

Data Visualization of Bird Strikes between 2000 – 2011

Introduction

A bird strike is strictly defined as a collision between a bird and an aircraft which is in flight or on a take-off or landing roll. The term is often expanded to cover other wildlife strikes - with bats or ground animals. Bird Strike is common and can be a significant threat to aircraft safety. For smaller aircraft, significant damage may be caused to the aircraft structure and all aircraft, especially jet-engine ones, are vulnerable to the loss of thrust which can follow the ingestion of birds into engine air intakes. This has resulted in several fatal accidents. Bird strikes may occur during any phase of flight, but are most likely during the take-off, initial climb, approach and landing phases due to the greater numbers of birds in flight at lower levels. ^[1] To have a closer look the following document visually depicts the data collected on Bird Strikes by FAA between 2000-2011.

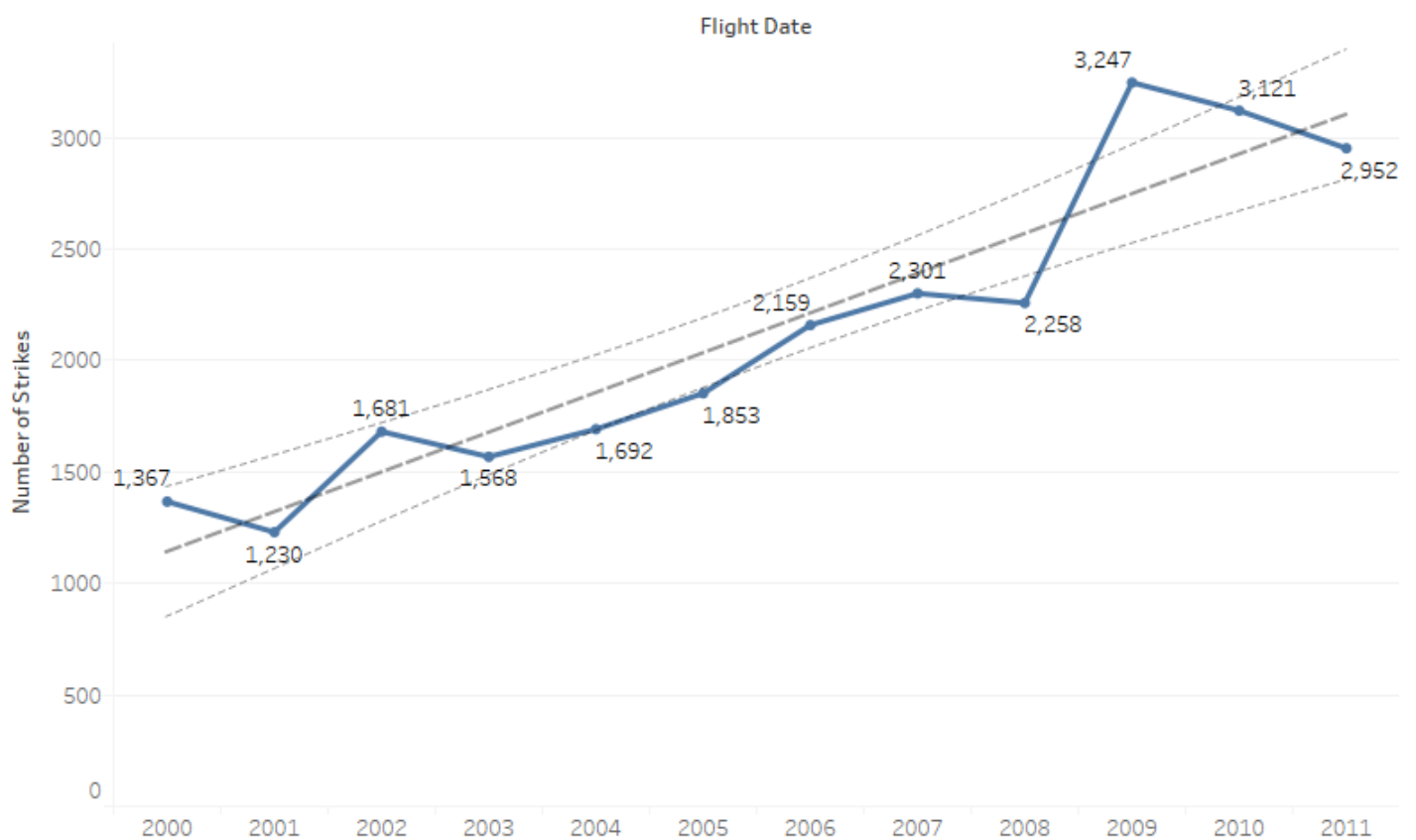
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1. Charts

The following charts provide different information regarding the statistics of the bird strikes.

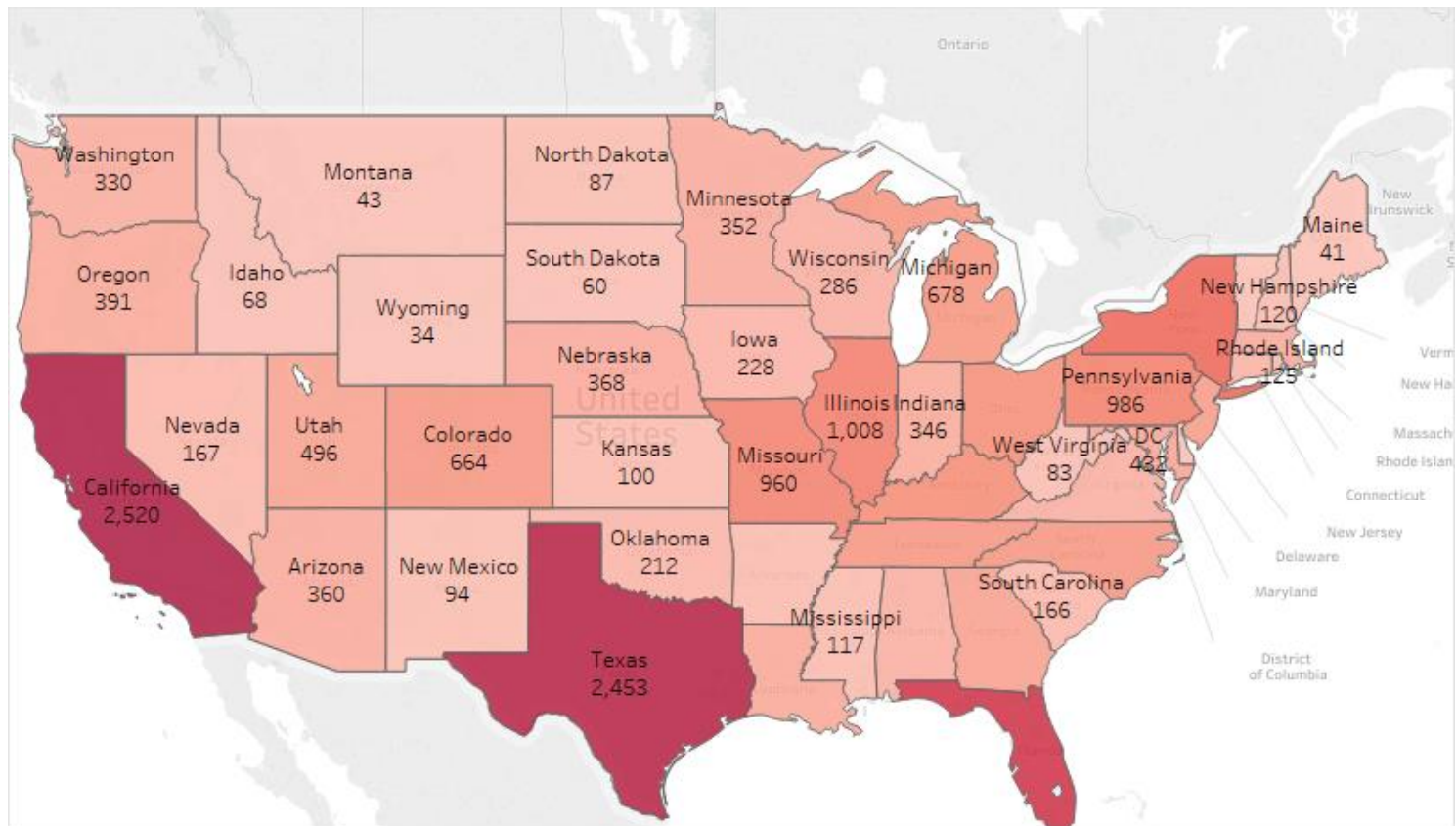
1.1 Visuals Depicting the Number of Bird Strikes:

1.1.1 Yearly Analysis



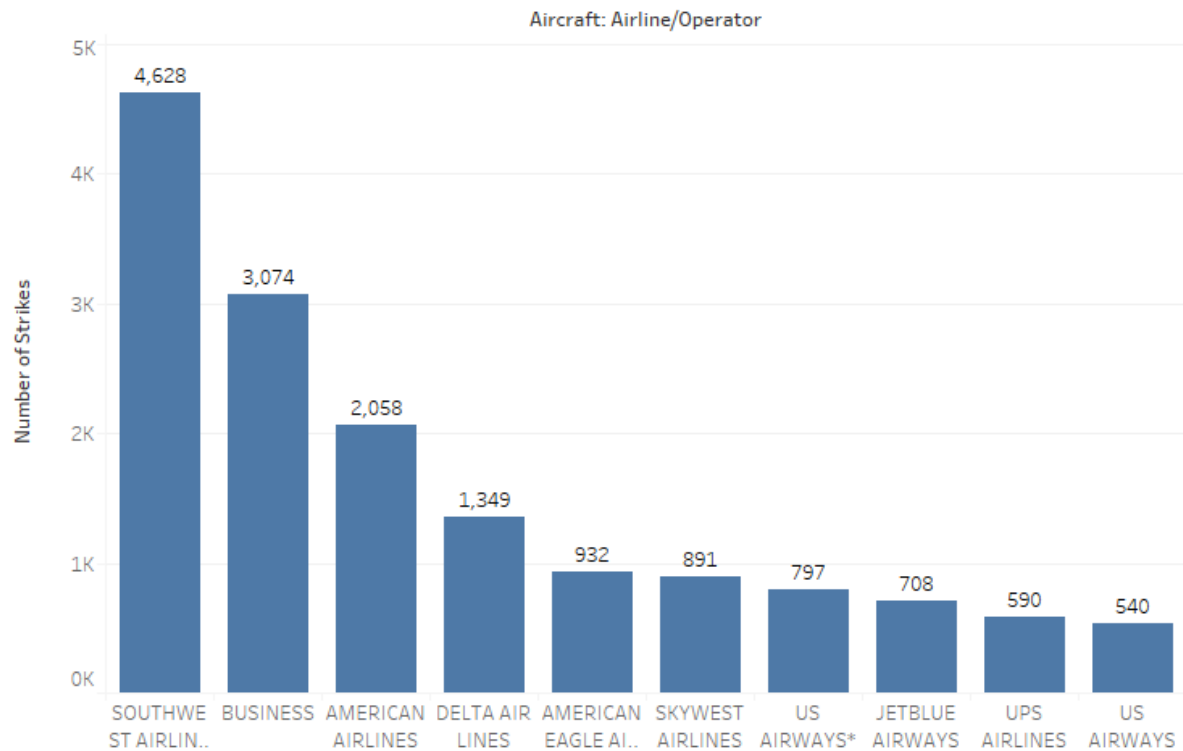
Yearly Analysis

1.1.2 Bird Strikes in US



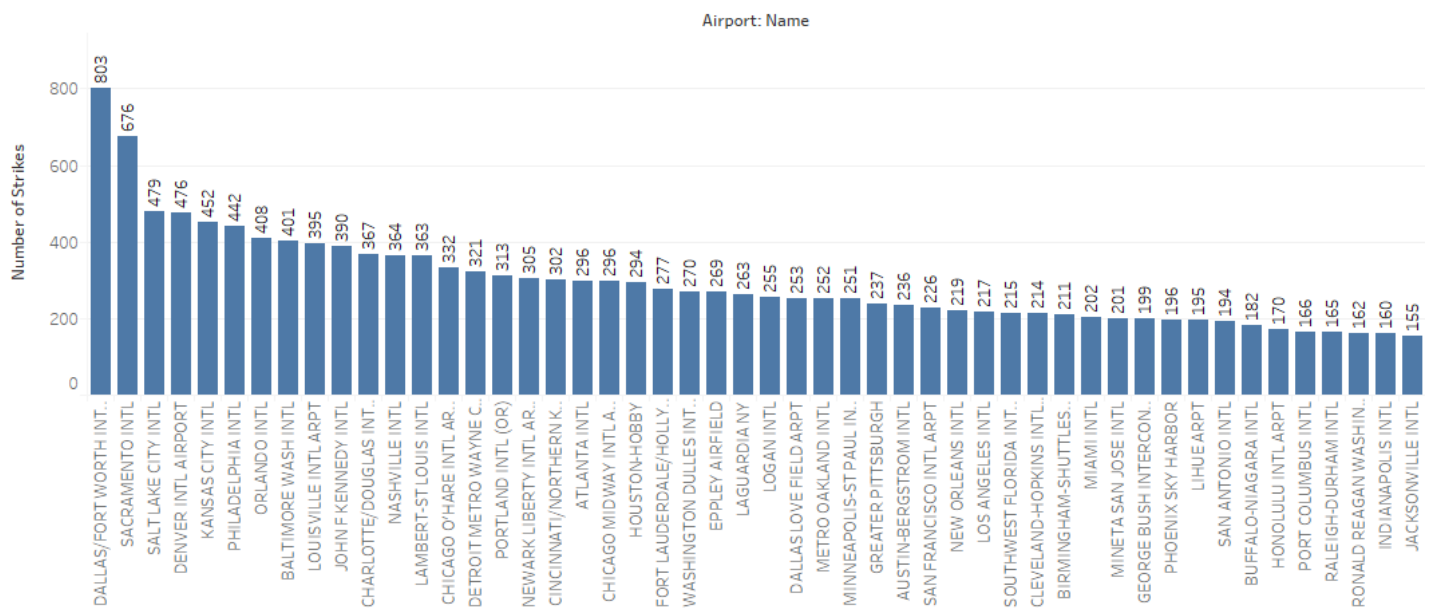
Bird Strikes in US

1.1.3 Top 10 US Airlines in terms of having encountered bird strikes



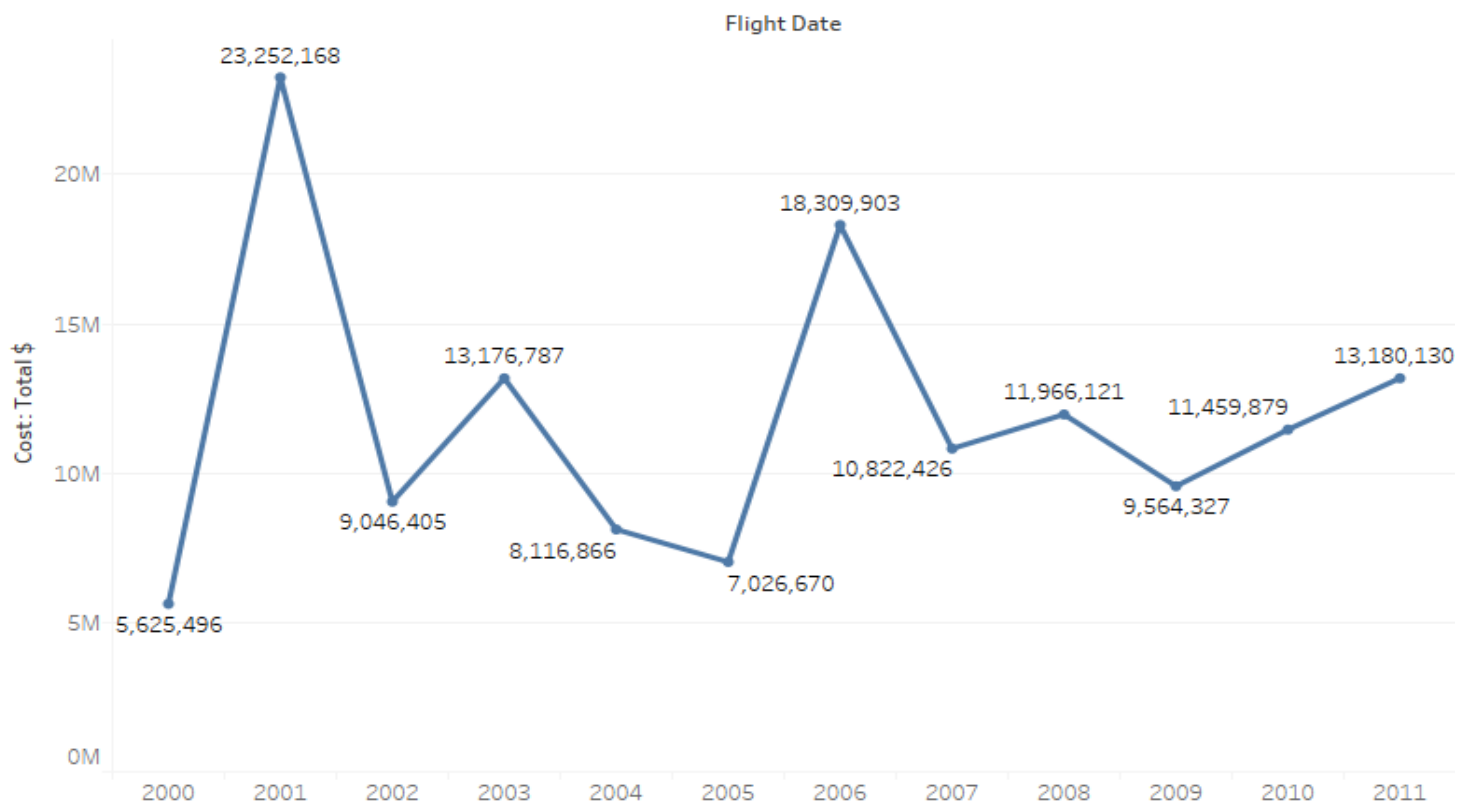
Top 10 US Airlines

1.1.4 Airports with most incidents of bird strikes – Top 50



Top 50 Airports

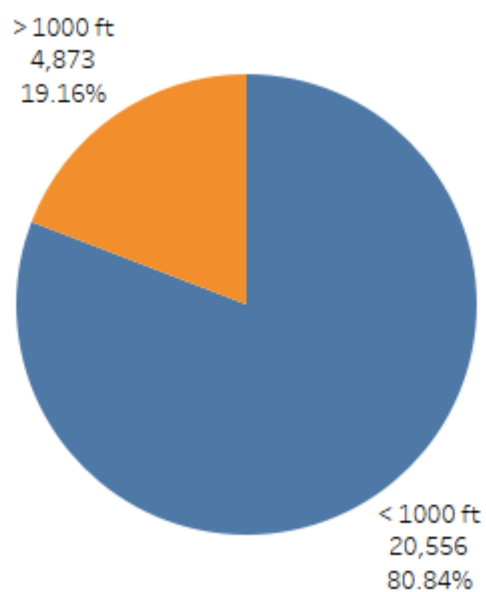
1.2 Yearly Cost Incurred due to Bird Strikes:



Yearly Cost \$

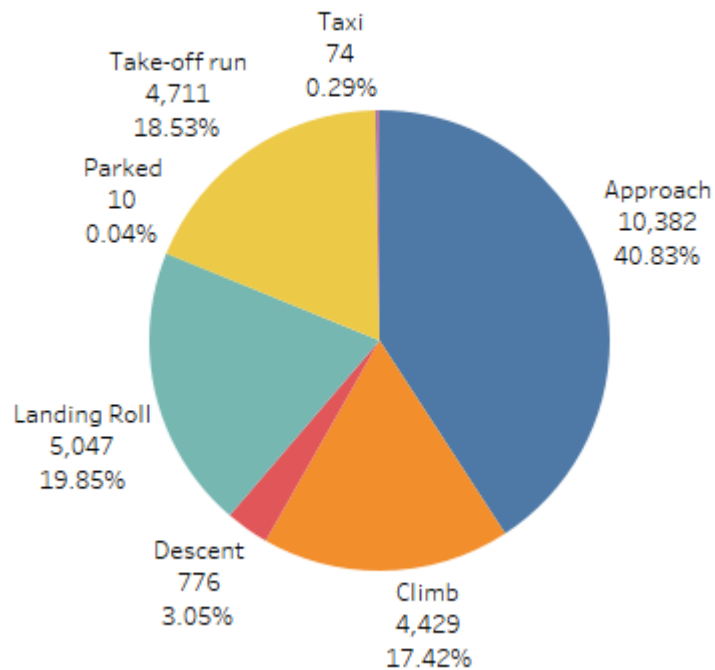
1.3 When do most bird strikes occur?

1.3.1 Altitude of airplanes at the time of strike



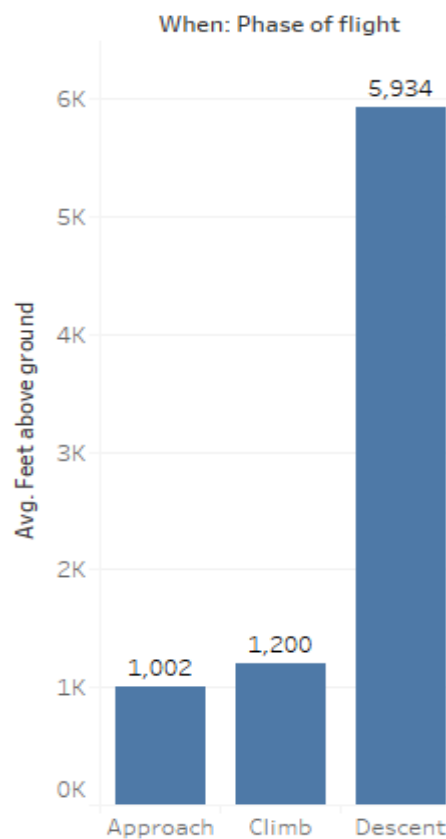
Altitude of Airplane

1.3.2 Phase of flight at the time of strike



Phase of Flight

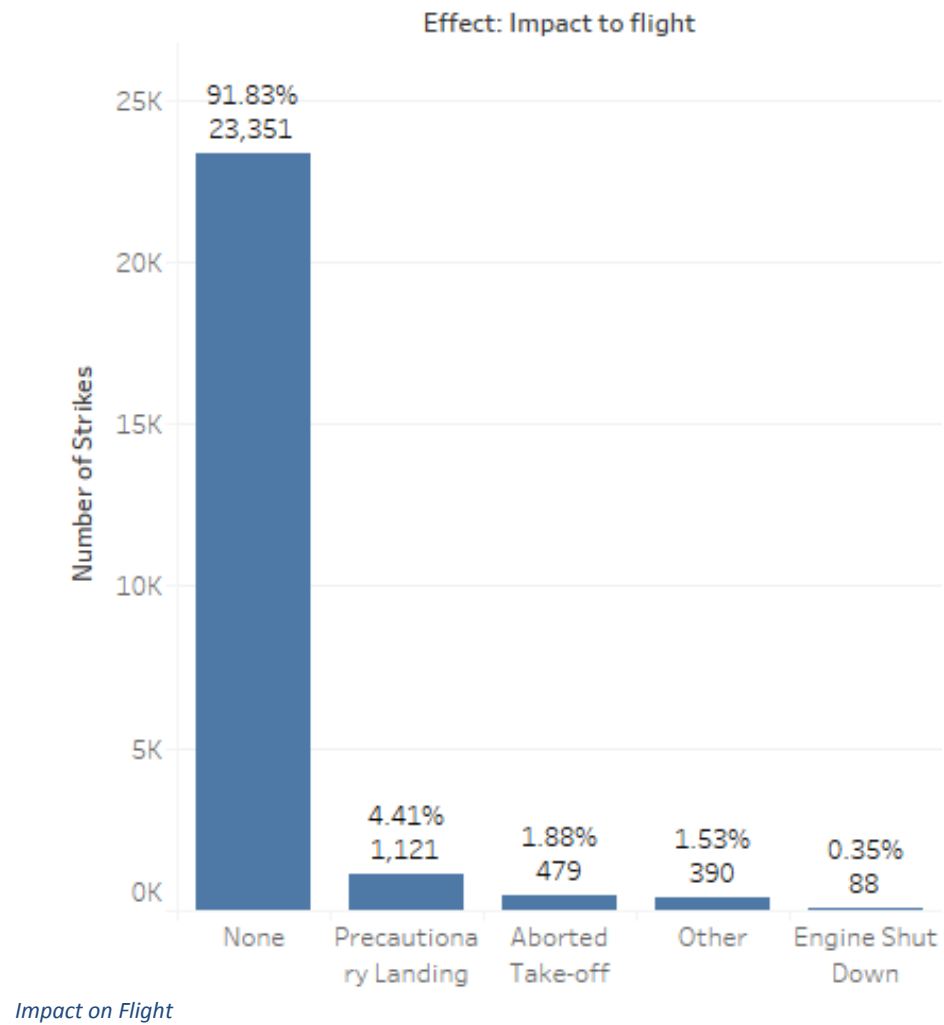
1.3.3 Average Altitude of the airplanes in different phases at the time of strike



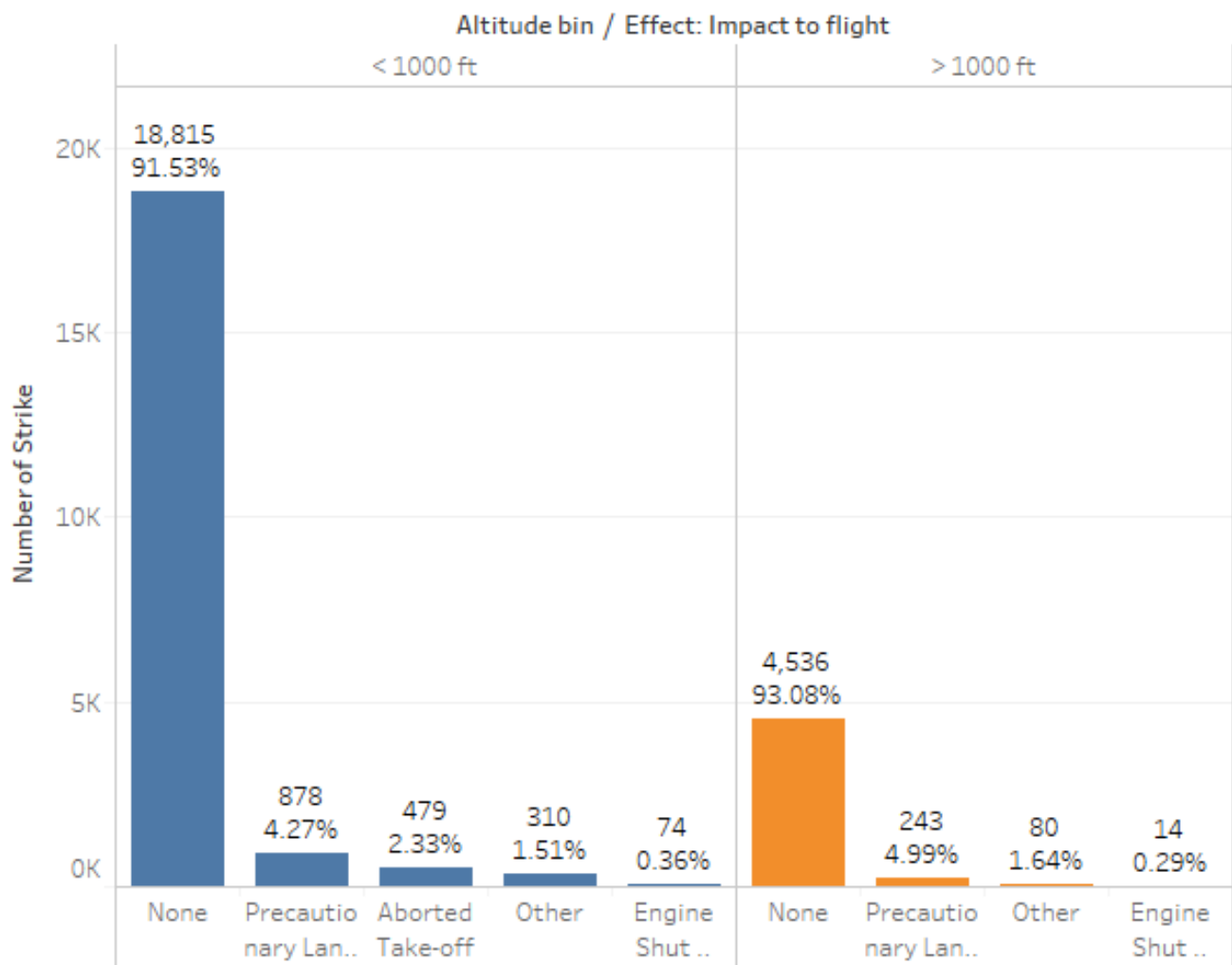
Avg Altitude in different phases

1.4 Effect of Bird Strikes

1.4.1 Impact on Flight

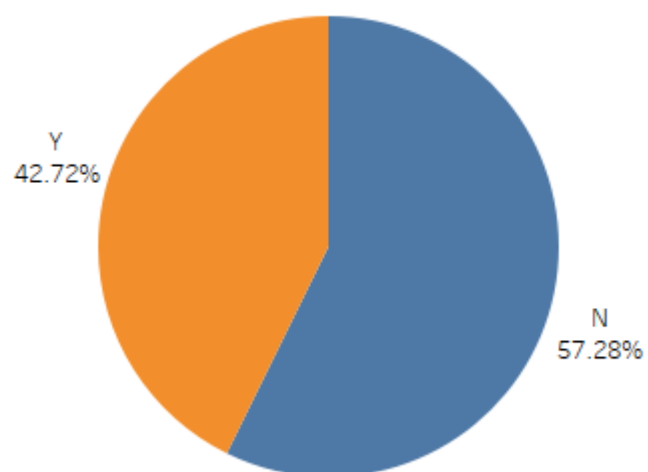


1.4.2 Effect of Strike at Different Altitude



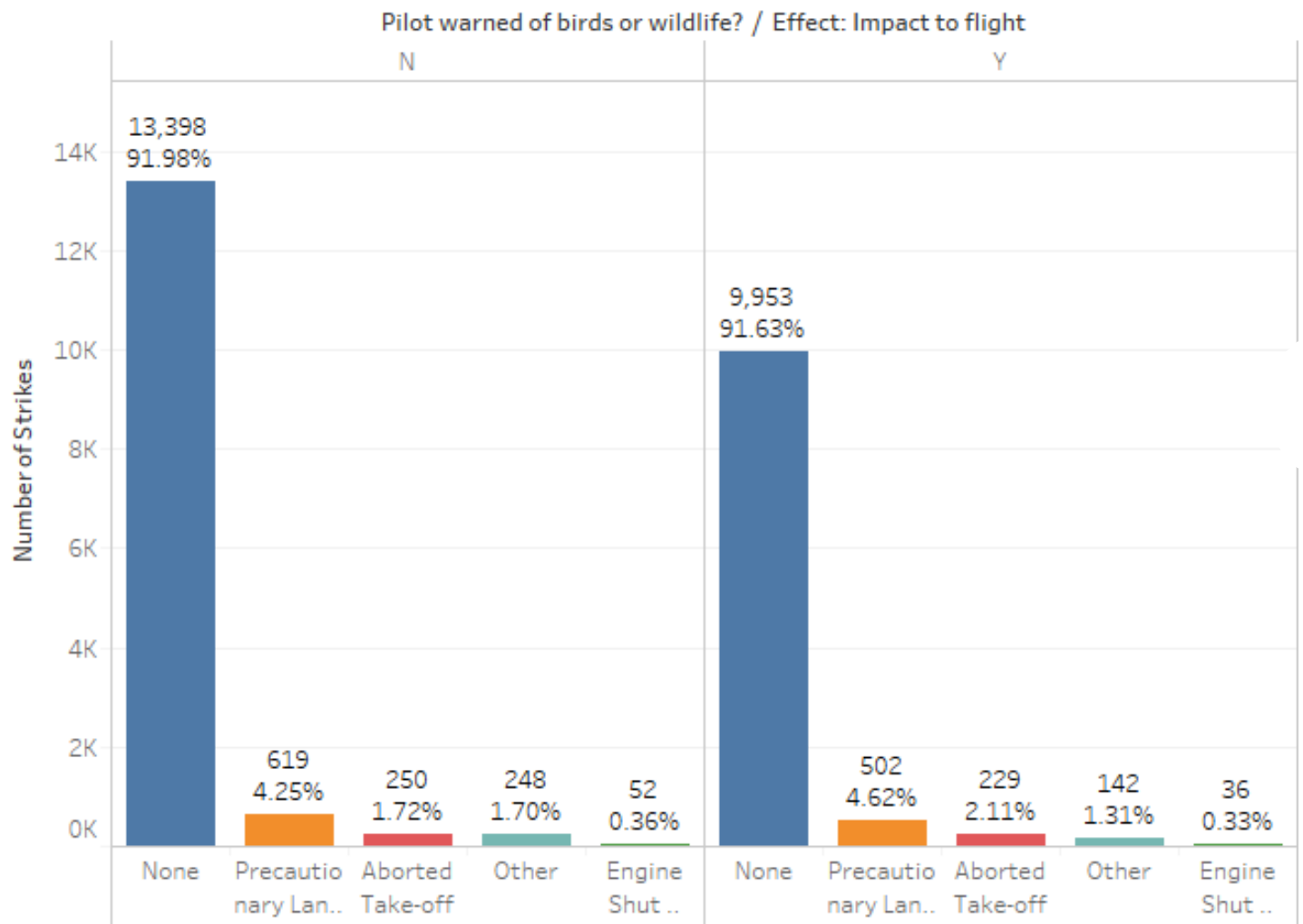
Altitude-Effect Relation

1.4.3 Were Pilots Informed?



Pilots Informed?

1.4.4 Prior Warning and Effect of Strike Relation



Prior Warning - Effect Relation

Note: The above data visualization has been done on the dataset: 2000-2011 Birds Strikes Planes. ^[2]

2 References

- [1] http://www.skybrary.aero/index.php/Bird_Strike
- [2] Data Set from <https://data.world/shihzy/2000-2011-birds-strikes-planes>