

## DS\_C7\_S4

### Task 1A: Stacked Bar Chart

- The visualization shows the frequency of different wildlife species involved in flight incidents. Unknown birds are the most common, followed by Mourning Doves.
- The impact ranges from minor incidents like precautionary landings to severe ones like aborted take-offs and engine shutdowns.
- Species like Red-Tailed Hawks and American Kestrels seem to pose a higher risk of severe incidents.

### Task 1B: Bar Chart

- The visualization shows that the approach phase of flight is most prone to wildlife strikes, followed by the landing roll phase.
- The take-off run and climb phases also have a significant number of incidents. Descent, taxi, and parked phases have considerably fewer incidents.

### Task 1C: Tree Map

- B737-700 is the aircraft model most frequently involved in wildlife strikes.
- Models like A320 and B737-800 also have a significant number of incidents.
- Smaller aircraft models like CL-RJ100/200 and SAAB-340 have fewer incidents

### Task 1D: Stacked Bar Chart

- The chart shows that Canada Geese are the most common species involved in bird strikes, followed by White-tailed Deer and Ospreys.
- Most strikes occur during the Approach phase of flight, with a significant number also happening during the Landing Roll phase.

### Task 1E: Line Chart

- The visualization shows the trend of wildlife strikes across different states over the years 2007 to 2011.
- Some states, like California, Alaska, and Florida, consistently have a high number of strikes throughout the years. Other states, such as Idaho, Illinois, and Indiana, have relatively fewer strikes.

### Task 1F: Dashboard

- Common Species: Canada Geese are the most frequent culprits, followed by White-tailed Deer and Ospreys.
- Critical Phases: The approach and landing phases are most susceptible to wildlife strikes.
- Aircraft Vulnerability: Certain aircraft models, like the B737-700 and A320, are more prone to strikes.
- Temporal Trends: The number of strikes has fluctuated over the years, with some years showing higher incidence rates.

#### Task 2A: Bar Chart

- The visualization shows the number of bird strike incidents at various airports.
- It's clear that Atlanta International Airport has the highest number of reported incidents, followed by Baltimore Washington International Airport.

#### Task 2B: Pie Chart

- The pie chart illustrates the distribution of sky conditions during bird strikes.
- The majority of strikes (49.52%) occurred under No Cloud conditions, followed by Some Cloud (34.01%) and Overcast conditions (16.46%).

#### Task 2C: Horizontal Chart

- The visualization shows the number of bird strike incidents at various airports.
- It's clear that Dallas/Fort Worth International Airport has the highest number of reported incidents, followed by Sacramento International Airport.

#### Task 2D: Dashboard

- Airport Vulnerability: Dallas Fort Worth International Airport has the highest number of bird strike incidents, followed by Sacramento International Airport.
- Sky Conditions: Most bird strikes occur under clear skies, followed by some cloud cover and overcast conditions.
- Seasonal Trends: Analysing data over time can reveal seasonal patterns in bird strikes, which can help in implementing targeted mitigation measures.

#### Task 3A: Bar Chart

- The chart shows the number of people injured due to different types of flight impacts caused by bird strikes.
- The majority of injuries occurred during Precautionary Landings, followed by Engine Shutdowns. Aborted Take-offs and Other impacts resulted in fewer injuries.

#### Task 3B: Bar Chart

- The visualization shows the number of bird strike incidents for different aircraft models.
- It's clear that the B737-700 is the aircraft model most frequently involved in bird strikes, followed by the B737-800 and the B737-500.

#### Task 4A: Bar Chart

- The visualization shows the most frequently involved wildlife species in bird strikes.
- Unknown birds (large) are the most common, followed by Mourning Doves and European Starlings. This suggests that these species pose a significant risk to aviation safety.

#### Task 4B: Stacked Bar Chart

- The visualization shows the distribution of bird strike incidents across different wildlife sizes and species.
- It's evident that large birds are most frequently involved in strikes, followed by medium-sized birds. Smaller birds contribute to a smaller proportion of incidents.

#### Task 4C: Dashboard

- Impact on Flight: Precautionary landings are the most common impact, followed by engine shutdowns.
- Frequent Species: Unknown large birds are the most frequent culprits, followed by Mourning Doves and European Starlings.
- Aircraft Vulnerability: Certain aircraft models, like the B737-700, are more prone to bird strikes.
- Size Matters: Larger birds pose a greater risk, with large birds being involved in the majority of incidents.