DETERMINING WHICH AIRCRAFTS OFFER LOWER RISK TO BUSINESS SHARHOLDERS.

Project Overview

1. A detailed findings on which aircrafts would offer lower risk to shareholders while undertaking this new venture.
2. Cleaning the data so as to make sure the data contains no missing values.
3. Communicating insights using visualizations.

<u>Business Understanding</u>

<u>Project Goals</u>

1. Analyze data from the National Transportation Safety Board from 1962 to 2023 that deal with aviation accidents.
2. Find the shareholders what aircrafts offer lower risks to invest in.
3. Determine what aircrafts offer high risks to the investors.
4. Provide information to the head of new aviation division on which aircrafts the shareholders should purchase.

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Data Understanding

- This dataset comes from kaggle which provides information of aviation accidents from 1962 to 2023.
- The dataset contains missing values which would interfere with our results so my first step is to clean the dataset.
- We drop either columns or rows with missing values and also duplicates. After cleaning i am left with columns and rows that i can use for data analysis.
- The data contained only two duplicates.
- My final dataset contains 84069 rows and 15 columns.

Data Analysis

- I was able to use exploratory data analysis.
- I used visualizations such as line graph, bar chart, Histogram and seaborn to display my data.
- The analysis yielded that Boeing would offer lower risk to investors.
- I was able to get information that personal flights are the most common types of flights taken by passengers.
- The visualization also shows some models of aircrafts are more likely to handle harsh weather condition.

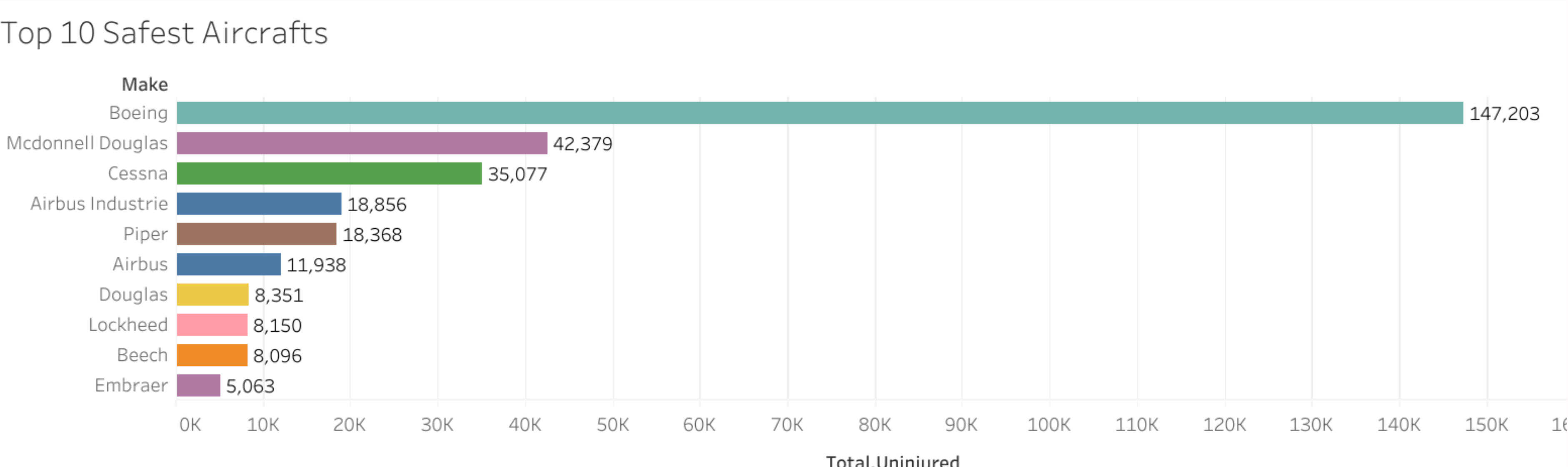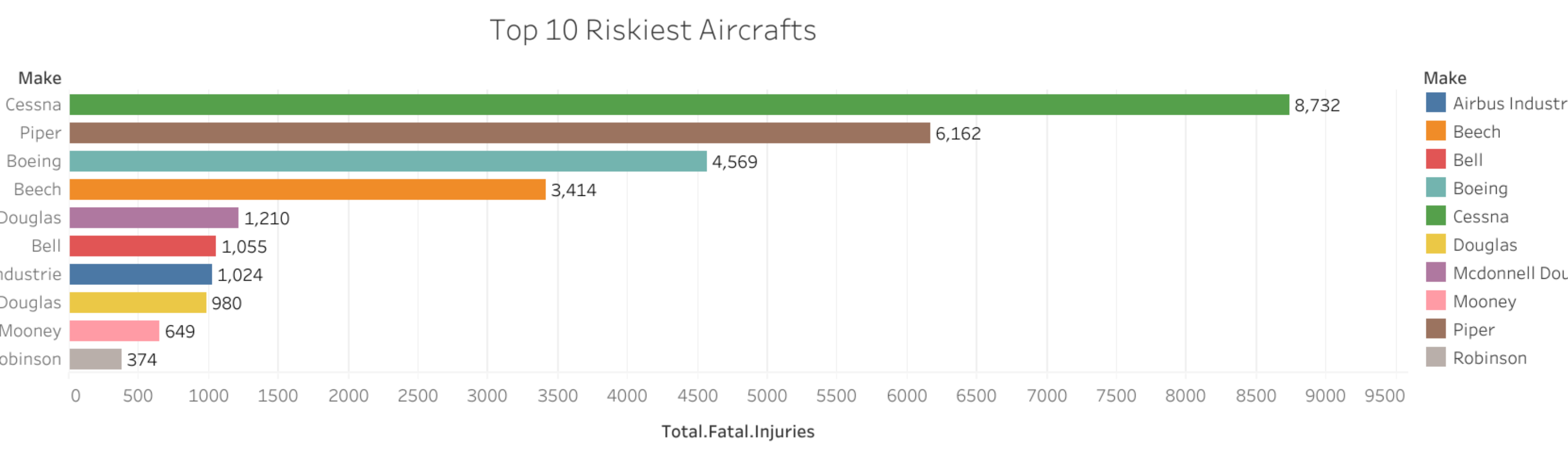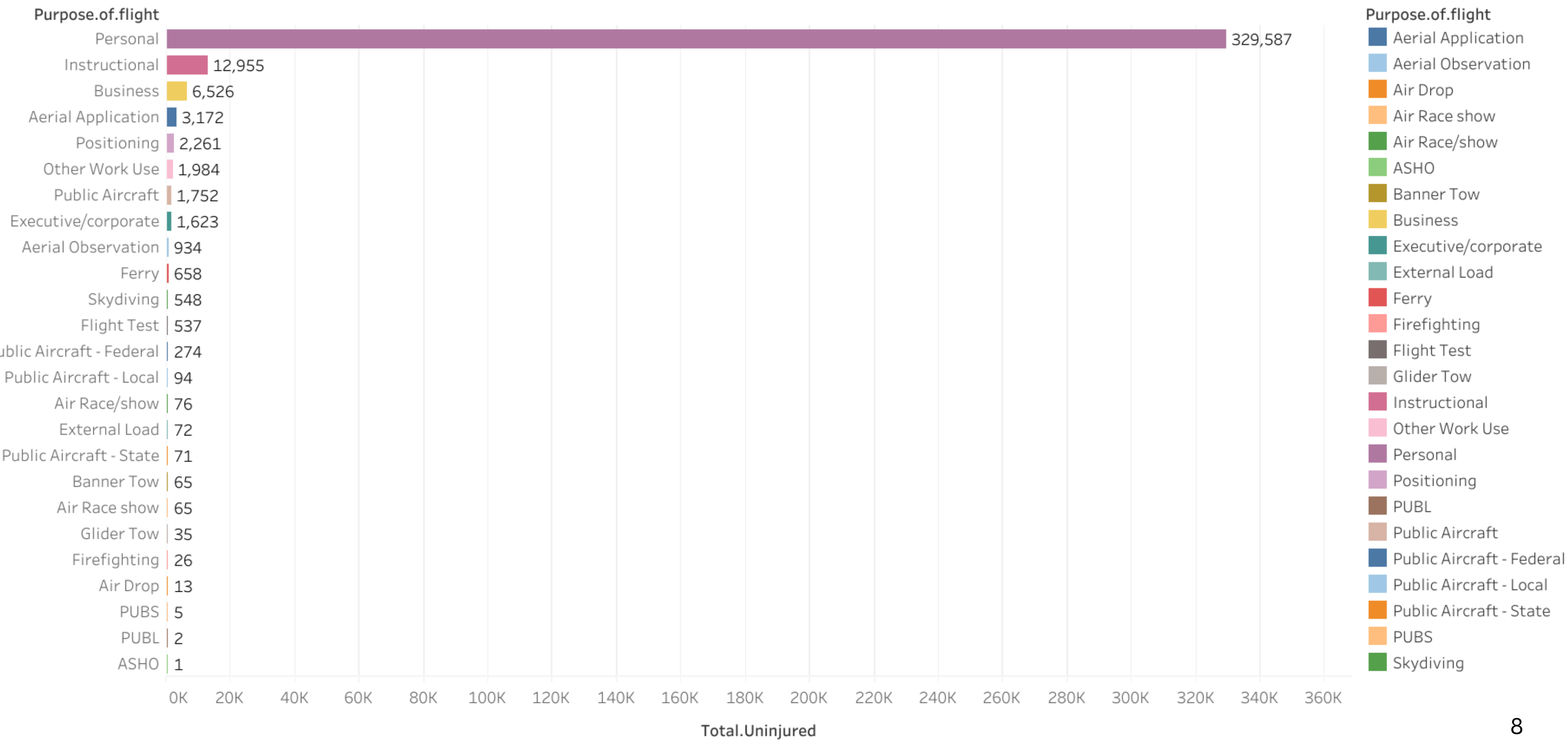# Image Of Bar Chart Showing The Safest Aircrafts

Top 10 Safest Aircrafts

Make

Make	Total.Uninjured
Boeing	147,203
Mcdonnell Douglas	42,379
Cessna	35,077
Airbus Industrie	18,856
Piper	18,368
Airbus	11,938
Douglas	8,351
Lockheed	8,150
Beech	8,096
Embraer	5,063

Total.Uniniured

Image Of A Bar Chart Showing Riskiest Aircrafts

Top 10 Riskiest Aircrafts

Total Uninjured by Purpose Of Flight

Recommendations

- I would advice the shareholders to invest in Boeing Aircraft as its the safest hence it provide low risk to investors because it has the highest number of Total Uninjured passengers.
- The shareholders should avoid Cessna Aircraft since it has the highest number of Total fatal Injuries among the aircrafts thus has higher risk.
- The business shareholders should also invest in personal flights with Boeing Aircraft since personal flights are the reason for travel by passengers.
- I would also recommend the shareholders to buy Boeing Model 737 Aircraft since it is better at handling the weather conditions than the other Boeing models.
- The investors should also consider diversifying and also investing in Mcdonnell Douglas since its the second safest Aircraft and its model Dc-10-10 is the best at handling weather conditions among all the aircrafts.
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