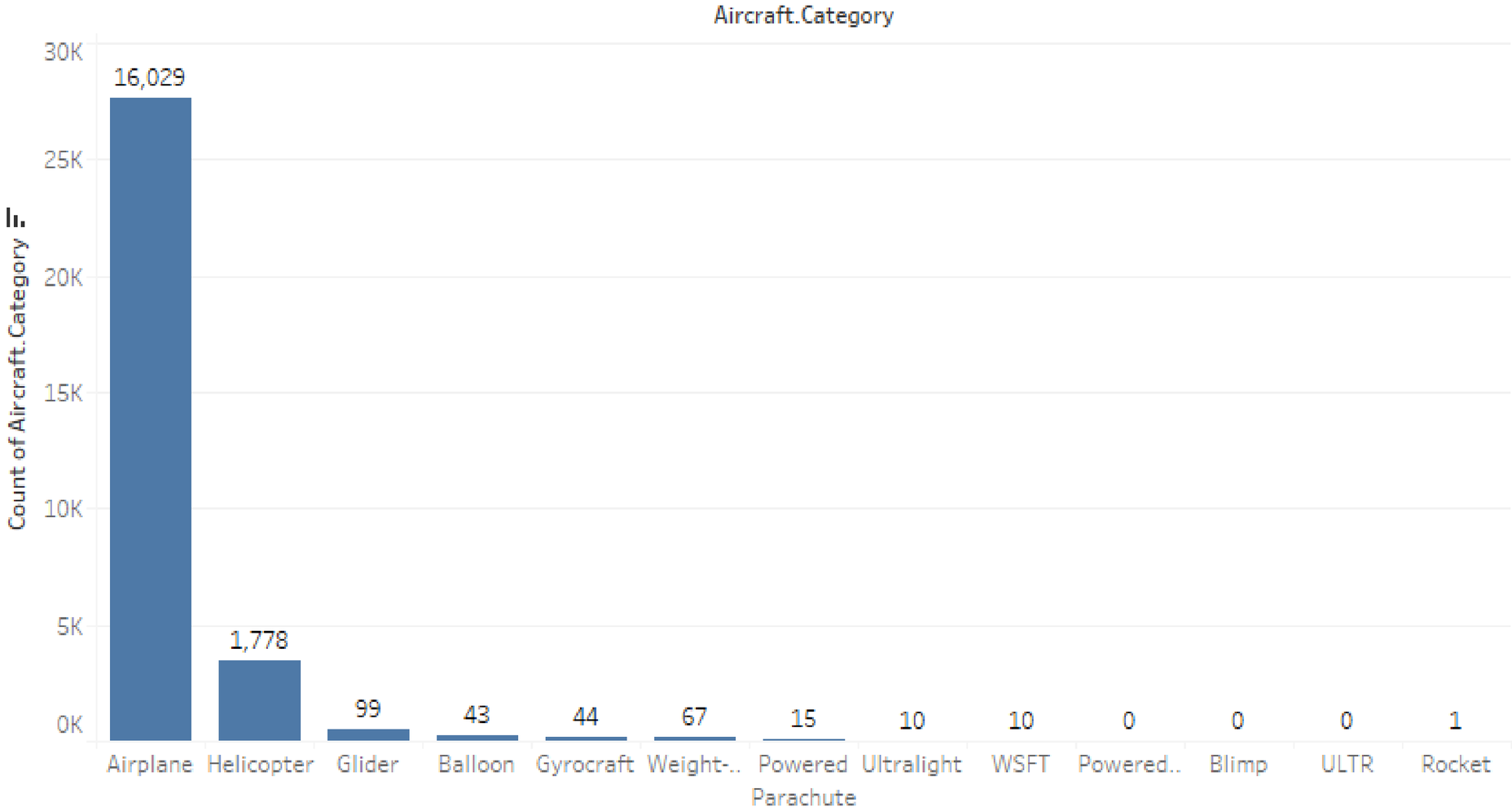
Marks

Automatic

Color | Size | Label | Detail | Tooltip

SUM(Total.Fat..

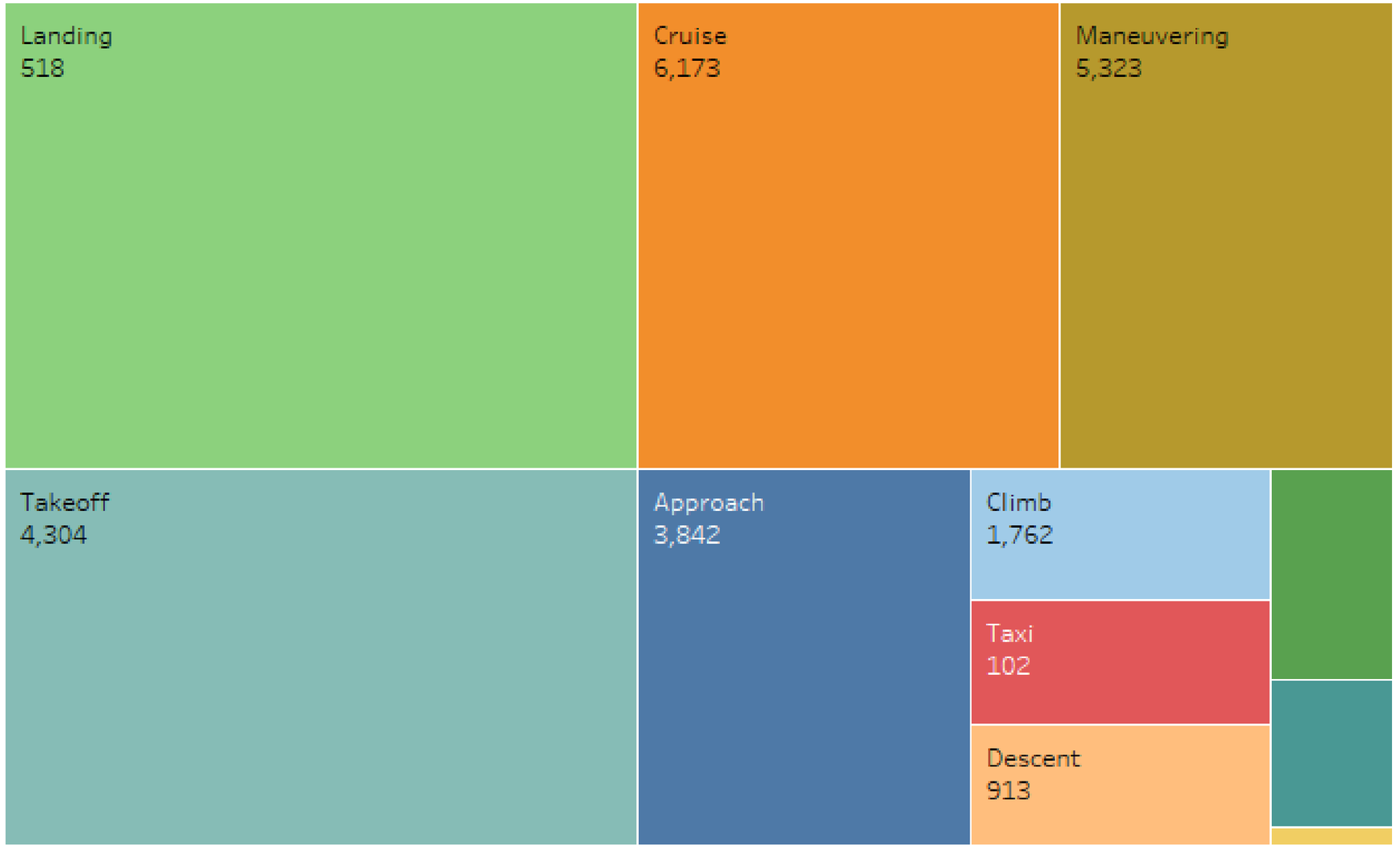
Aircraft Categories



eet 2 | Phase of Flight vs Accident fatality | Sheet 4 | Sheet 4 (2) | Sheet 5 | Sheet 6 | Sheet 7 | Sheet 8 | Sheet 9 | Phase of Flight vs Fatality | Accident over years vs Injuries t...

Rows

Phase of Flight vs Fatality



Broad.phase.of.fli...

- Approach
- Climb
- Cruise
- Descent
- Go-around
- Landing
- Maneuvering
- Other
- Standing
- Takeoff
- Taxi

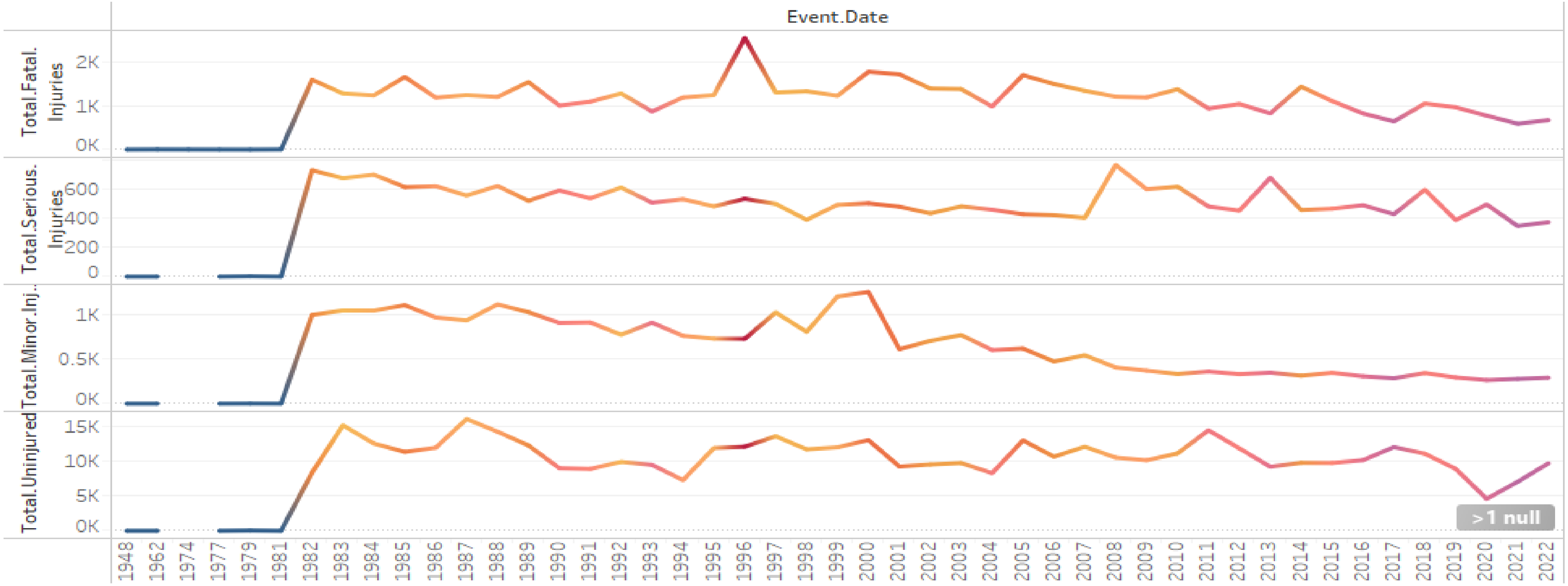
Entire View

Show Me

Columns: YEAR(Event.Date)

Rows: SUM(Total.Fatal.Injur..) SUM(Total.Serious.In..) SUM(Total.Minor.Inju..) SUM(Total.Uninjured)

Accident over years vs Injuries type



Sheet 4 (2) | Sheet 5 | Sheet 6 | Sheet 7 | Sheet 8 | Sheet 9 | Phase of Flight vs Fatality | Accident over years vs Injuries ...

Key Observation:

- Accident Trends Over Time Accidents have fluctuated over the decades, with spikes observed in earlier years. The number of decrease in recent years reflecting improvements in aviation safety, technology, and regulations

- Weather Condition IMC (Instrument Meteorological Conditions): Accidents during adverse weather result in more fatal injuries and 2,732 minor Injuries. VMC (Visual Meteorological Conditions): While VMC conditions account for more total injuries higher volume of fatal injuries under these conditions.

Compared to takeoff or landing, cruise-phase accidents tend to be more catastrophic. Takeoff has significant injury counts of fatalities, highlighting the risks of this critical phase. Maneuvering also records a high number of fatalities (5,323), indicating higher across standard fight maneuvers..

Top 10 Countries with Most Accidents The United States leads in accident counts which is expected due to its large aviation sect

RECOMMENDATION

- Critical Flight Phases Recommendation: Implement targeted training and automated safety systems for high-risk flight phases.

- Enhance Weather-Related Safety Recommendation: Develop stringent protocols and pilot training programs for operating in adversity condition

- Prioritize Critical Flight Phases Recommendation: Implement targeted training and automated safety systems for high-risk flight phases

- Regional Safety Initiatives Recommendation: Focus safety improvement efforts in regions with the highest accident counts, particular in States and other countries with notable risks

- Invest in Technology-Driven Safety Recommendation

- Target Personal Aviation Risks Recommendation invest in initiatives to enhance safety in personal aviation, including: Improved training

- Focus on acquiring modern commercial aircraft from manufacturers with a strong safety trackrecoed Airbus) while avoiding older or recreational aircraft models from high-risk manufacturers

“Question and Answer”

Thank You!

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