

Bird Strikes Analysis Report

Executive Summary

Bird strikes pose a significant safety concern in aviation, impacting aircraft operations and safety. This report presents a comprehensive analysis of bird strike data collected between 2000-2011, focusing on key aspects such as wildlife species, locations, and financial implications. The visualizations and insights generated using Power BI provide a holistic view of the bird strike landscape.

Visualizations and Key Findings

1. Bird Strikes Overview

- The bar chart illustrates the distribution of bird strikes across various wildlife species.
- Prominent species include Seagulls, Hawks, and Pigeons.

2. Yearly Analysis

- The line chart depicts the yearly trend in bird strikes, showing fluctuations over the years.
- Notable peaks occurred in 2005 and 2009.

3. Geographical Distribution

- The heat map provides insights into the geographical distribution of bird strikes, highlighting regions with higher incident rates.
- Airports in the Northeastern and Southeastern regions experienced elevated occurrences.

4. Wildlife Species Contribution

- The donut chart displays the contribution of different wildlife species to the total number of strikes.
- Seagulls constitute a significant portion of bird strikes.

5. Financial Impact

- The box plot visualizes the financial impact of bird strikes, showing the distribution of total costs.
- Outliers indicate incidents with exceptionally high associated costs.

Recommendations

1. Enhanced Monitoring and Reporting:

- Strengthen monitoring systems at airports to detect and report bird strikes promptly.

2. Wildlife Management Programs:

- Implement wildlife management programs to mitigate the presence of high-risk species around airports.

3. Improved Pilot Training:

- Enhance pilot training programs to improve responses to bird strikes during different phases of flight.

4. Technological Solutions:

- Explore and invest in technological solutions, such as avian radar, to detect and mitigate bird strike risks.

Conclusion

The analysis of bird strike data through Power BI reveals valuable insights into the patterns and impact of these incidents. By leveraging these insights, aviation authorities and stakeholders can implement targeted strategies to enhance safety and reduce the financial burden associated with bird strikes.