



BIRD STRIKES BETWEEN 2000 - 2011



Introduction to Bird Strikes

Bird strikes, a significant aviation safety issue, occur when birds collide with aircraft in flight, leading to potential damage and safety hazards.

KPI

Number of Bird Strikes

The total number of bird strikes is approximately 24.75K.

Total Cost for Airplane Repair

The incurred cost for repairing airplanes due to bird strikes is estimated at 13M.

Average (Number of Incident per Year)

The average number of bird strike incidents per year is around 2K.

Average Altitude of the Airplanes

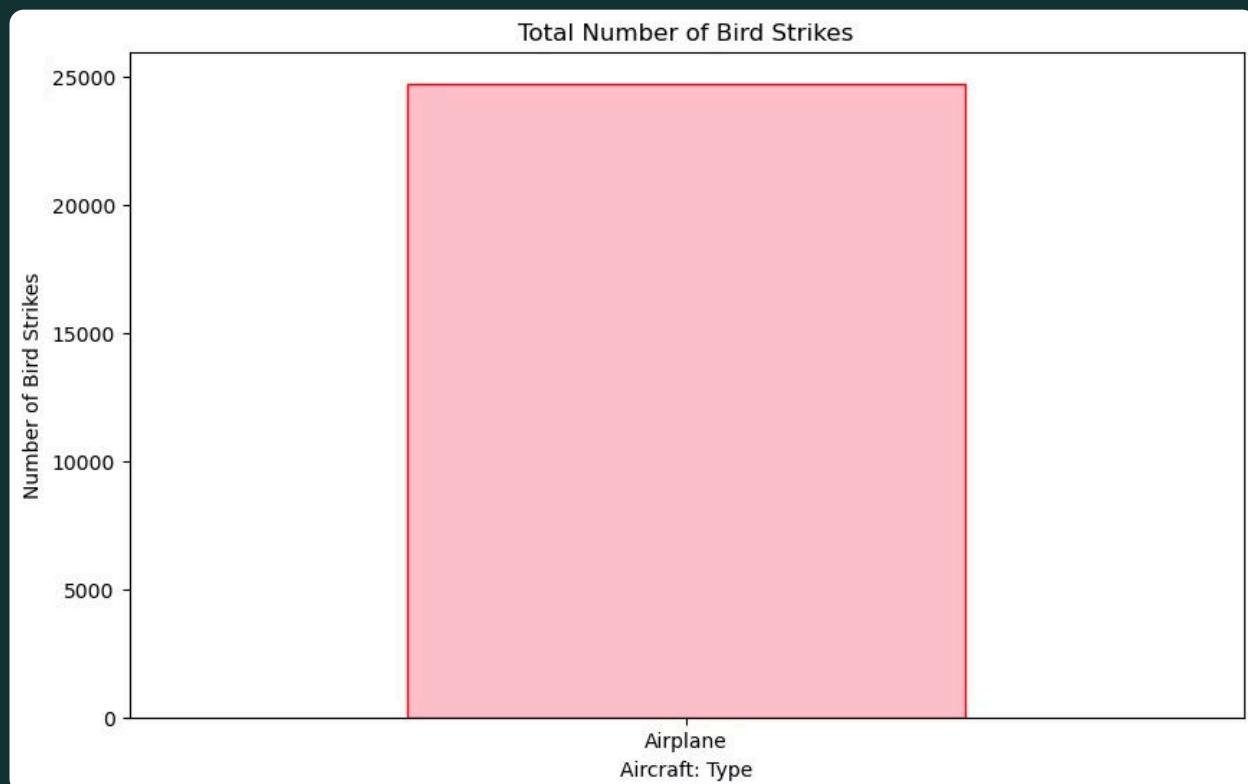
The average altitude of airplanes in different phases at the time of strike is approximately 801.5 feet.

Number of People Injured

A total of 21 people were reported injured due to bird strikes.



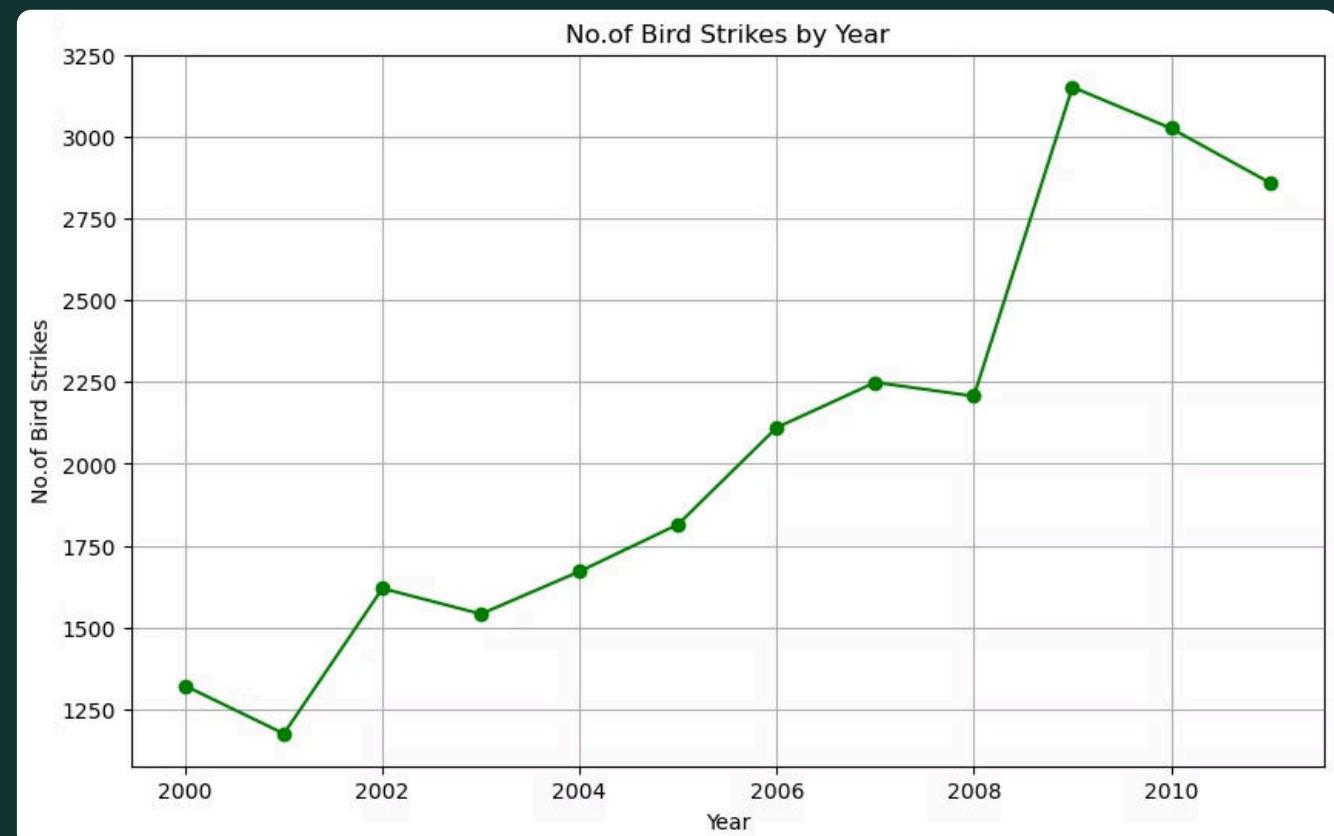
Total Number of Bird Strikes



Global Impact

It's concerning that there have been approximately 25,000 bird strikes.

Yearly Analysis & Bird Strikes in the US



1 2000 - 2005

During this period, the number of bird strikes showed a steady rise.

2 2006 - 2008

The frequency of bird strikes continued to increase, raising concerns.

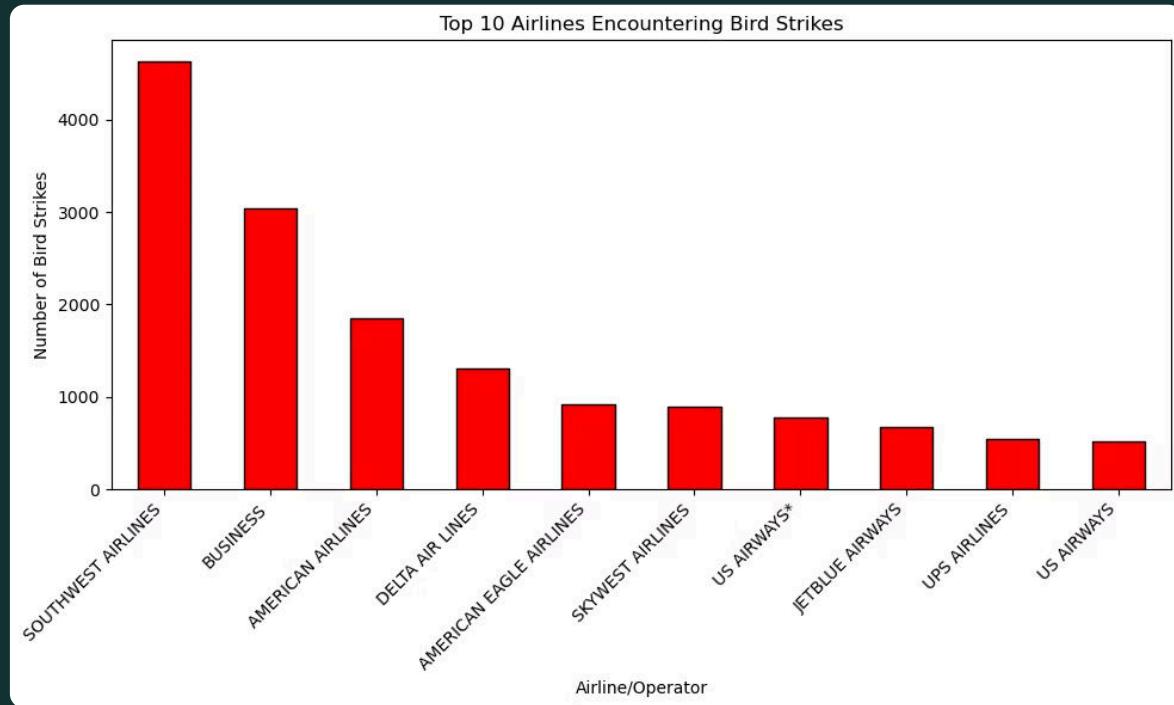
3 2009 - 2011

In the final years, bird strikes saw a notable surge, warranting attention.

st Frequently Struck
e involved in collisions with U
bird types most often involve
efined by the FAA.



Top 10 US Airlines in terms of having encountered bird strikes



Delta Airlines

- Experienced the highest number of bird strikes.

American Airlines

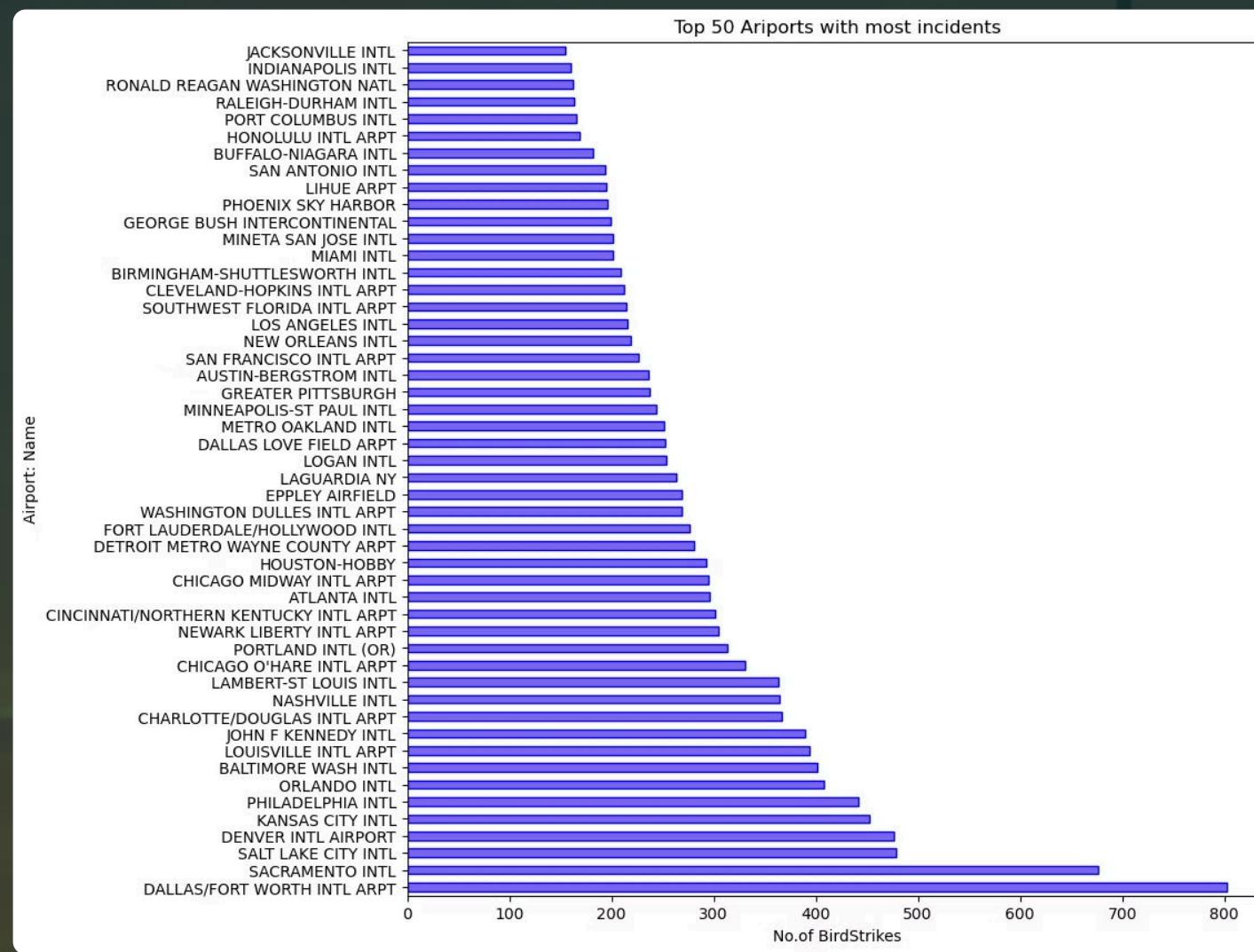
- Reported bird strike incidents across various locations.

United Airlines

- Landed in the top 3 for bird strike occurrences.



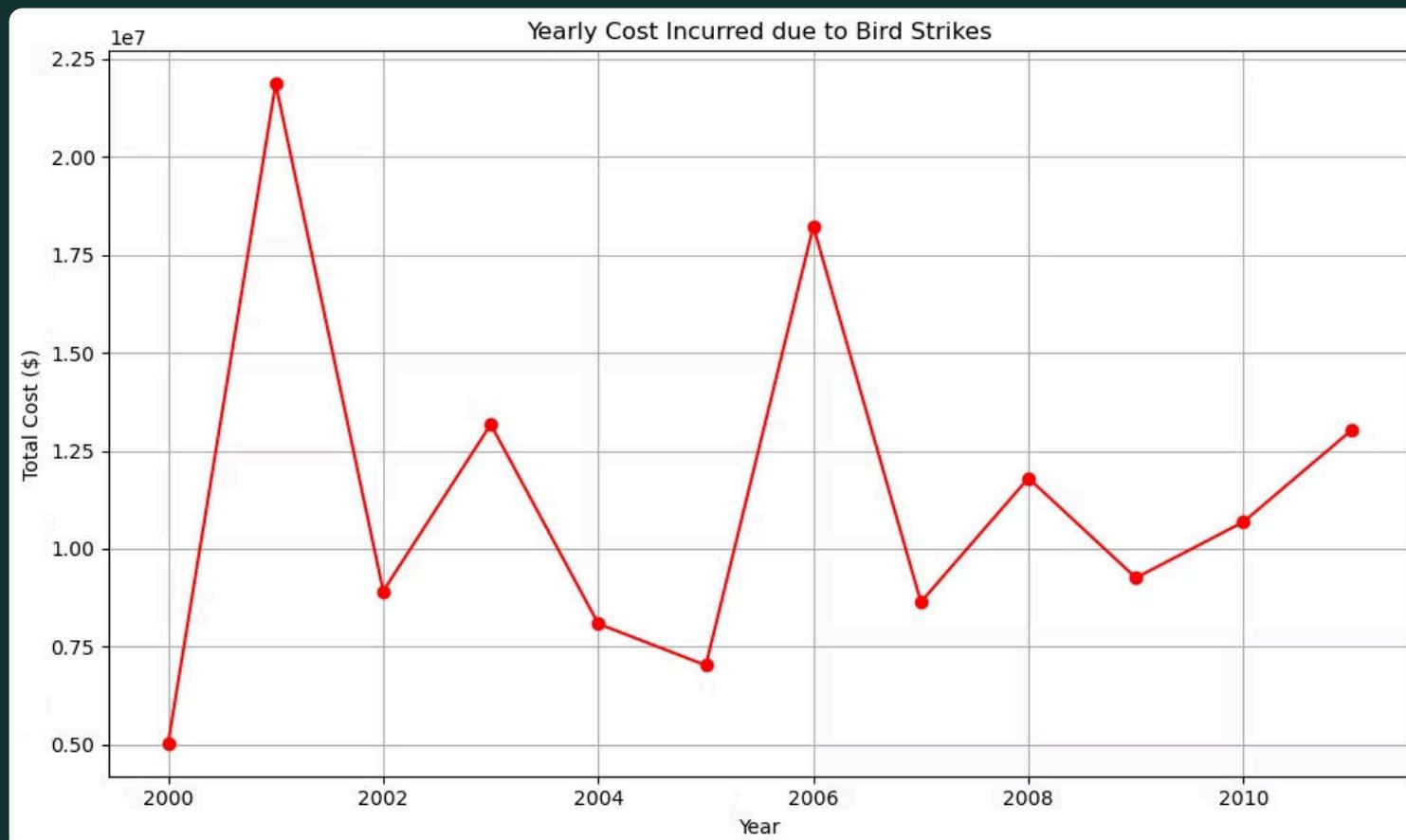
Airports with the Most Bird Strike Incidents



The analysis of the top 50 airports reveals the locations where bird strikes occur frequently. These airports face high incidents of bird strikes, causing potential risks to aviation activities and passenger safety. Understanding these hotspots can aid in developing targeted preventive measures and safety protocols.

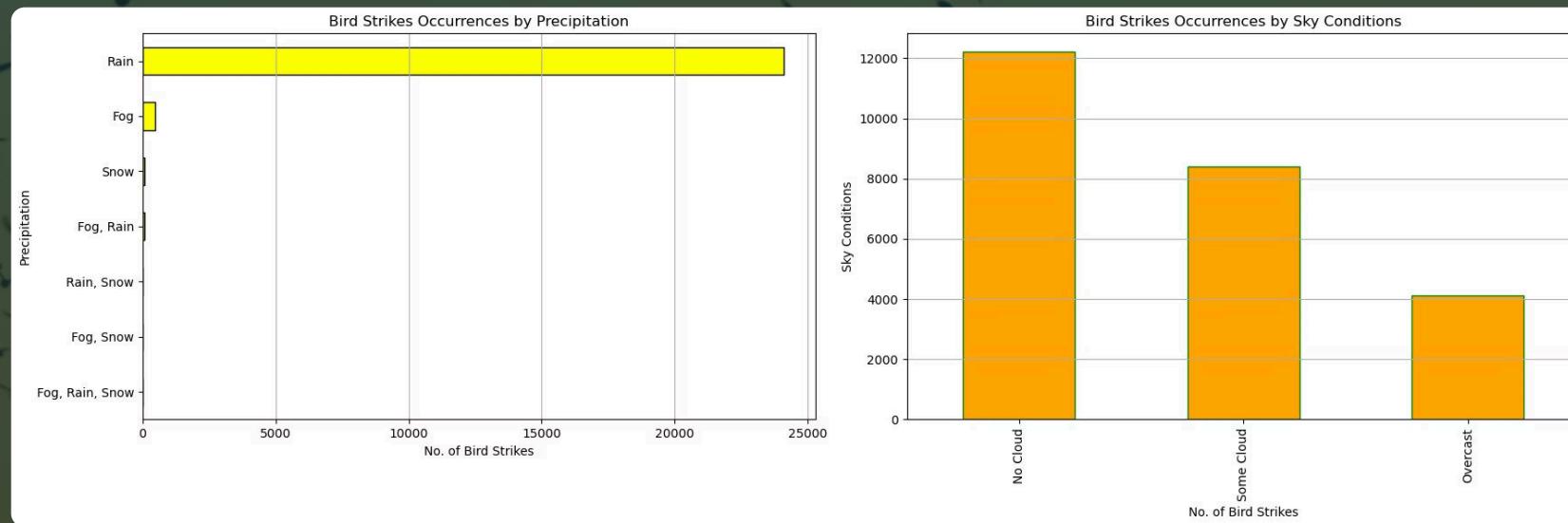


Yearly Cost Incurred due to Bird Strikes



Analysis of the annual cost impact of "Bird Strikes" on airplanes reveals substantial financial implications due to damages incurred by the strikes.

Analysis of most bird strikes occur in Different Conditions



Precipitation

Many bird strikes occur during precipitation, such as rain or snow.

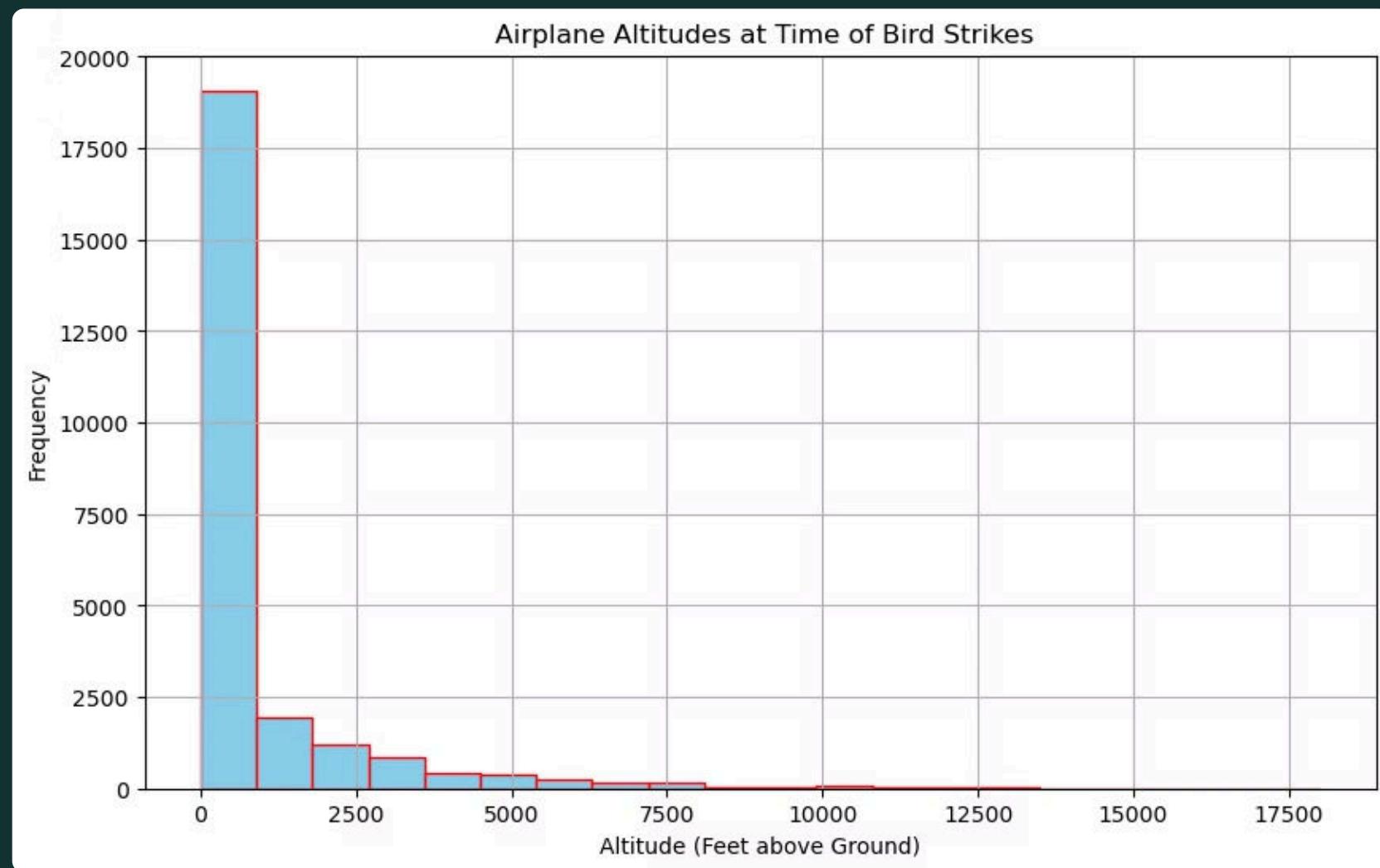


Sky Conditions

Bird strikes are common during various sky conditions, impacting flight safety.



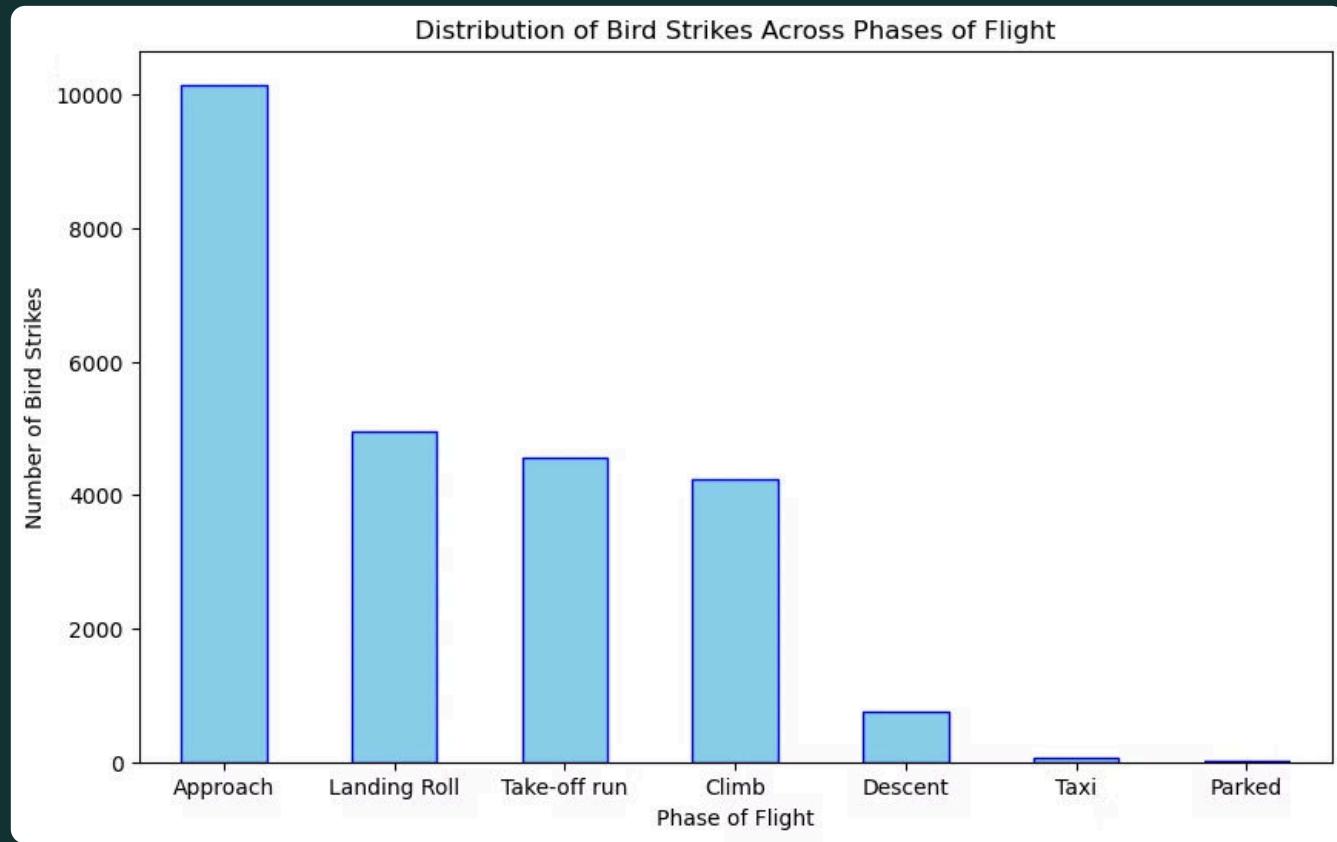
Altitude of airplanes at the time of strike



When analyzing bird strikes, it's crucial to understand the altitude of airplanes at the time of impact. The altitude (in feet above ground) is a key factor in evaluating the risk posed by birds to aviation safety.

It's intriguing to note how different altitudes correlate with varying frequencies of bird strikes, providing valuable insights for aviation safety measures.

Phase of Flight at the Time of the Strike



Approach

Most bird strikes occurred during the approach phase of the flight.

Landing Roll

Significant bird strikes were observed during the landing roll.

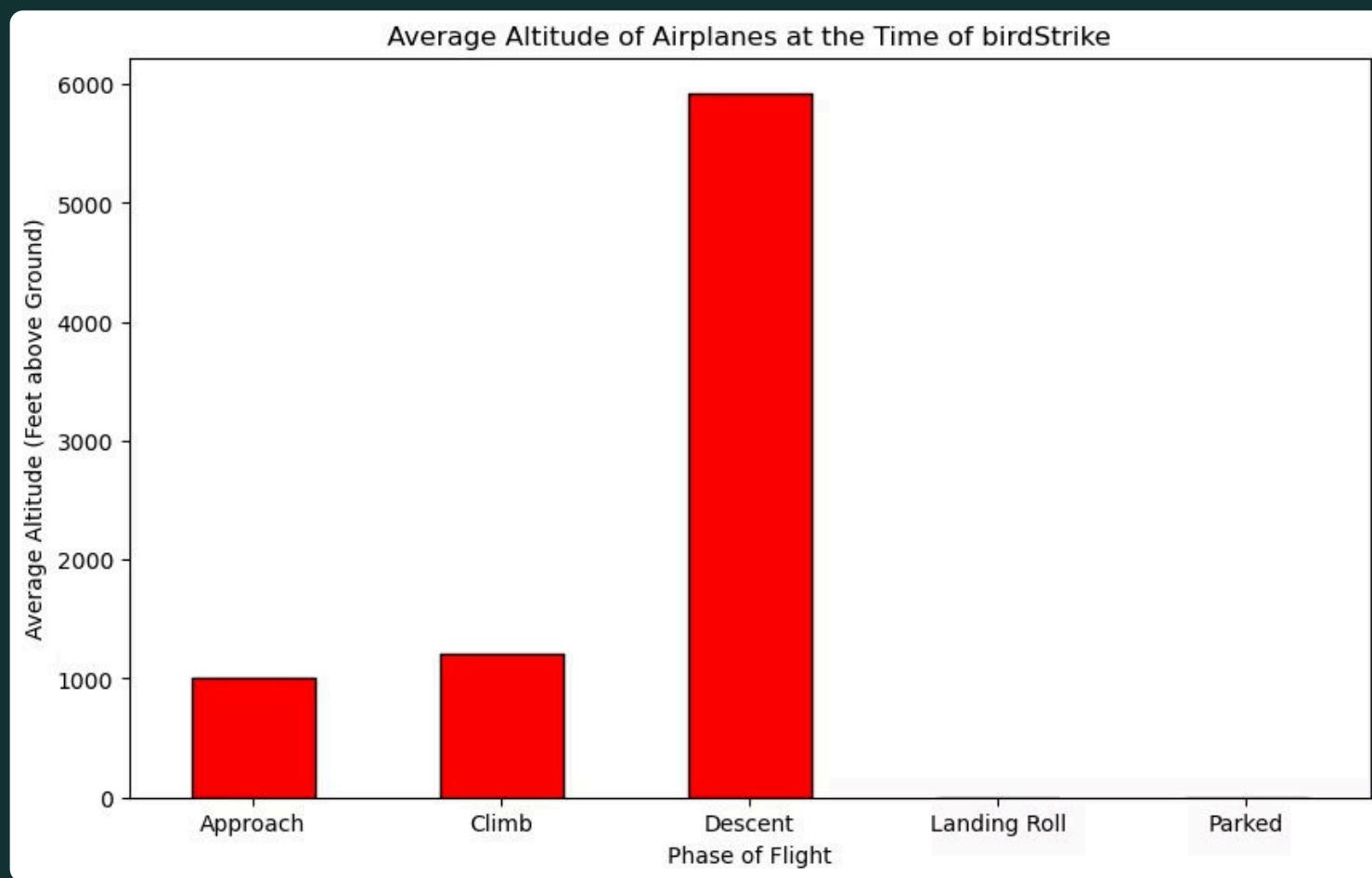
Take-off Run & Climb

Bird strikes commonly happened during the take-off run and climb.





Average Altitude of Aircraft During Strikes



Descent

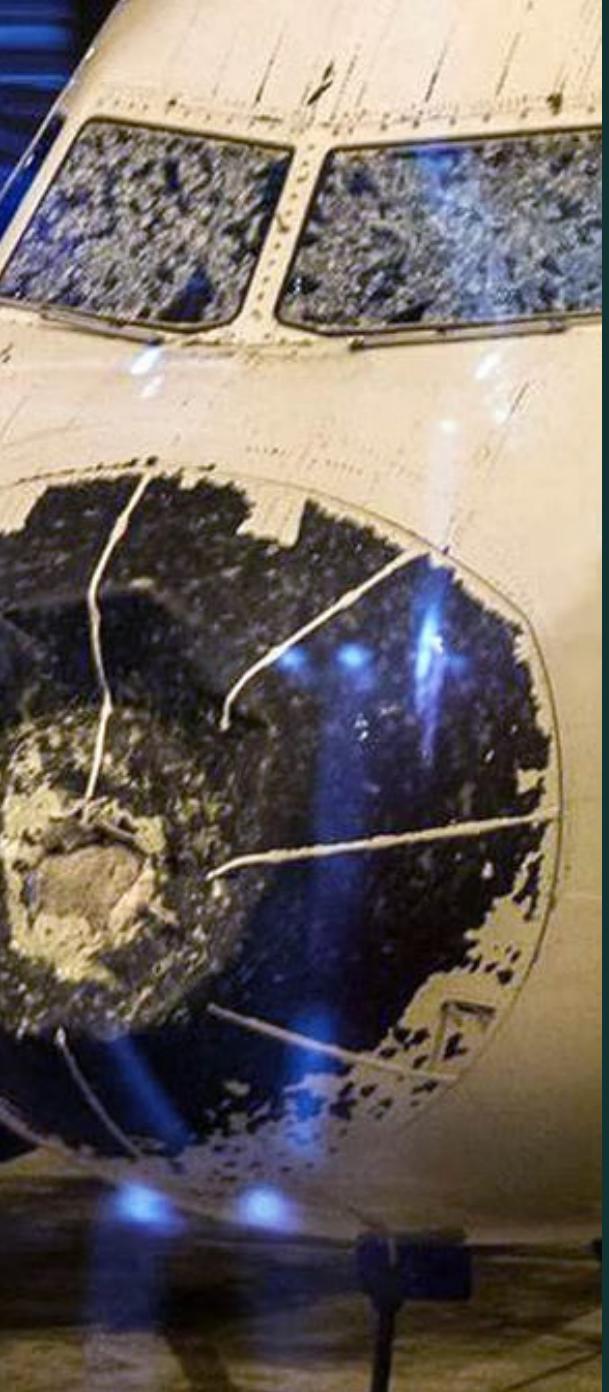
Most bird strikes occurred when aircraft were in the descent phase.

Climb

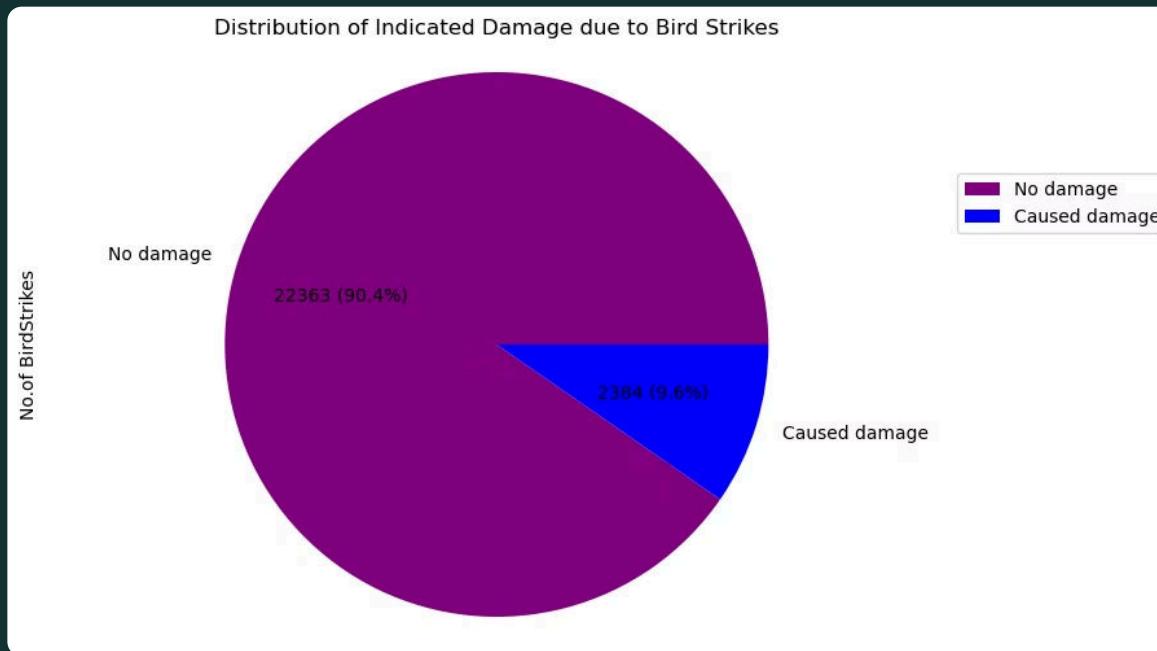
Bird strikes were also common during the climb phase of flights.

Approach

The approach phase also experienced a high number of bird strikes.



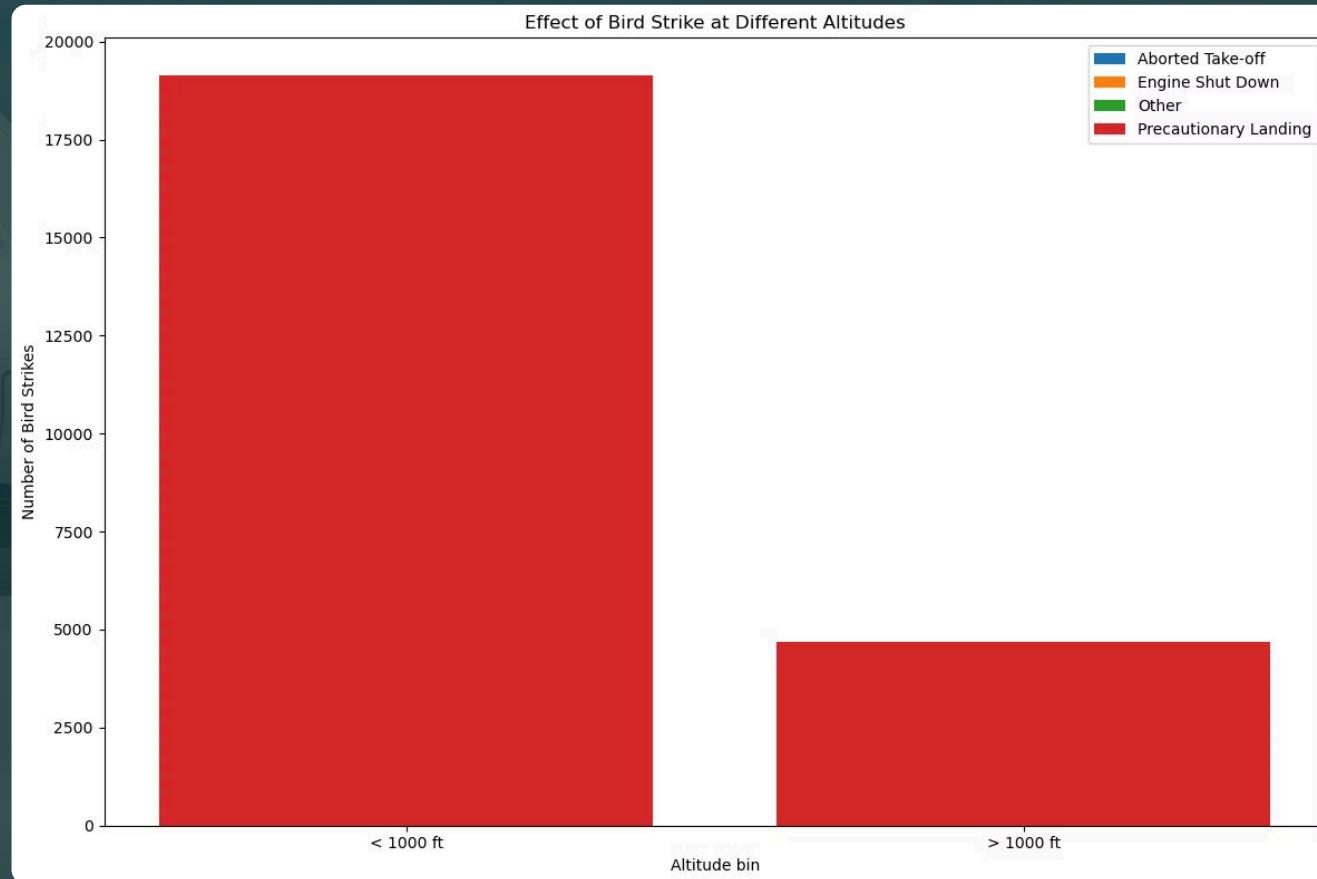
Analysis of Bird Strikes Effects & Impact on Flight



Damage at Landing

Observations highlight damage to planes resulting from bird strikes during landing.

Effect of Strike at Different Altitudes

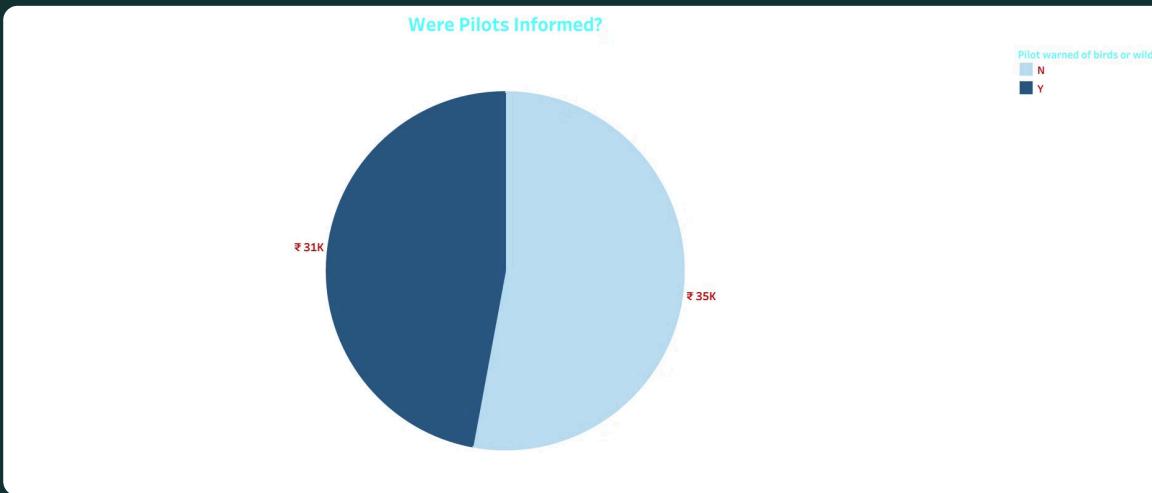


Altitude Analysis

The bar chart provides insights into the altitude of aircraft during bird strikes.



Were Pilots Informed? Prior Warning and Effect of Strike Relation



Pilot Communication

A review of the bar chart data indicates the altitude of planes during bird strikes.

Insights from Bird Strikes b/w 2000 - 2011 Data Analysis

Yearly Trends

The data from 2000-2011 reveals that bird strikes have been on a gradual rise, aligning with increased air traffic. The yearly trends indicate a spike during migration seasons when birds traverse vast distances, heightening the risk of air collisions.

Affected Airlines

Top airlines have reported varying degrees of bird strike incidents, with some regional carriers experiencing more frequent occurrences possibly due to operating in bird-rich routes or the vicinity of large water bodies where bird populations thrive.

Major Airports

Airports located near coastal areas, wetlands, and wildlife reserves are identified as hotspots for bird strike incidents. Enhanced surveillance and mitigation measures are critical at these locations to reduce strike events.

The impact of bird strikes is not only a concern for avian welfare but also weighs heavily on the financial aspects of airline operations. The data analysis shows that annual costs associated with these incidents, including damage repair and flight delays, contribute to a substantial economic burden on the industry. Furthermore, the safety implications cannot be overstated, with numerous cases resulting in emergency procedures and unscheduled landings.



Thank You