## **Summary Report: Bird Strikes Analysis (2000-2011)**

**TASK 3**

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## **Objective**

## The objective of this analysis was to create interactive data visualizations to effectively showcase the trends and patterns in bird strikes from 2000 to 2011. The goal was to provide clear insights into how bird strikes have changed over time and identify any significant patterns.

## **Data Overview**

## The dataset includes information on bird strikes reported in the US between 2000 and 2011. Key data points include:

## • Timeline of bird strikes

## • Top states where incidents occurred

## • Altitude at which strikes happened

## • Wildlife size involved in strikes

## • Information on pilots being informed

## • Impact on flight

## • Airline operators and airports most affected

## • Phase of flight during which strikes occurred

## **Key Metrics and Insights**

## **1. Timeline of Bird Strikes:**

## • The number of bird strikes has generally increased over the years, starting from 1,367 in 2000 and peaking at 3,012 in 2011.

## • Notable years with significant increases include 2006, 2008, and 2011, indicating potential factors or reporting changes during these years.

## **2. Top State:**

## • The dashboard highlights states with the highest bird strike incidents, with Texas, Florida, California, and New York being prominent.

## **3. Altitude:**

## • The majority of bird strikes (80.84%) occurred below 1,000 feet.

## • A smaller portion (19.16%) occurred above 1,000 feet, suggesting most incidents happen during takeoff and landing phases.

## **4. Wildlife Size:**

## • Small birds accounted for 68.47% of the strikes.

## • Medium-sized birds were involved in 23.35% of the strikes.

## • Large birds were involved in 8.18% of the strikes.

## **5. Pilots Informed:**

## • In 57.28% of the cases, pilots were not informed about the bird strike.

## • In 42.72% of the cases, pilots were informed, highlighting potential gaps in communication.

## **6. Effect on Flight:**

## • The majority of bird strikes (91.83%) had no effect on the flight.

## • Precautionary landings were required in 4.41% of the incidents.

## • Minor effects were observed in 3.76% of the cases.

## **7. Airline Operators:**

## • Southwest Airlines reported the highest number of bird strikes (4,028), followed by Business (3,074), American Airlines (2,058), and Delta Air Lines (1,349).

## **8. Airports:**

## • Dallas/Fort Worth International Airport had the highest number of bird strikes (803).

## • Other notable airports include Sacramento International (676), Salt Lake City International (479), and Denver International (476).

## **9. Phase of Flight:**

## • The approach phase saw the highest percentage of bird strikes (40.83%).

## • Other significant phases include landing roll (19.85%), take-off run (18.53%), climb (17.42%), and descent (3.05%).

## **Conclusions and Recommendations**

## • Trend Analysis: The upward trend in bird strikes over the years suggests a need for improved wildlife management and bird strike prevention strategies.

## • Risk Assessment: High-risk phases of flight (approach, landing roll, and take-off run) require targeted mitigation efforts.

## • Communication: Enhancing communication protocols to ensure pilots are promptly informed about bird strikes could improve response measures.

## • Focused Measures: Specific measures should be taken at high-risk airports and for airline operators with higher incident rates.

## • Wildlife Management: Continued efforts in managing bird populations around airports can help reduce the frequency of bird strikes.

## This report summary can be populated with specific data from dashboard for detailed insights and presentation.