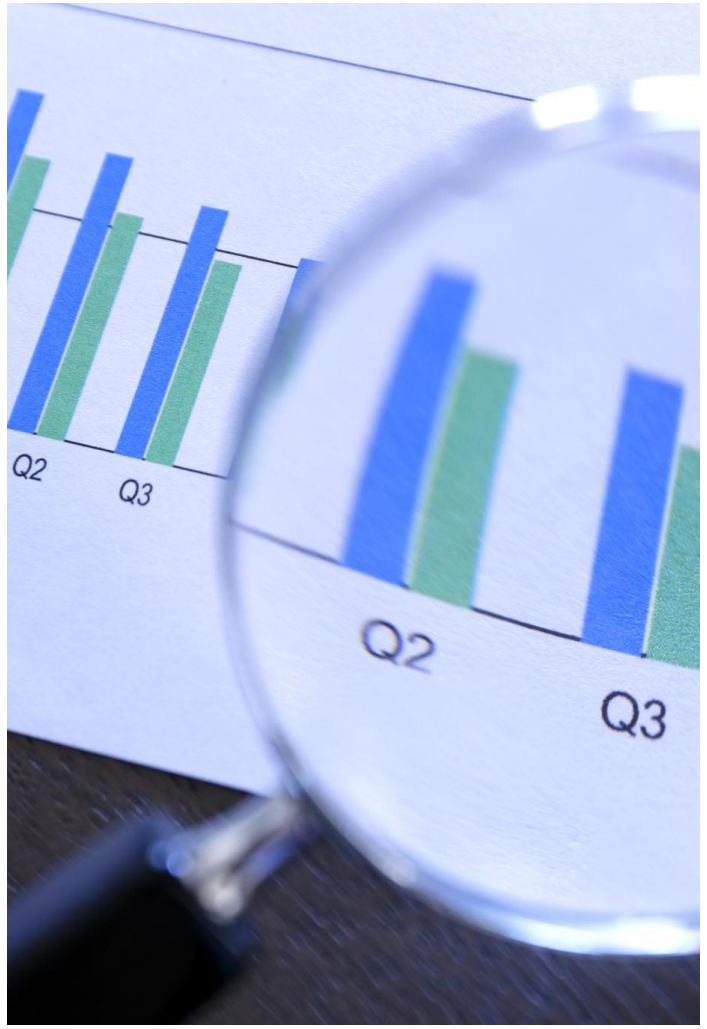
Tableau Project Presentation

FAA Wildlife Strike Database

Presenter: Dat Tran (Alex)

Process

1. - Understand all aspect the dataset about animal strikes by using different table and chart to explore and evaluate the dataset.
2. - Clean dataset from all null, inappropriate data types and duplicate data with python.
3. - Create visualization to explain the questions about the dataset.
4. - Evaluate the visualization to explain business questions.



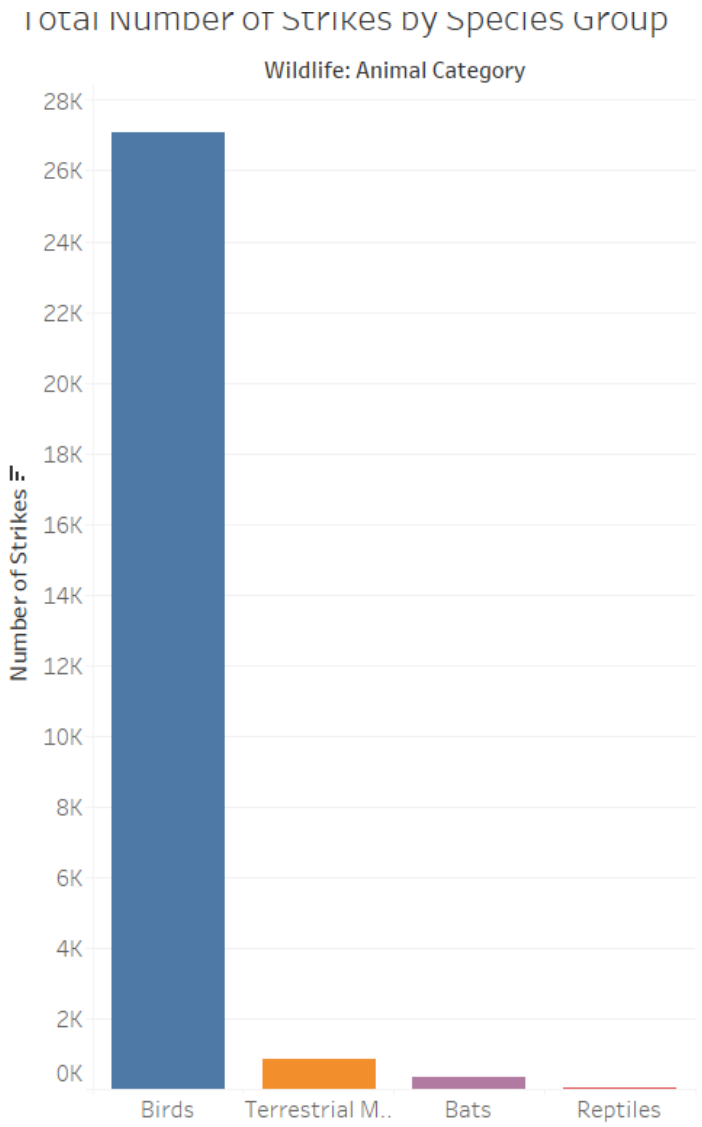
Process

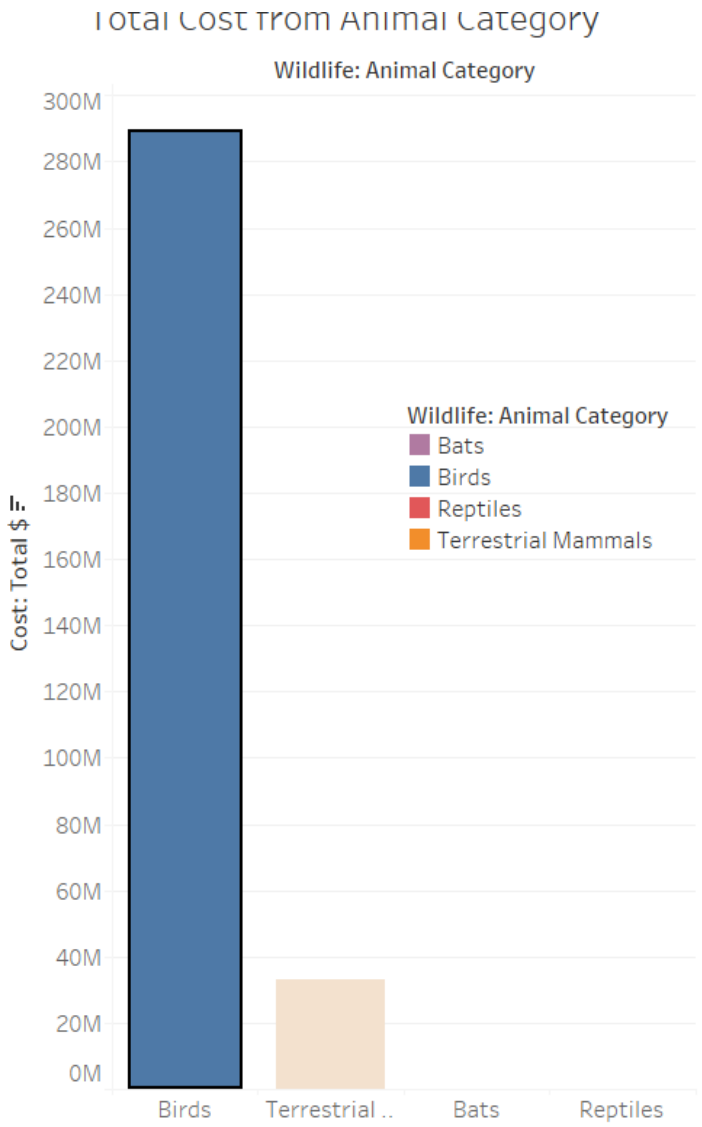
To better understand the relationship between flight and animal strikes. Three aspect of the dataset is analyzed:

- The wildlife characteristic

- The time of strikes

- The effect of the strikes





The wildlife characteristics

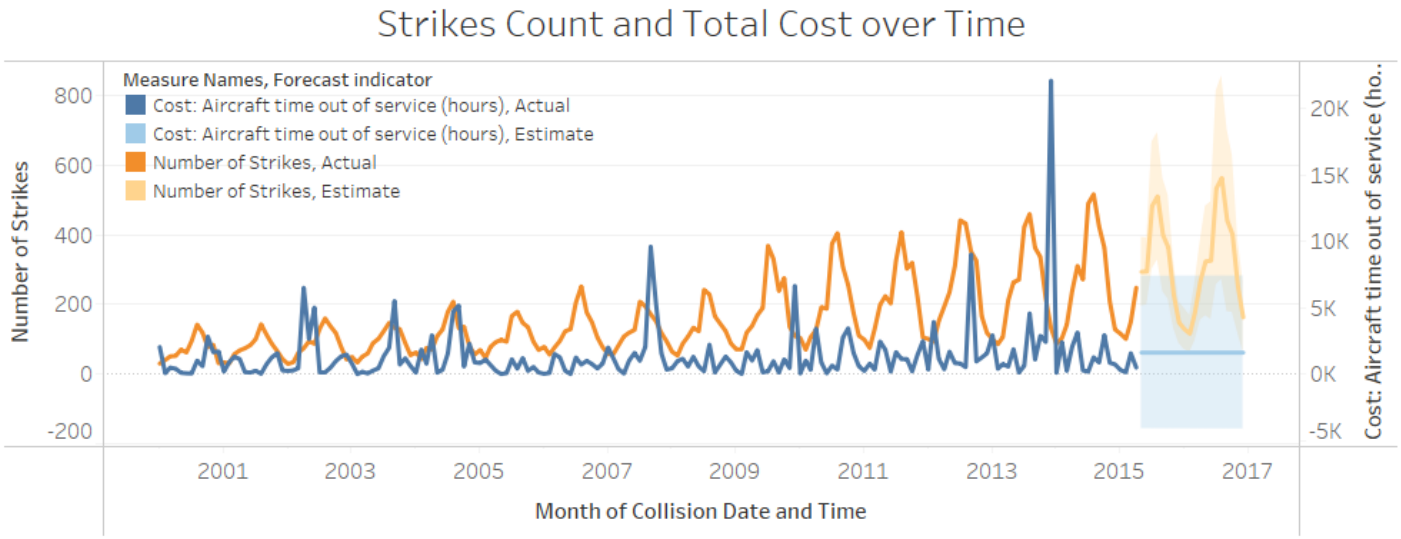
Understand of the kind of animal that caused the strikes as well as the total cost that animal can give us an idea of what animal we need to have an action on.

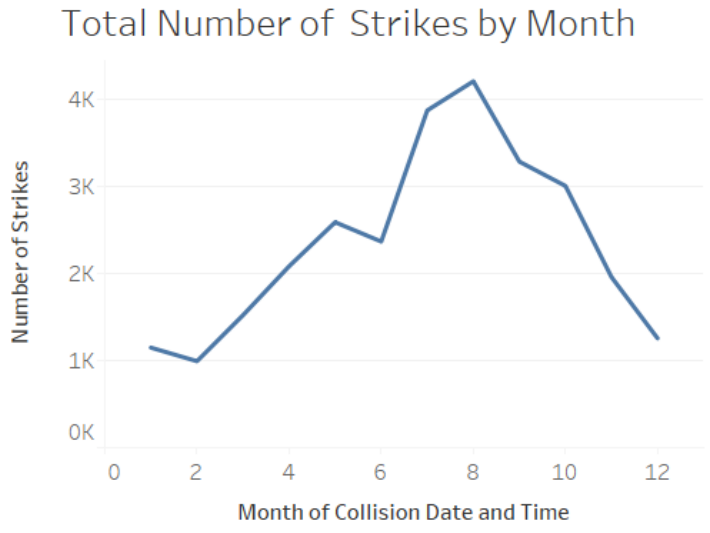
From the charts we can see most of the strikes in the record is from birds, so as the total cost, so we can mainly focus on dealing with bird strikes.

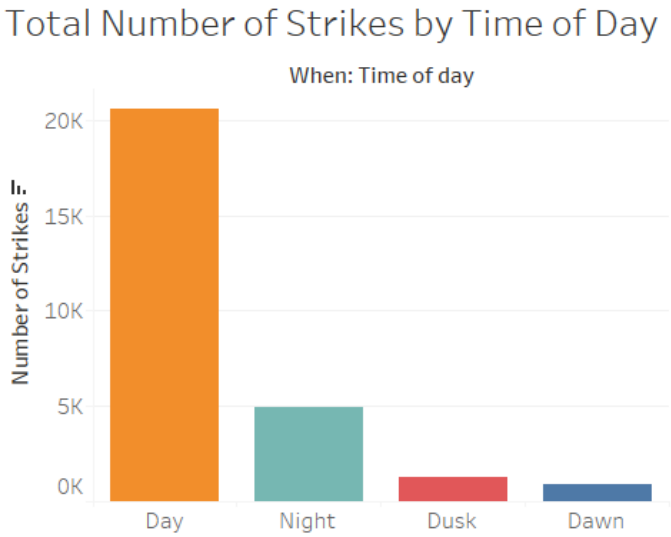
The time aspect

From the Strikes Count and Total Cost over Time chart, we can see that the animal strikes largely happens around August of any year from the 90s to 2015. The prediction of total number of strikes also shows that August will also be the month with most strike for the year of 2016 and 2017. The second chart about Total Number of Strikes by Month also said the same thing by showing the August as the time of year with the largest number of animal strikes.

From the animal characteristics, we know that birds contributes a large number of animal strikes, and most of the so there is a possibility that the number of strikes might go up due to the migration season of birds.



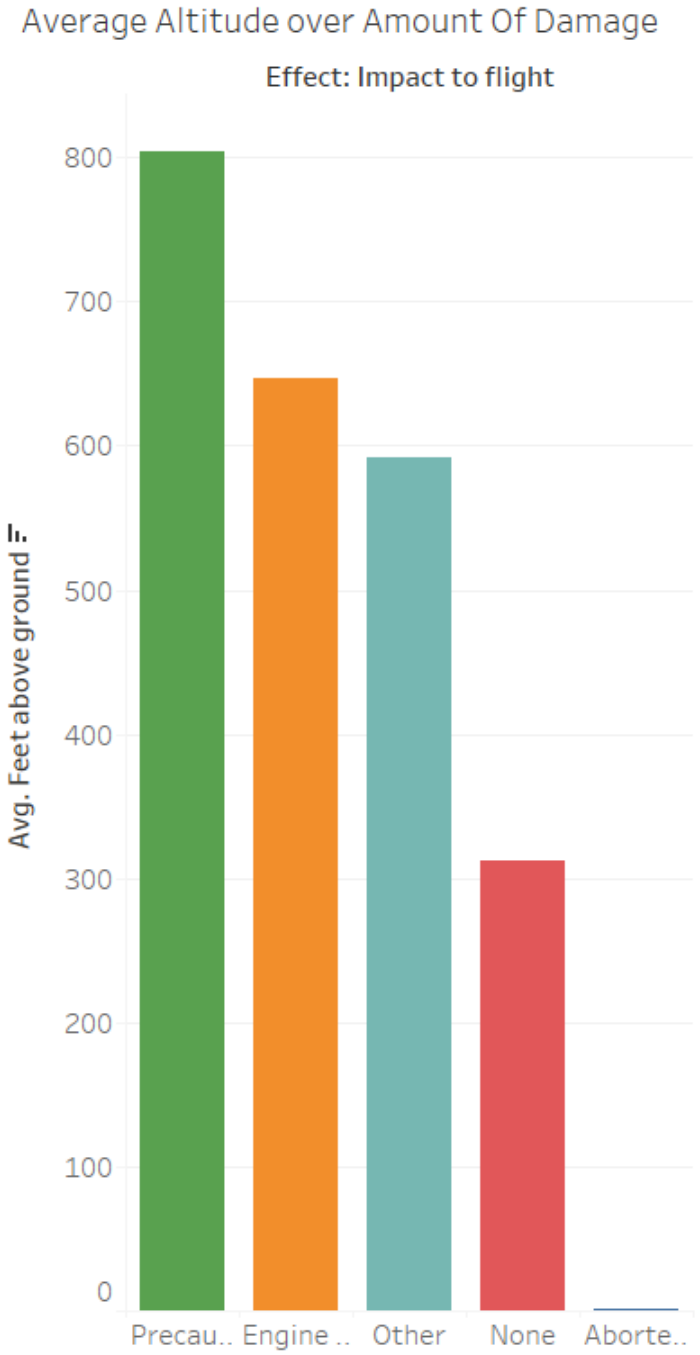


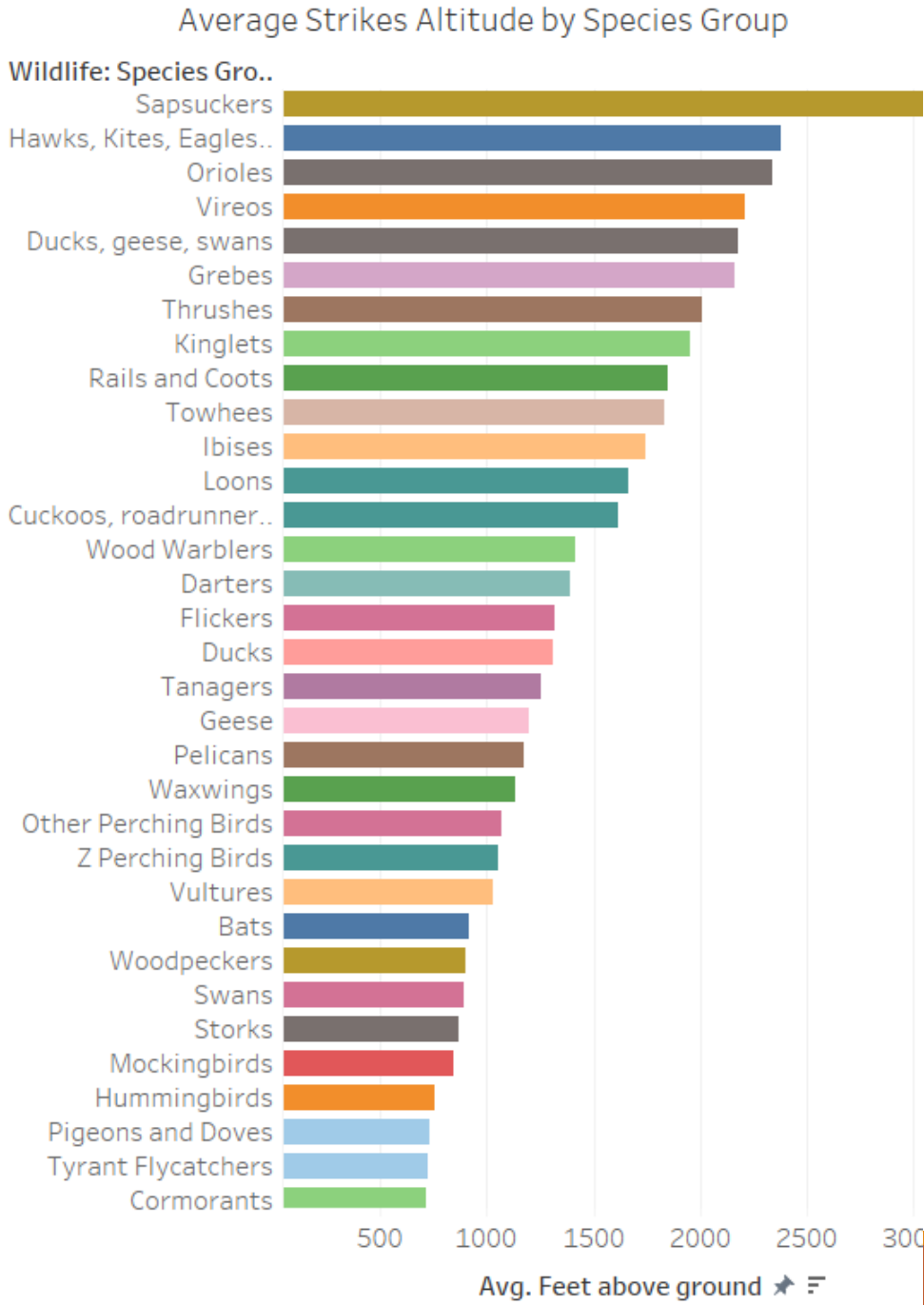


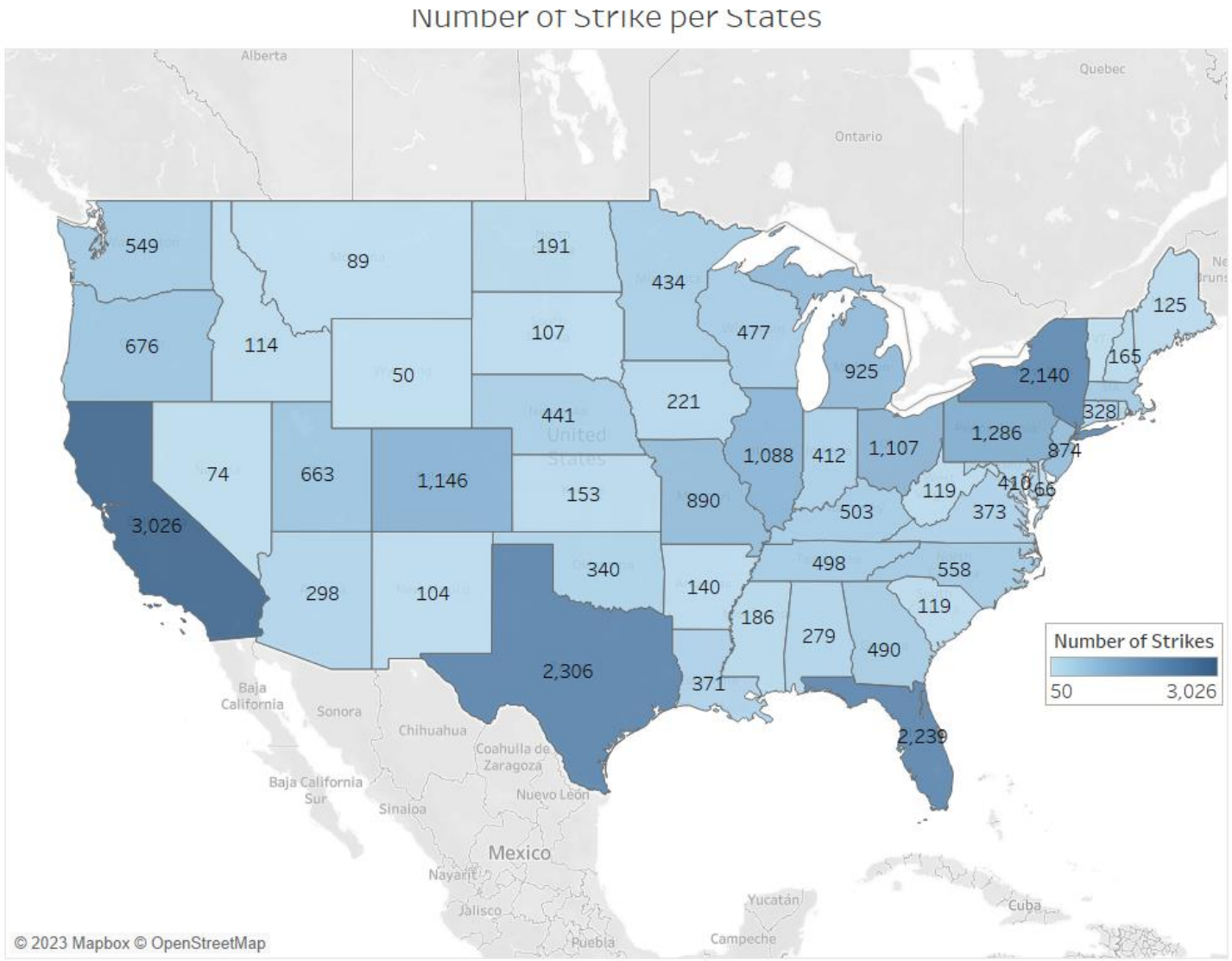
The location aspect

The first chart presents that on average, for precaution landing and engine stop, the strikes happen at high altitude(800 and 650 relatively), which mean that the strikes can be really serious and should be handled with care.

The second show us what type of bird got strikes at what average altitude, from there we can adjust the flight route to avoid the strikes at these altitude.







The location aspect

We also have the map of US with number of strikes on it. And we can see that along the bird migrations line on the West coast, East coast and the middle part of the US, especially California with 3026 strikes, Texas with 2306 strikes, Florida with 2239 and New York with 2140 strikes.

Results

Most of the air strikes of animals in the US are link to birds, especially during August. The strikes lightly to happen on daytime and mostly during approach, landing, take off and climb phrases of the flights.

We also understand that for geological and natural features, some state might expect a significant higher number of strikes such as Texas, California, Florida or New York.

Challenges

- Different numeric data is seem relational, which increase the bias of the analysis

- Cost is unpredictable base on simple regression model

Thank you for your time!