Data Analysis with Tableau

- Goals and Process
- FAA Wildlife Strikes data (Main data)
- Airbnb data (side note)
- Conclusion

01 Goals

The goal of the Data Analysis project is to study different dataset with Tableau.

The main objectives are:

- Build different visualizations to better understand the data
- Analysis of different relationship within the dataset
- Set up a dashboard that can be used to answer questions we have about the dataset

02 FFA Wildlife dataset

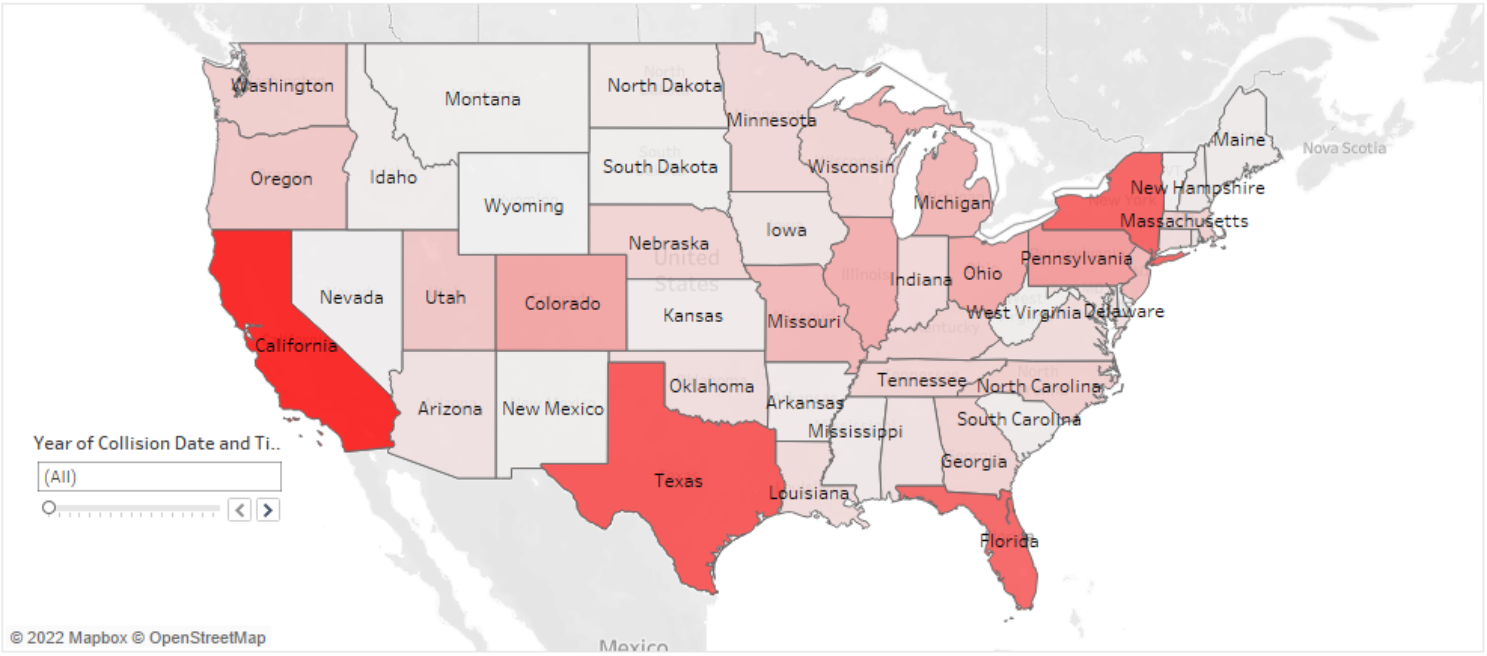
Data Overview

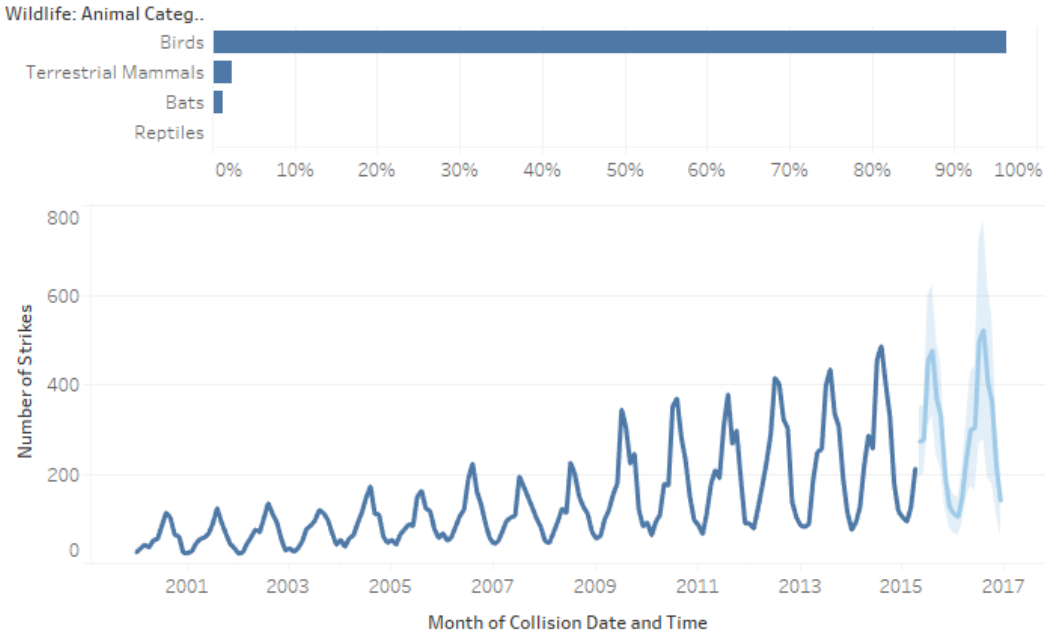
- The dataset shows the incidents of collision between airplanes and wildlife in the US between 2000 and 2015

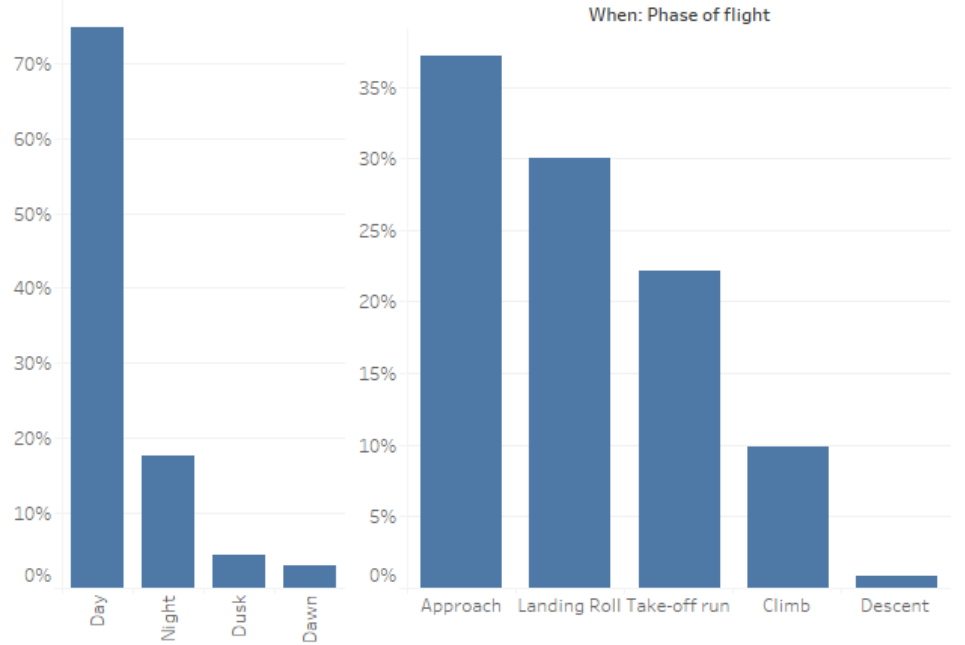
- The information it provides includes:
  - Time and data of collisions
  - Location (Region) of the incidents
  - Type of wildlife involved
  - Damage to the airplanes

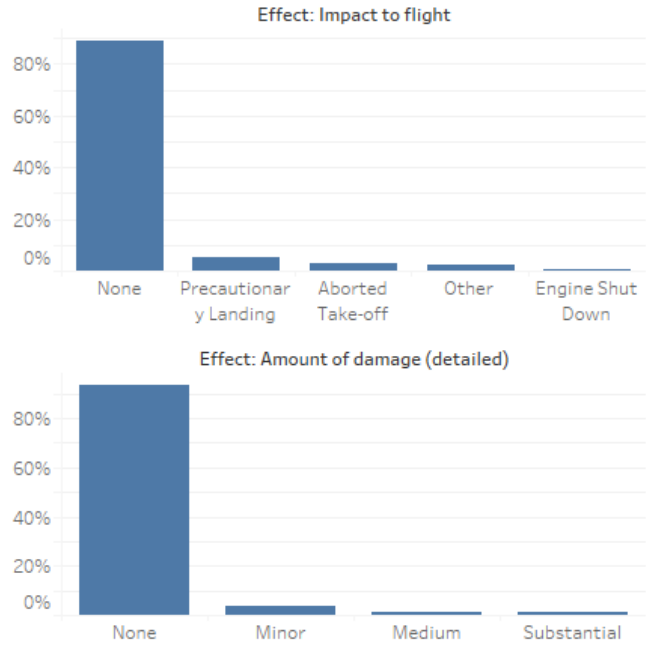
Some questions about the dataset:
- Which region tend to have the most incidents?
- What kind of wildlife tend to be involved with the collisions?
- Is there a time where the collisions are the most frequent?
- What kind of damage does the collision by wildlife tend to cause?

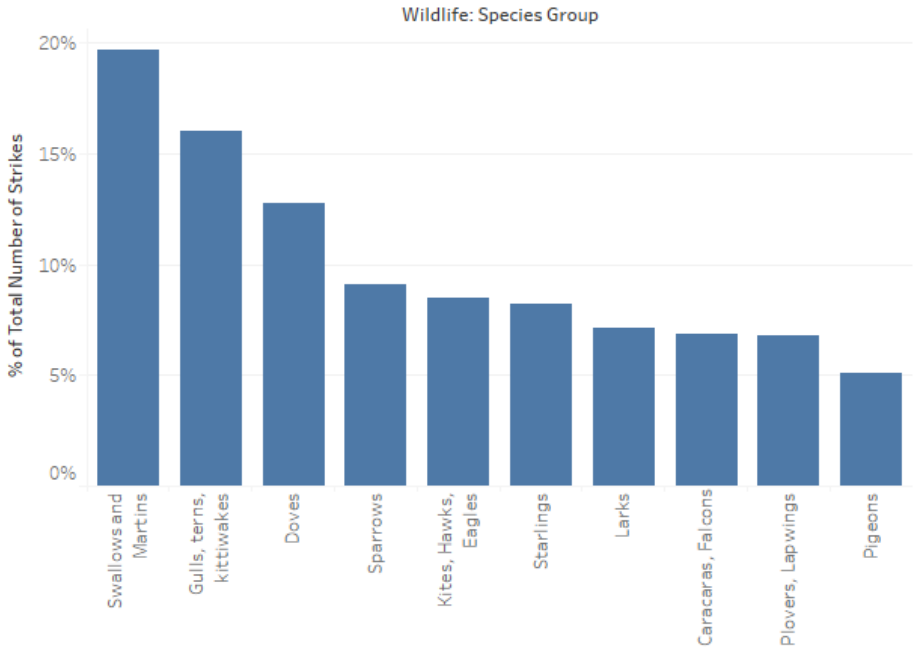
The FFA wildlife collision Dashboard



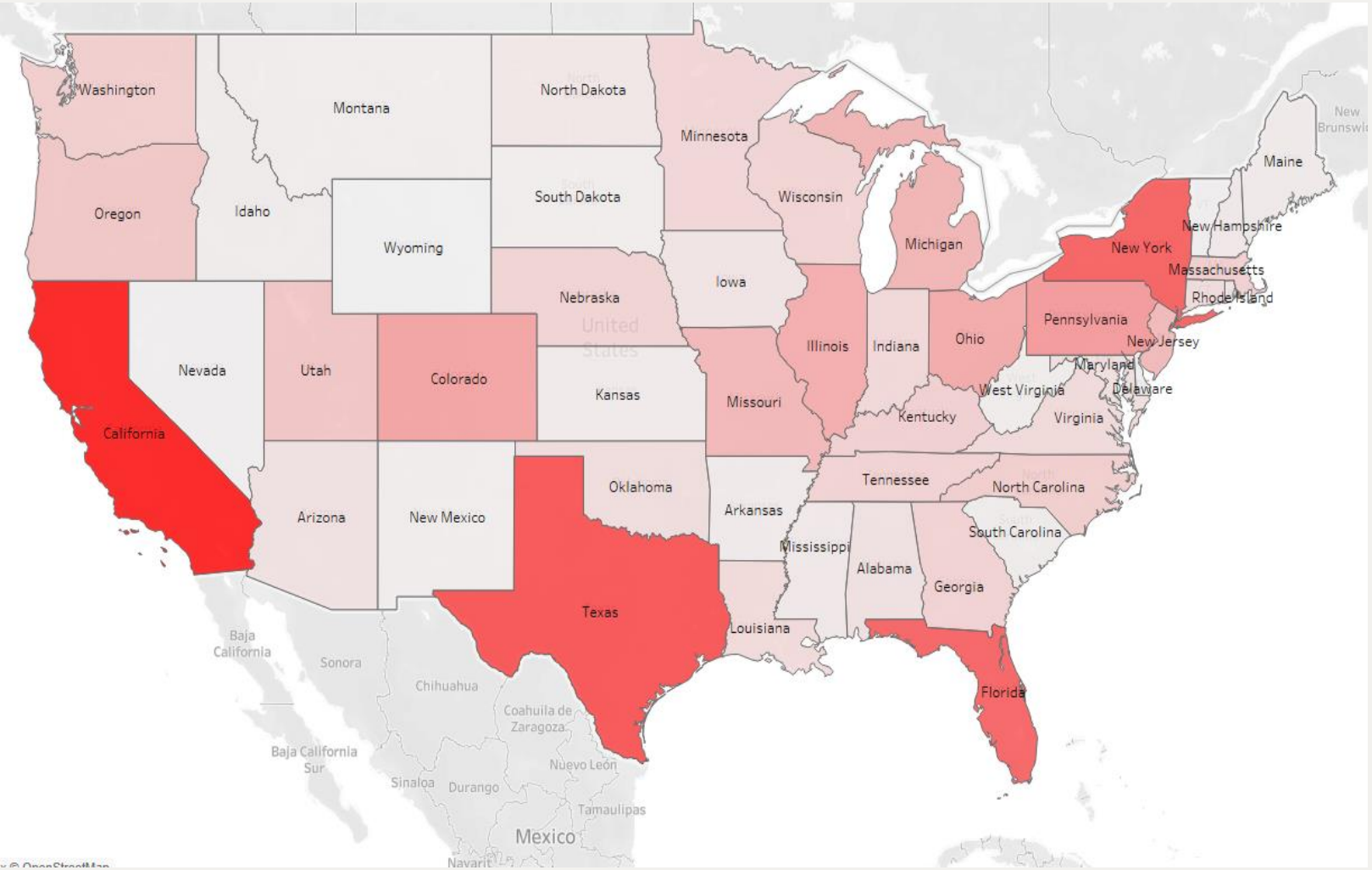






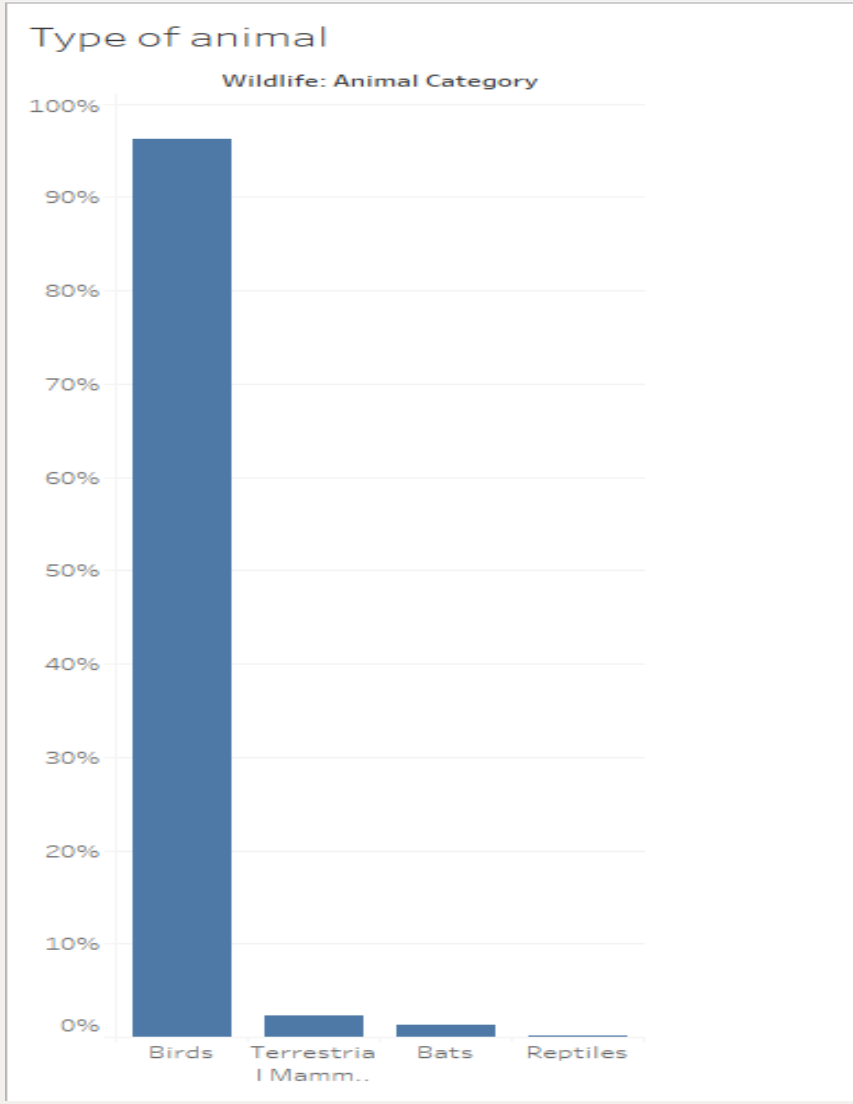


Answering questions



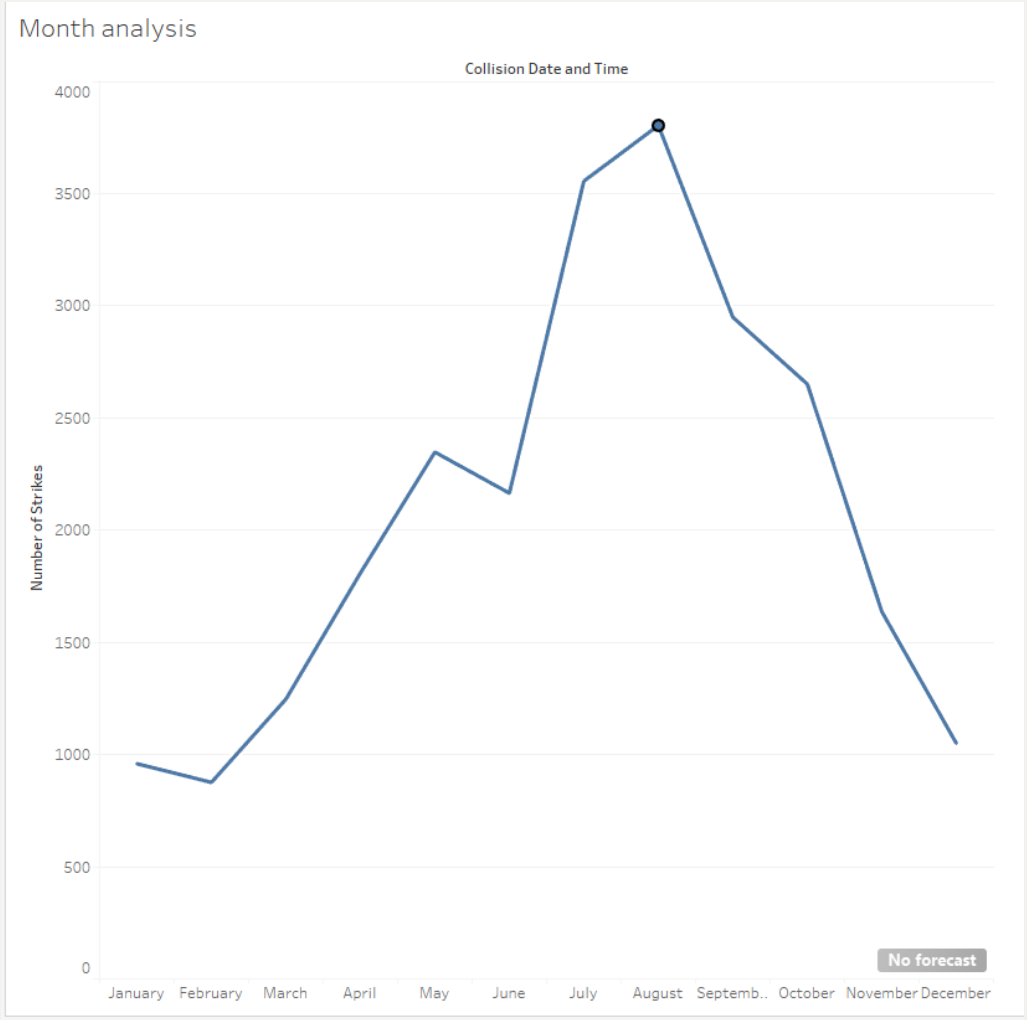
- The state with the most highest incident count is California
- The states of Texas, Florida and New York also have a high amount of collisions
- A potential cause for the high amount of incident is the high amount air traffic in those states

Answering Questions



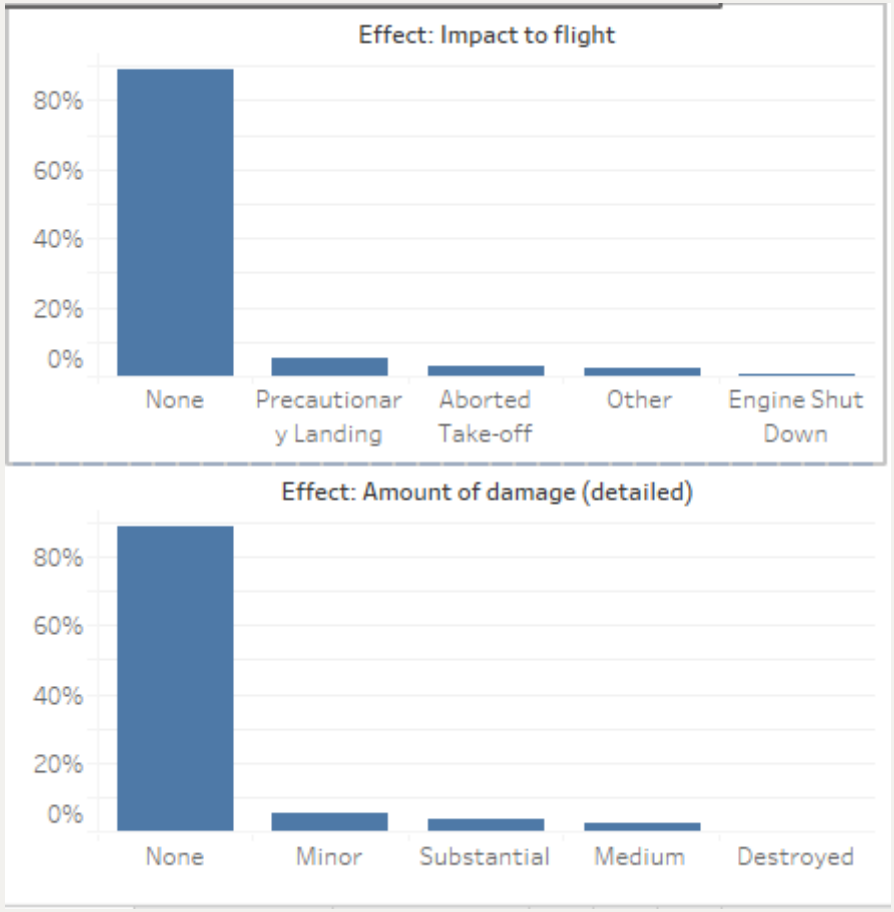
- Main culprit of the collision seems to be birds with an occurrence of over 95% (makes sense, given that these are collisions with airplanes)
- Swallows, martins, gulls, sparrow, hawks, doves and eagles makes up for the vast majority of the collisions (>50%)

Answering questions



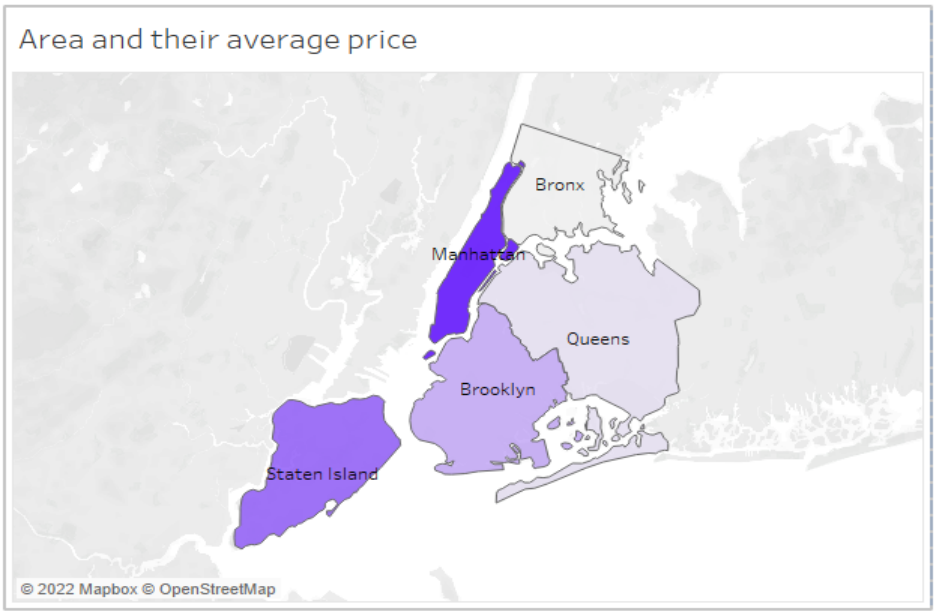
- Month of August is the month with the highest number of incidents every year
- The incidents are most frequent during summer
- The incidents are less frequents during winter
- From the earlier dashboard, we can see that :
  - Most of the collisions happen during daytime
  - Most of the collisions happen during approach, take-off and landing roll.

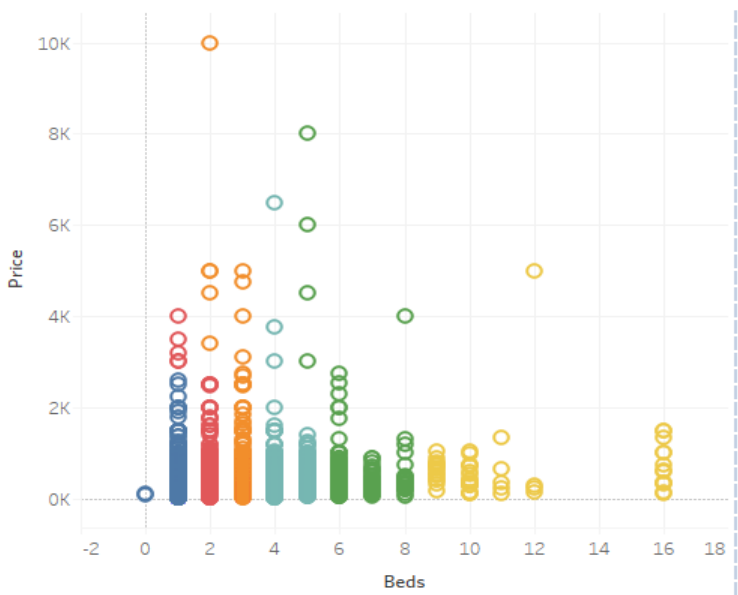
Answering Questions

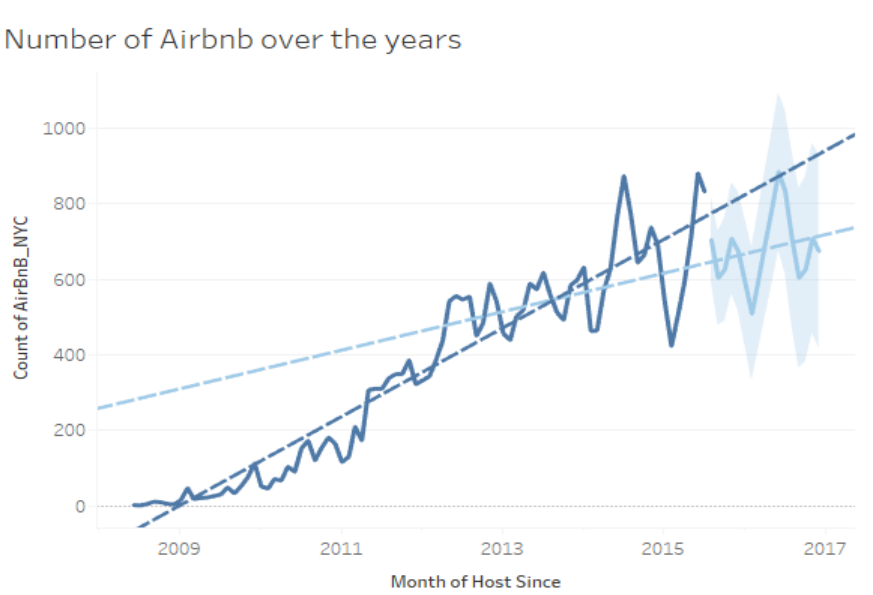


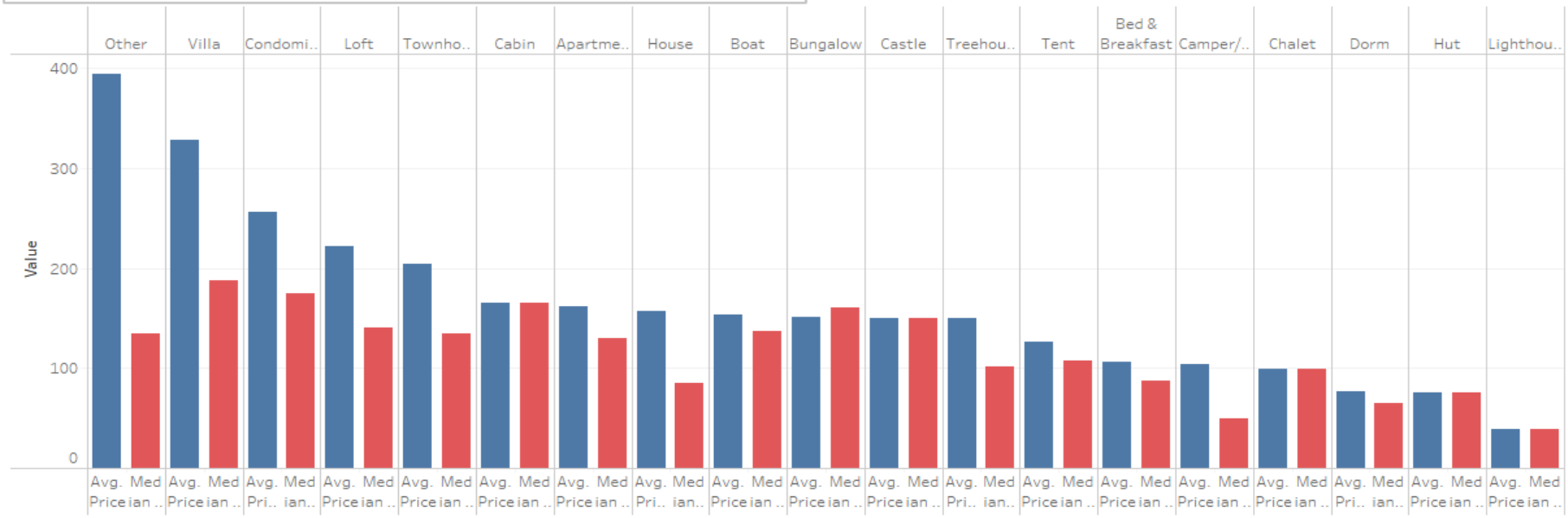
- Most of the collisions do not result in any damage to the aircraft
- On rare occasion the collision can cause substantial damage or engine shutdown... or even destroy the airplane (0.12% of occurrence)
- Gulls, terns and kittiwakes as well as kites, hawks and eagles are the cause for the majority incidents causing substantial damage.
- Hawks, eagles, kites as well as caracaras and falcons are the major cause of destroyed airplanes.

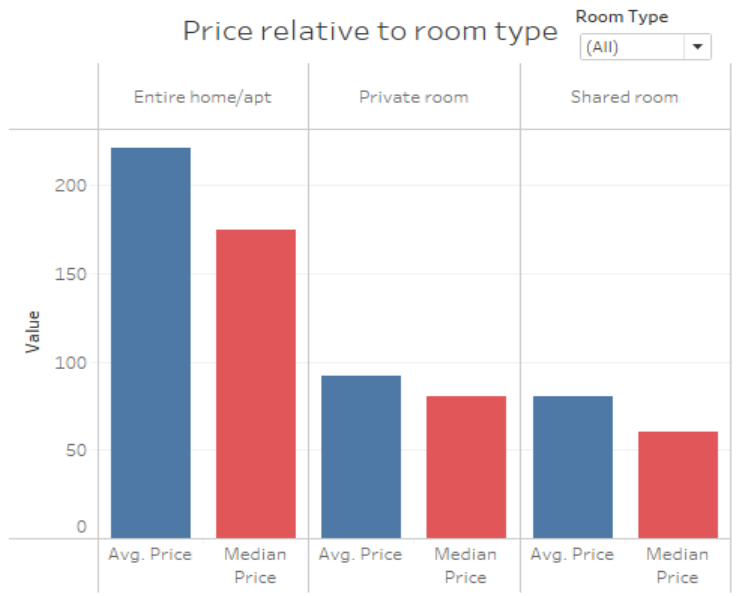
03 Airbnb dataset











04 Conclusion

- Tableau is a powerful tool for data visualization
- Data obtained through analysis can be used to help guide decisions. In the FAA wildlife case, it might be good to suggest implementing some sort of safety measure for airplanes in the high risk states during summer months
- With more time, it would be possible to dig deeper into the data to look for outliers and how those affect the data
- The cost of damage was omitted while working with the FAA data, but it would be a valuable insight to look into that to see what kind of incidents are the most costly for the airplane companies