



# AMAZON SALES ANALYSIS

UNIFIED MENTOR



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## Amazon Sales Analysis & Bird strikes

analysis:

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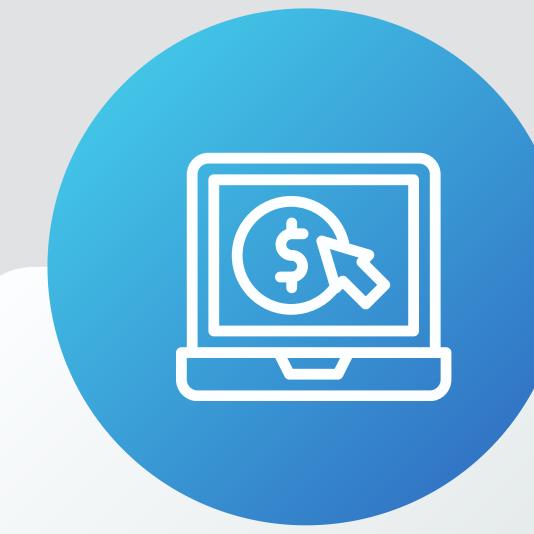
# INTRODUCTION



**Objective:**  
Analyze Amazon sales data to identify trends and key metrics.



**Tools Used:**  
Data cleaning in Excel, data visualization in Power BI.



**Importance:**  
Understanding sales patterns helps improve distribution methods, reduce costs, and increase profits in a competitive e-commerce environment.

# **PROBLEM STATEMENT**



Sales management has gained importance to meet increasing competition and the need for improved methods of distribution to reduce costs and to increase profits. Sales management today is the most important function in a commercial and business enterprise.

# DATASET OVERVIEW

## Columns:

- Region: Geographic region where the sales occurred.
- Country: Country where the sales occurred.
- Item Type: Type of item sold.
- Sales Channel: Channel through which the sale was made (e.g., online, offline).
- Order Priority: Priority level of the order.
- Order Date: Date when the order was placed.
- Order ID: Unique identifier for the order.
- Ship Date: Date when the order was shipped.
- Units Sold: Number of units sold in the order.
- Unit Price: Price per unit of the item.
- Unit Cost: Cost per unit of the item.
- Total Revenue: Total revenue generated from the order.
- Total Cost: Total cost incurred for the order.
- Total Profit: Total profit earned from the order.



# DATA CLEANING

- **Tool:** Excel
- **Steps:**
  - Removed duplicates and handled missing values.
  - Standardized date formats for consistency.
  - Filtered out irrelevant data to focus on meaningful insights.
  - Column Manipulation:
    - Replaced values in the "Order Priority" column (H -> High, L -> Low, C -> Critical, M -> Medium).
    - Converted "Order Date" and "Ship Date" from text format to date format.

# DATA ANALYSIS

Tool: Power BI

## Steps:

Imported cleaned data into Power BI.

Developed calculated columns and measures for key metrics

Designed interactive visuals to explore sales trends by region, product category, and time period.



# DASHBOARD OVERVIEW

## GRAPHS

- Region Wise Profit and Revenue: Visualizes profit and revenue across different regions.
- Number of Orders by Item Type: Displays the count of orders for each item type.
- Sales Channel Distribution: Shows the distribution of sales across different channels (online, offline).
- Item Type Distribution: Illustrates the proportion of different item types sold.
- Order Priority Breakdown: Breaks down the orders based on priority levels.
- Revenue Trend Over Time: Tracks revenue trends over the analyzed period.

## KPIS

- Unit Cost
- Count of Units Sold
- Total Profit
- Total Revenue





# AMAZON SALES ANALYSIS

2010 2011 2012 2013 2014 2015 2016 2017

19.1K  
Unit Cost

100  
Count of Units Sold

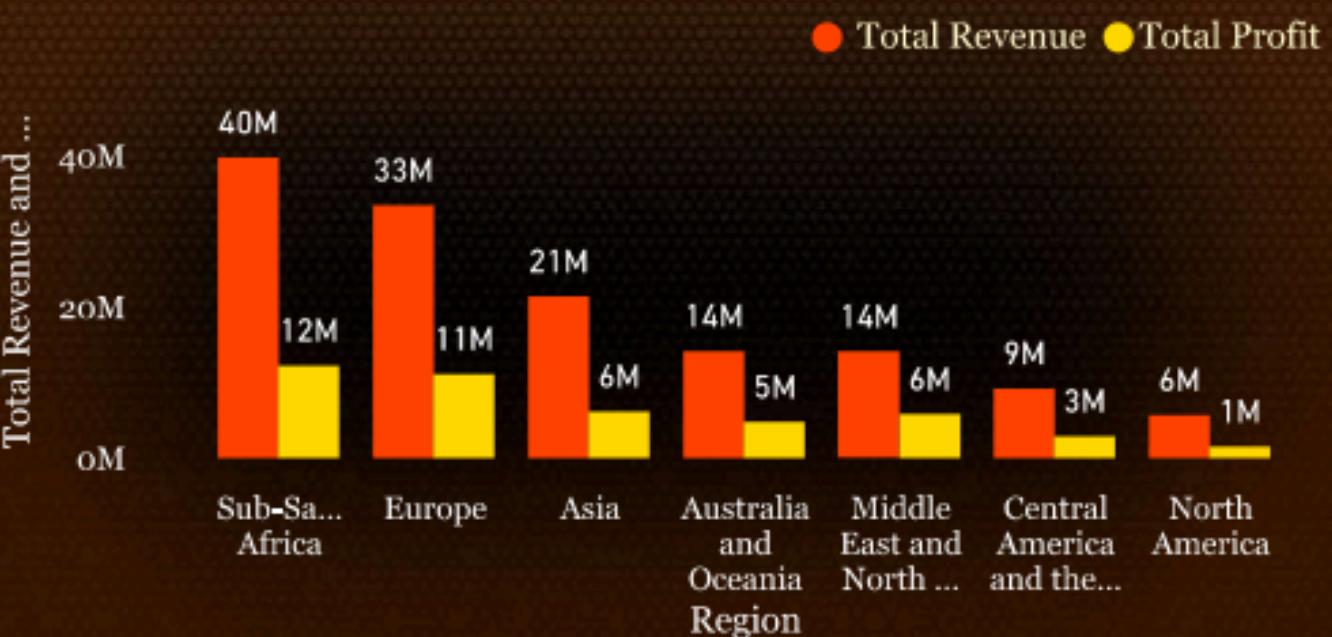
44.2M  
Total Profit

137.3M  
Total Revenue

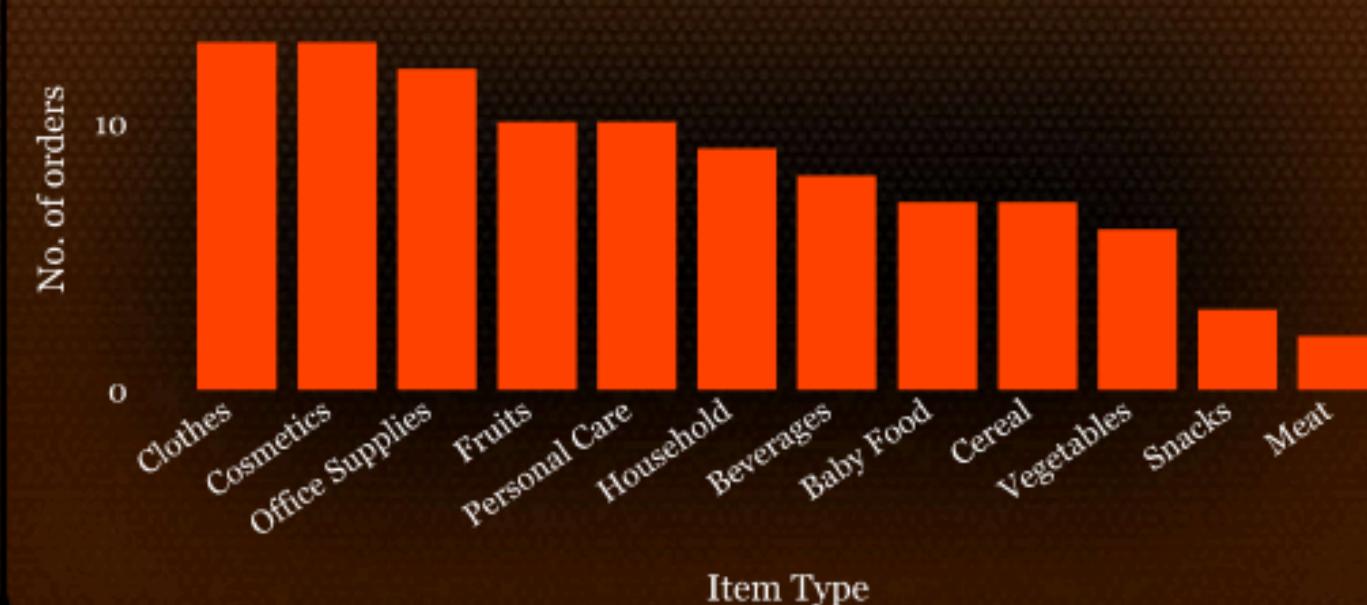
Region

All

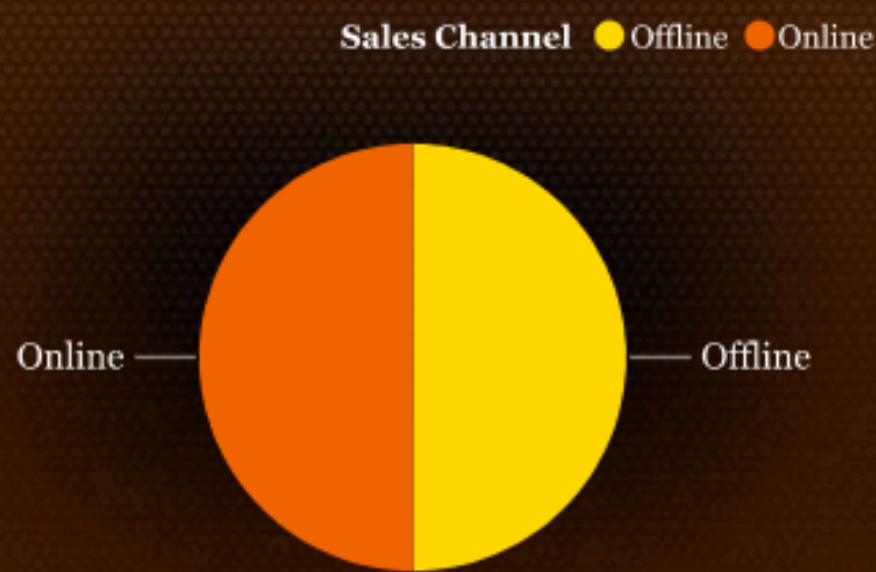
## Region wise profit and revenue



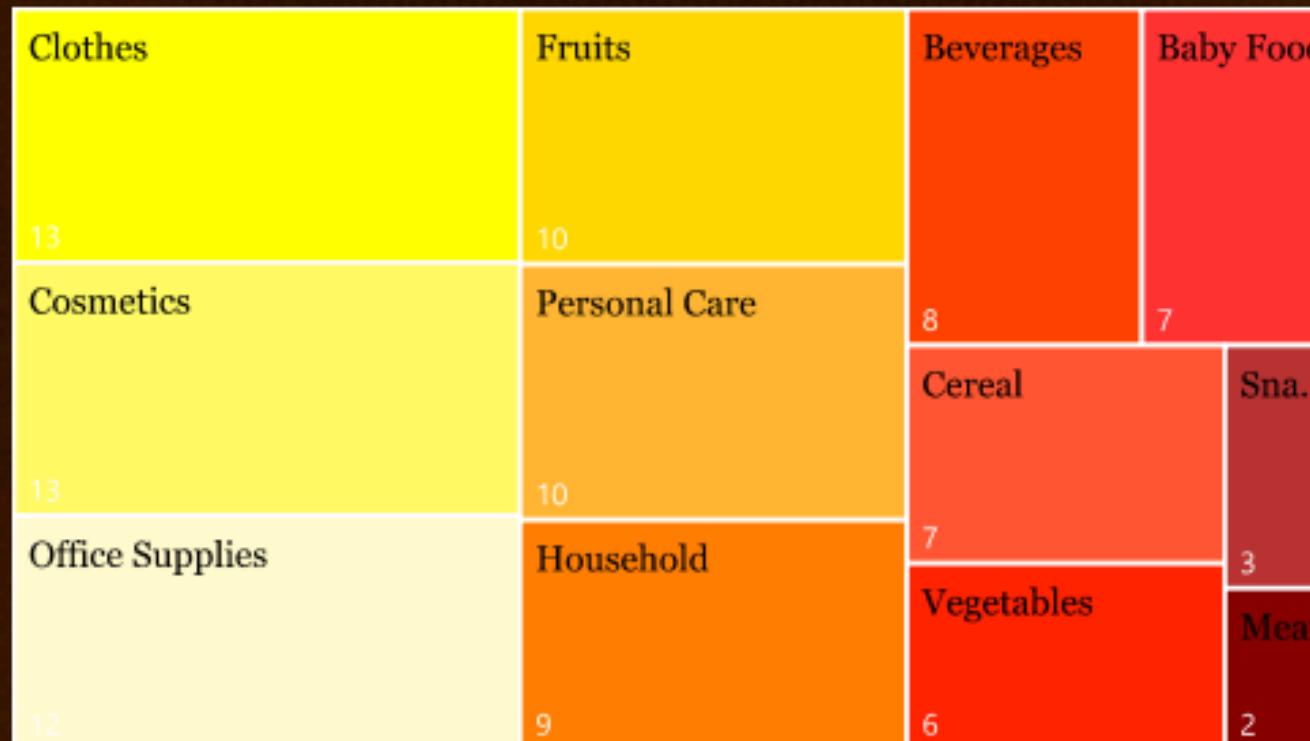
## Number of Orders by Item Type



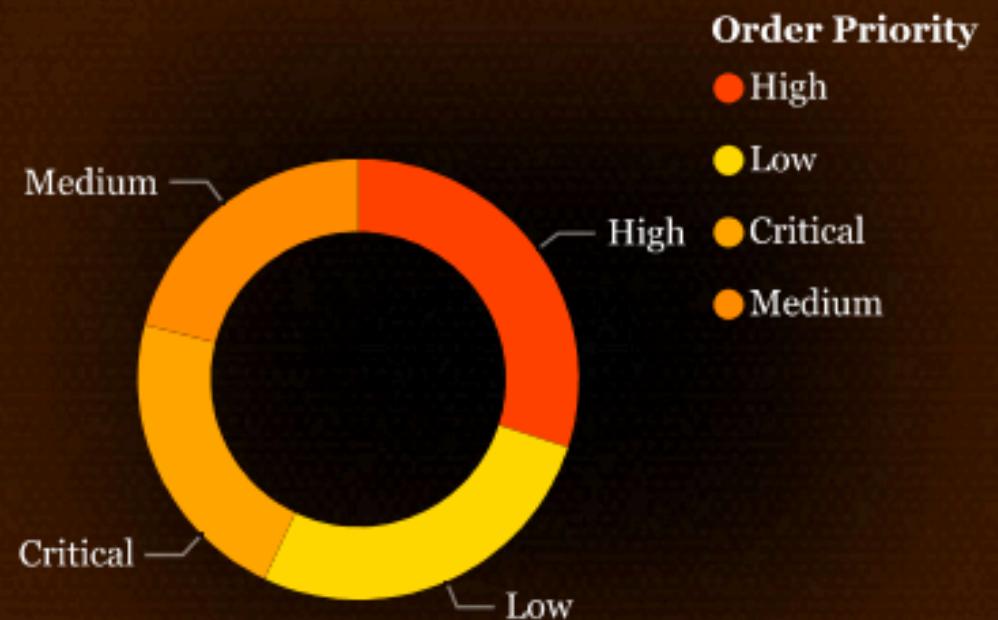
## Sales Channel Distribution



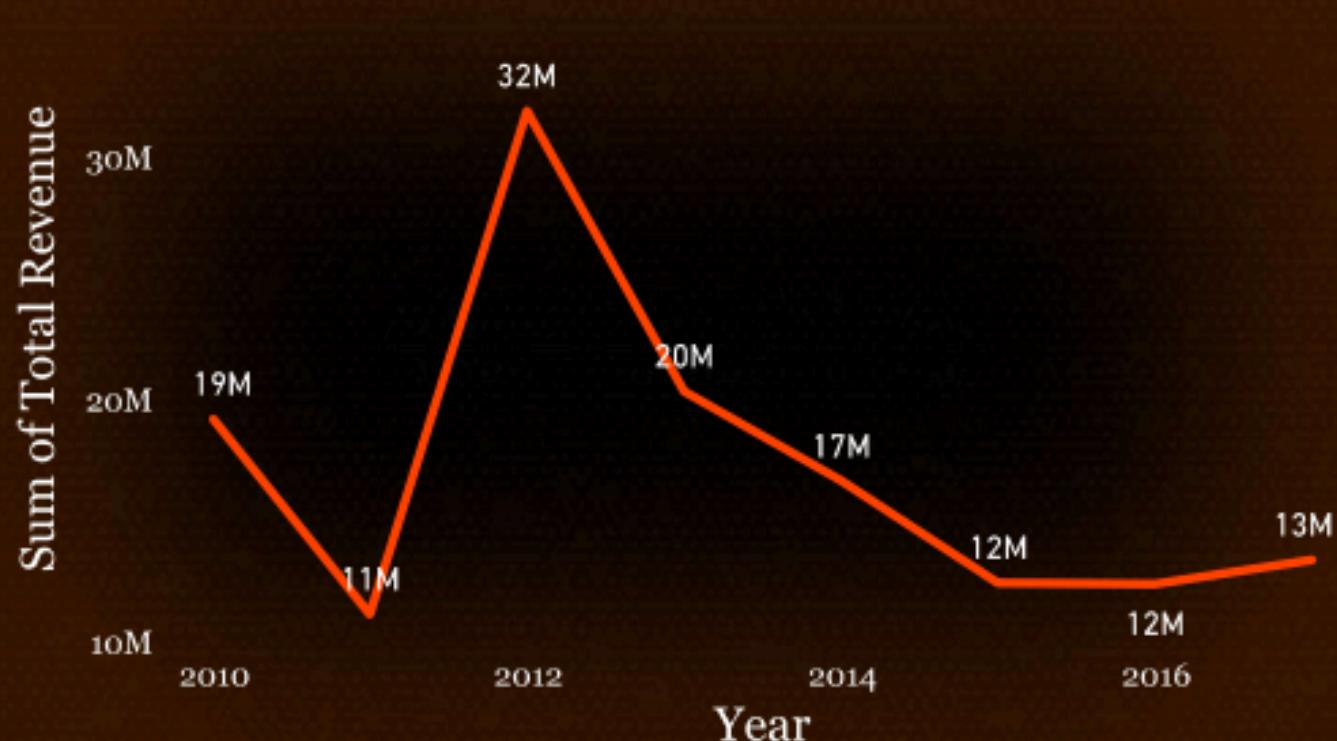
## Item Type Distribution



## Order Priority Breakdown



## Revenue Trend Over Time



# KEY FINDINGS

1

- NORTH AMERICA GENERATES THE HIGHEST PROFIT AND REVENUE.

2

- ONLINE SALES SURPASS OFFLINE SALES SIGNIFICANTLY.

3

- HIGH-PRIORITY ORDERS ARE PROMINENT.

4

- CONSUMER ELECTRONICS ARE THE MOST FREQUENTLY ORDERED ITEMS.

5

- CONSUMER ELECTRONICS AND CLOTHING DOMINATE SALES.

6

- REVENUE SHOWS STEADY GROWTH WITH PEAKS DURING HOLIDAYS.



# BIRD STRIKES ANALYSIS

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# INTRODUCTION



**Objective:**  
Visualize bird strike data to identify patterns and trends that can enhance aviation safety..



**Tools Used:**  
Data cleaning in Excel, data visualization in Power BI.



**Importance:**  
Bird strikes pose significant risks to aircraft safety, especially during critical phases of flight. Analyzing these incidents helps improve preventive measures.

# PROBLEM STATEMENT



Bird strikes, defined as collisions between birds and aircraft, pose significant safety threats, especially during take-off, climb, approach, and landing phases. Analyzing bird strike data from 2000-2011 can help identify patterns and improve aviation safety measures.



# DATASET OVERVIEW

## Columns:

- Aircraft: Type: Type of aircraft involved in the strike.
- Airport: Name: Name of the airport where the strike occurred.
- Altitude bin: Altitude range at which the strike occurred.
- Aircraft: Make/Model: Make and model of the aircraft.
- Wildlife: Number struck: Number of wildlife struck.
- Wildlife: Number Struck Actual: Actual number of wildlife struck.
- FlightDate: Date of the flight during which the strike occurred.
- Effect: Indicated Damage: Indicated damage to the aircraft.
- Aircraft: Number of engines?: Number of engines on the aircraft.
- Aircraft: Airline/Operator: Airline or operator of the aircraft.
- Origin State: State of origin of the flight.
- When: Phase of flight: Phase of flight when the strike occurred (e.g., take-off, landing).
- Wildlife: Size: Size of the wildlife involved.
- Conditions: Sky: Sky conditions at the time of the strike.
- Wildlife: Species: Species of wildlife involved.
- Cost: Total \$: Total cost incurred due to the strike.
- Feet above ground: Altitude above ground at which the strike occurred.
- Number of people injured: Number of people injured in the incident.
- Is Aircraft Large?: Indicator of whether the aircraft is large



# DATA CLEANING

- **Tool:** Excel
- **Steps:**
  - Consolidated data from multiple sources into a single dataset.
  - Handled missing values and outliers.
  - Standardized categorical variables (e.g., aircraft types, wildlife species).
  - Ensured consistency in date and time formats.
- **Final Dataset:** Included only the following columns: Airport:Name, Altitude bin, Aircraft Model, Wildlife: Number struck, Effect: Indicated Damage, Aircraft: Number of engines, Aircraft: Airline/Operator, Origin State, When: Phase of flight, Wildlife: Size, Conditions: Sky, Feet above ground, Number of people injured, Is Aircraft Large?, FlightDate (converted from text to date format), Cost: Total \$, Removed redundant columns.



# DATA ANALYSIS

Tool: Power BI

## Steps:

Loaded the cleaned dataset into Power BI.

Developed calculated columns and measures to quantify impact (e.g., cost of damage, number of strikes per phase of flight).

Created Measures:

- Bird Strikes Count
- Total Bird Strikes

Designed dashboards to visualize trends in bird strikes over time, by location, and by aircraft type.



# DASHBOARD OVERVIEW

## GRAPHS

- Trend of Bird Strikes (2000-2011): Shows the trend of bird strikes over the years.
- Top 10 Airlines by Bird Strike Incidents: Ranks airlines based on the number of bird strike incidents.
- Altitude Distribution of Bird Strike Incidents: Displays the distribution of bird strikes across different altitude ranges.
- Yearly Cost of Bird Strikes: Illustrates the yearly financial impact of bird strikes.
- Effect of Bird Strike on Flights: Examines the impact of bird strikes on flight operations.
- 

## KPIS

- Total Bird Strikes
- Average of Cost: Total \$



# BIRD STRIKES ANALYSIS



**20K**

Total Bird Strikes

**5.41K**

Average of Cost: Total \$

Sky conditions

All

Year

All

Origin state

Alabama

Alaska

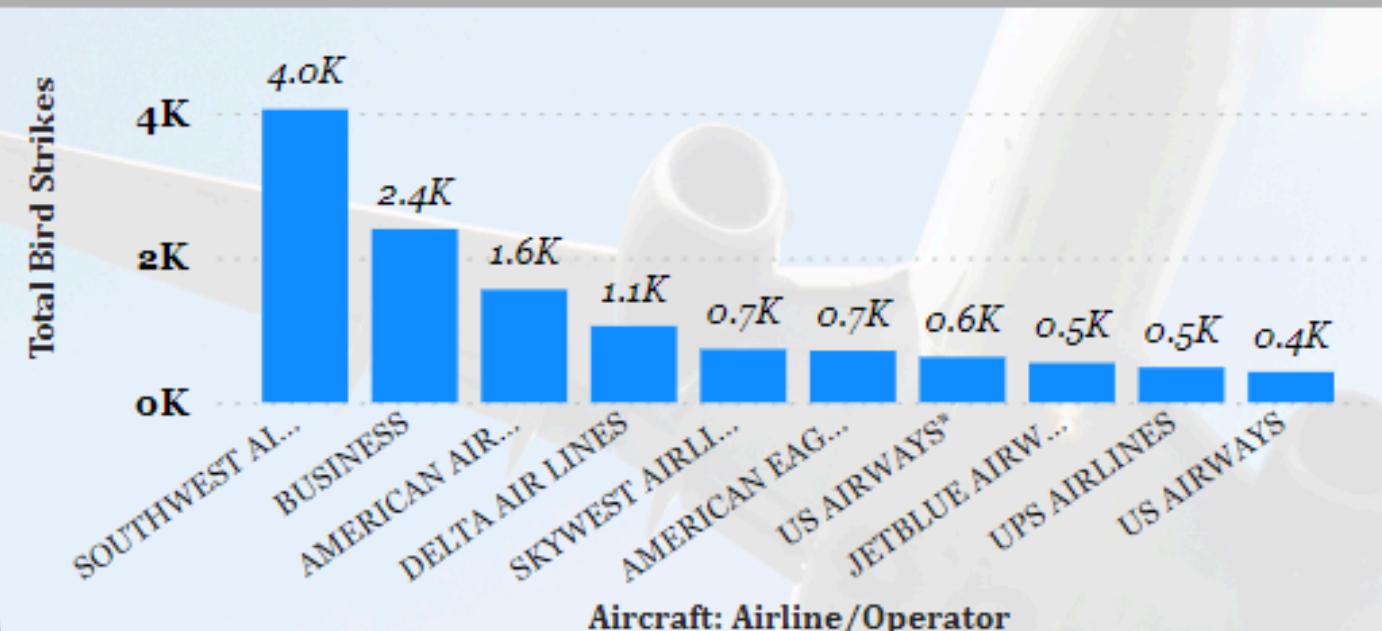
Alberta

Arizona

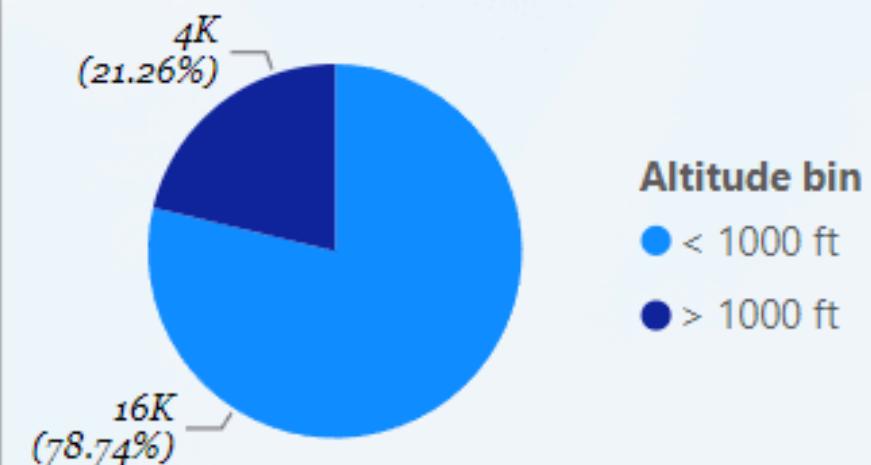
Trend of Bird Strikes (2000-2011)



Top 10 Airlines by Bird Strike Incidents



Altitude Distribution of Bird Strikes



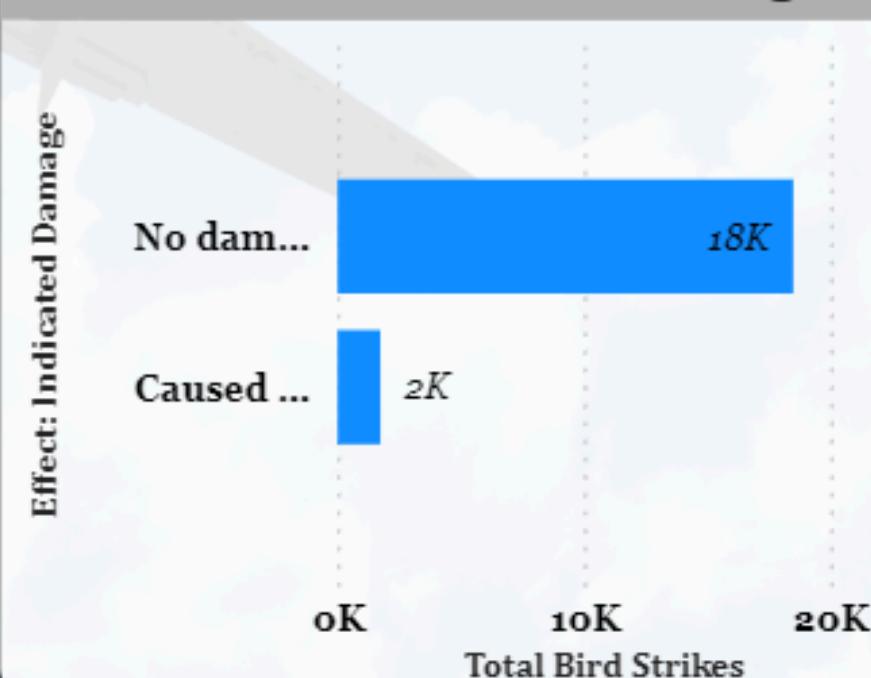
Top 10 Airports by Bird Strike Incidents



Yearly Cost of Bird Strikes (2000-2011)



Effect of Bird Strikes on Flight



# KEY FINDINGS

1

- BIRD STRIKES HAVE SHOWN AN OVERALL INCREASING TREND OVER THE YEARS.

2

- A FEW AIRLINES ACCOUNT FOR THE MAJORITY OF BIRD STRIKE INCIDENTS.

3

- MOST BIRD STRIKES OCCUR AT LOWER ALTITUDES DURING TAKE-OFF AND LANDING PHASES.

4

- THE FINANCIAL IMPACT OF BIRD STRIKES VARIES SIGNIFICANTLY EACH YEAR.

5

- BIRD STRIKES MOST COMMONLY CAUSE MINOR DAMAGE, BUT CAN OCCASIONALLY LEAD TO MAJOR INCIDENTS.



# PROJECT LINKS



Click

Amazon sales  
analysis

Click

Bird strikes  
analysis

# THANK YOU!



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