Bird Strikes between 2000 – 2011

Dataset Description

This dataset describes the bird strike that happened between 2000-2011 in US. It h as the number of variable that support for the collision of birds and other factors o f airport

Source of the Data

The data used is a subset from the dataset https://data.world/shihzy/2000-2011-birds-strikes-planes

Intend Use of Data

From this data we can visualize the Bird Strikes, Air Traffic Features and so on. Here 15 Dashboards created for the data visualization Technique and Clustering, Regression and Co-relation Co-efficient

Dataset variables – Self Explanatory

record_id
aircraft_type
airport_name
altitude_bin
aircraft_make_model
wildlife_number_struck
wildlife_number_struck_actual
effect_impact_to_flight
flightdate
effect_indicated_damage
aircraft_number_of_engines
aircraft_airline_operator
origin_state
when_phase_of_flight
conditions_precipitation

remains_of_wildlife_collected
remains_of_wildlife_sent_to_smithsonian
remarks
wildlife_size
conditions_sky
wildlife_species
pilot_warned_of_birds_or_wildlife
cost_total
feet_above_ground
number_of_people_injured
is_aircraft_large

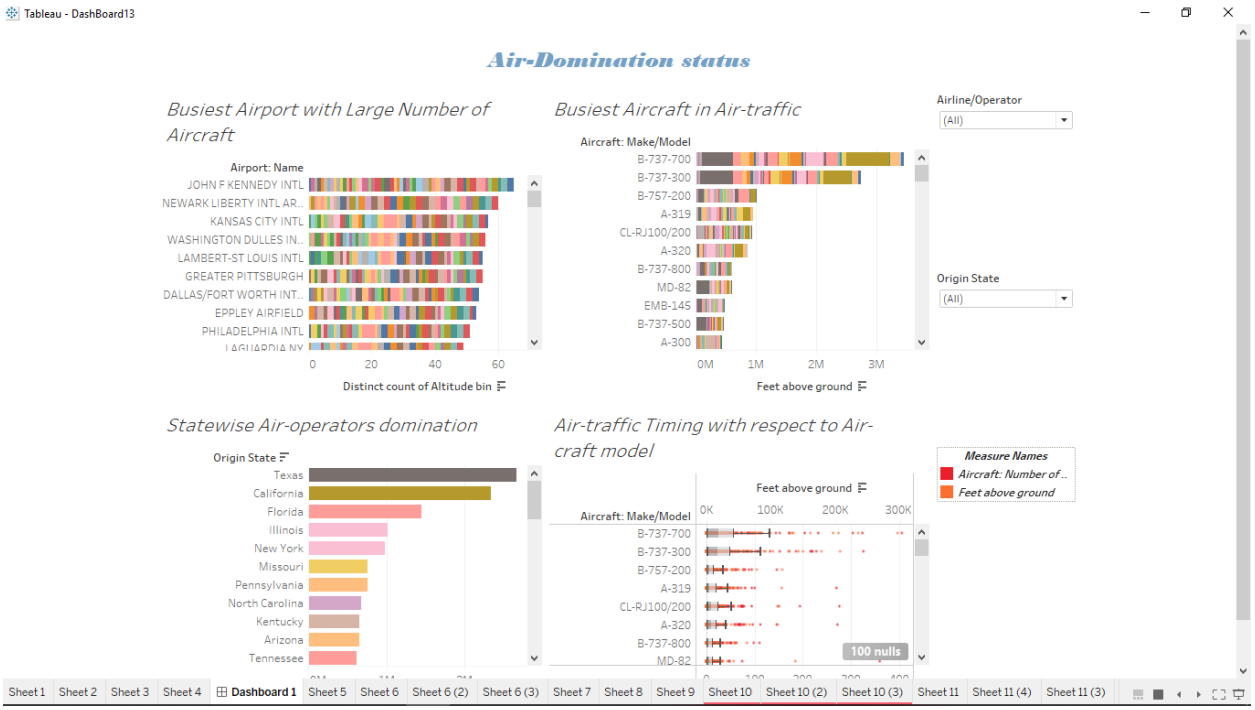
Observation Results by the Dashboards

- ***Lack of Airport Field Management and Security Features caused more repeat accidents***
- ***Lack of Concern over the Natural Habits Observed here***
- ***Lack of Concern over Environment Issues***
- ***Lack of Interest in Protection of other living organisms***
- ***Lack of Law and Protection over Species***

1. Air-Domination Status

This Dashboard States the Air Domination Status recoded from the Year 2000-2011, Following Dashboard contains Busiest Airport, Air Craft and State wise records. According to the flights visits in the Airport we estimate the busiest airport, second sheet contains Aircraft model which has been used wisely. Third Sheet contains the picture of the State wise records of the aircrafts and the final sheet contains the Model with respect to the Flying hours over the ground. By these sheets we can easily observe the Air Domination of the Aircraft, Airport and the State.

Target Audience – Commercial World

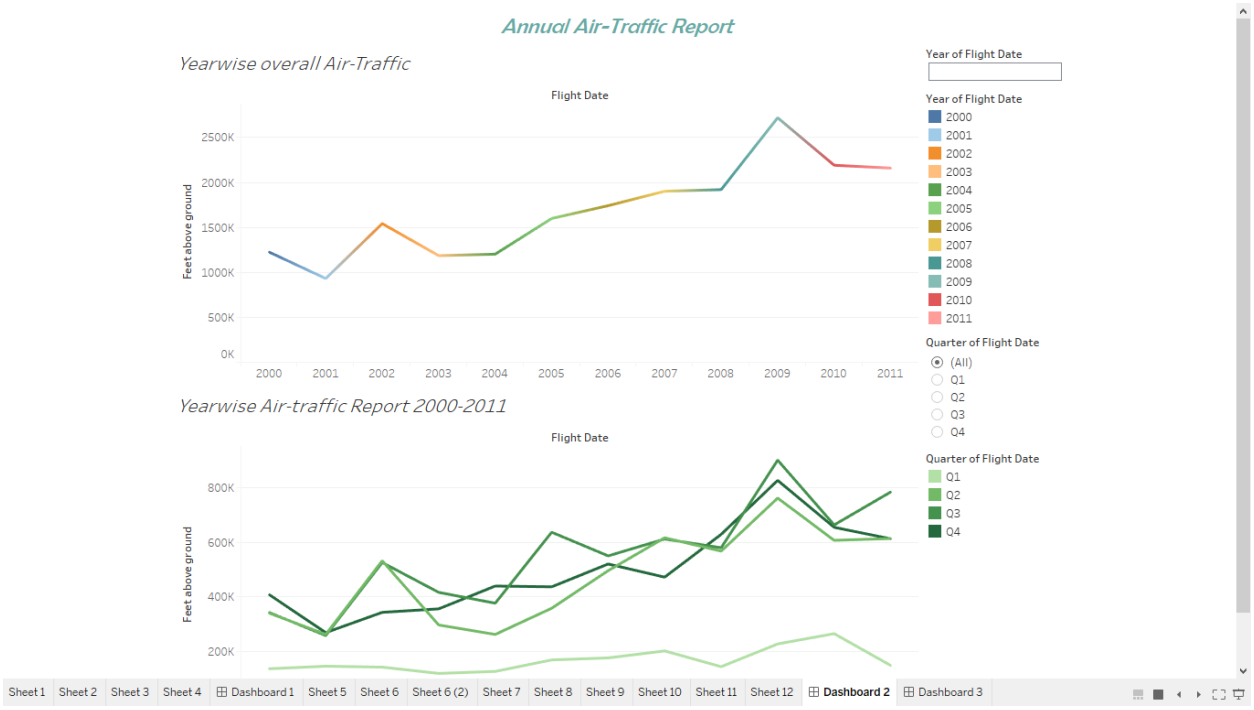


2. Annual Air Traffic Report

This dashboard explains the Annual air traffic based on the Total number of flight flying hours with the Years. We can understand the fast growing of the Air Transportation over the years. Sheet 2 describes the Which Quarter is the Busiest quarter, by filtering out the year we can see the desired year Quarters.

e.g.: From 2006 Q-3 we can see the details by filtering.

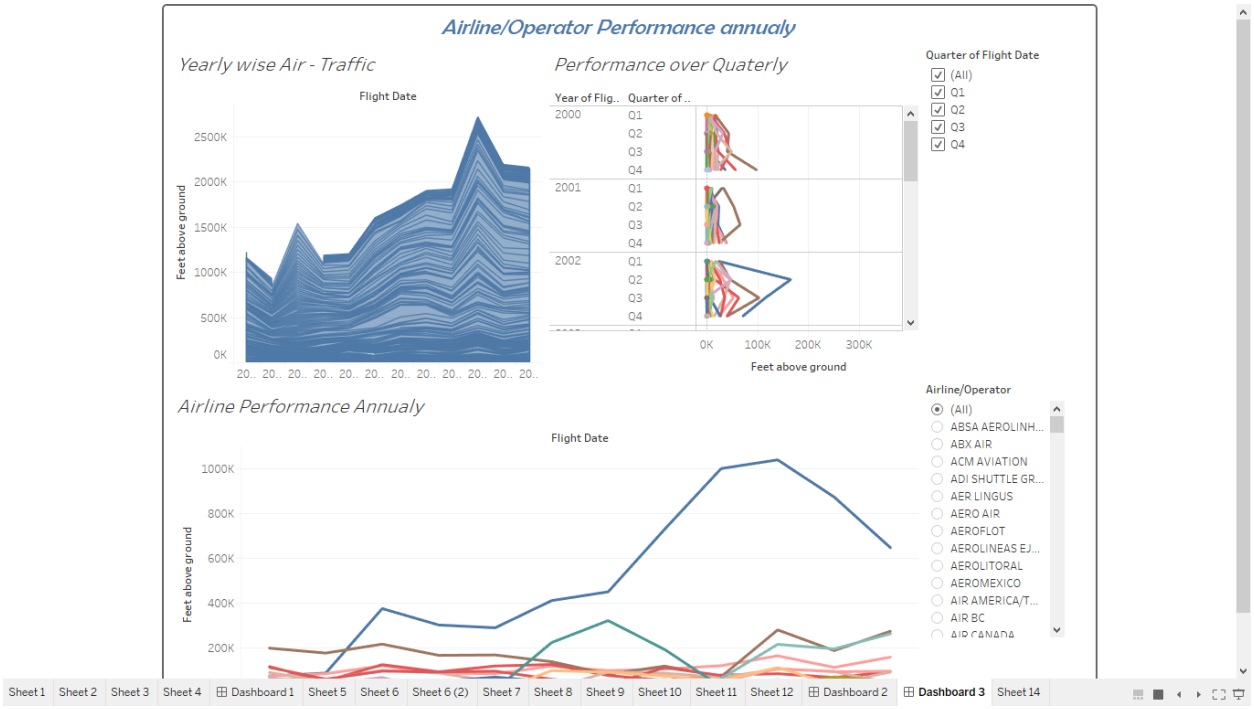
Target – Common world



3. Airline/Air-Operator Performance Report

This board explains the eventful occasions of the Airline/operator. From this we can observe the working chart of the air operators regularly. We can also visualize the yearly quarter performance of any in individual operator. This helps the air-operators to identify their own performances with both pros and cons.

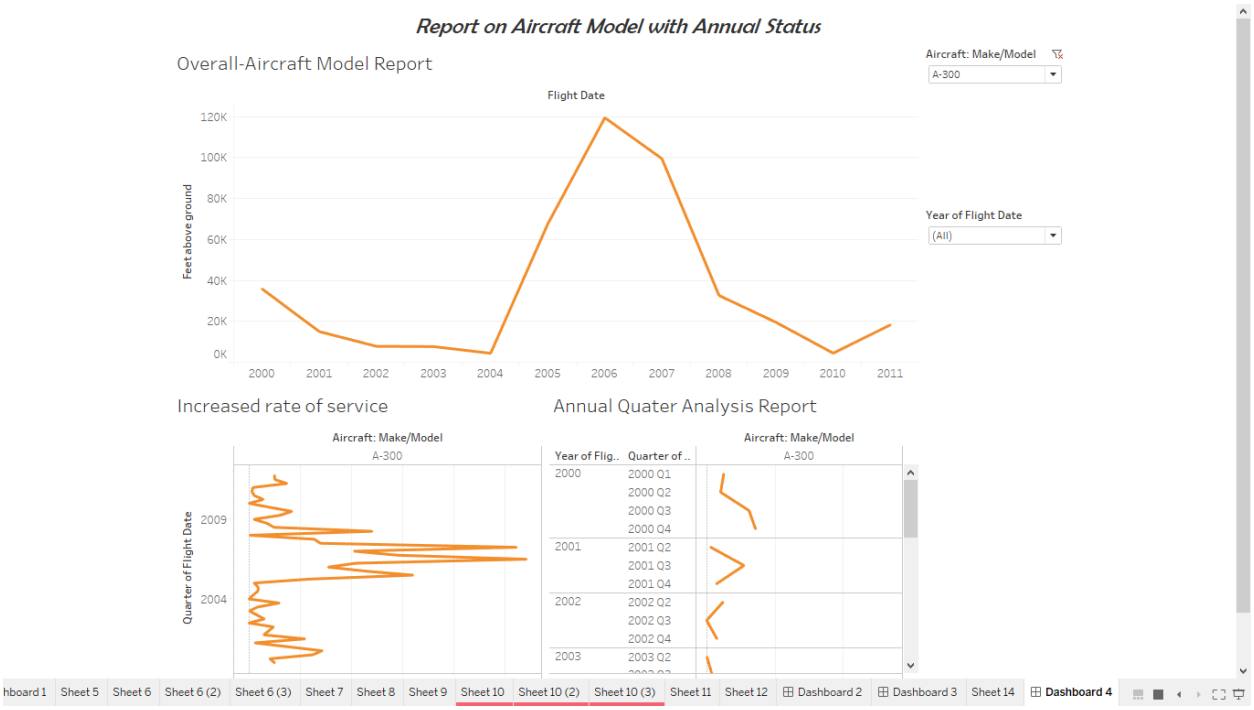
Target Audience - Airline/Air-Operator



4. Air-Craft Models Analysis Report

This board shows the use case of the Aircraft models, in below screenshot I took A-300 Model. From this I can see the Growth Chart of how the company and the people used this aircraft for the period. Initially they had an average growth from Year 2004-2006 A-300 has at its peak then it has a gradual decreased slope. From this we can observe rise and fall. If we revisit the records of 2004-2006 we can get the pros and from 2006-2007 we can get the reason for the fall. Also with the support of each quarters and the Yearly Quarters we can see the performance and get an optimal analysis. Likewise we can make it for any operator.

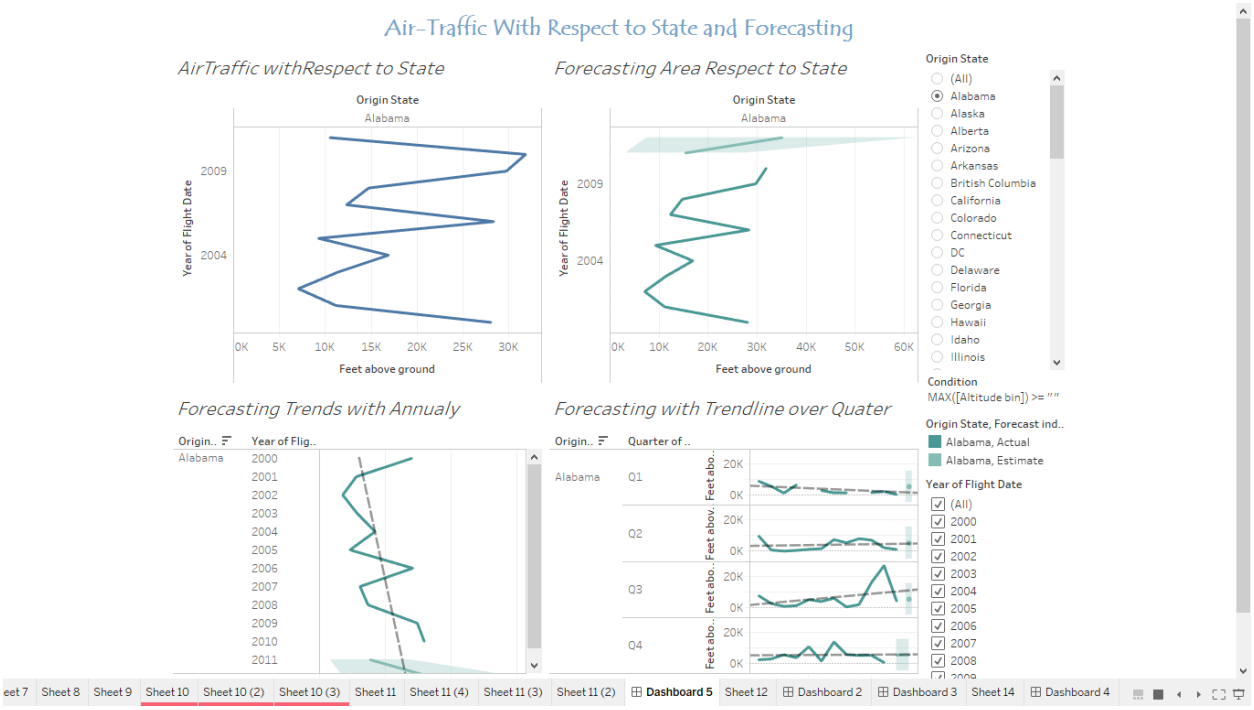
Target Audience – Commercial World



5. State wise Air – Traffic Measurements and Forecasted Details

This board explains the engaged air traffic of the state. It list down the Performance graph of the State Air traffic. We can visualize any state Traffic with the Forecasted Report. In screenshot it expressed about state Alabama. In the sheet 3 & 4 we can see the growth of the State Air Traffic as well which quarter makes the state an engaged one. Same wise we can see the analysis report for each state through Filter.

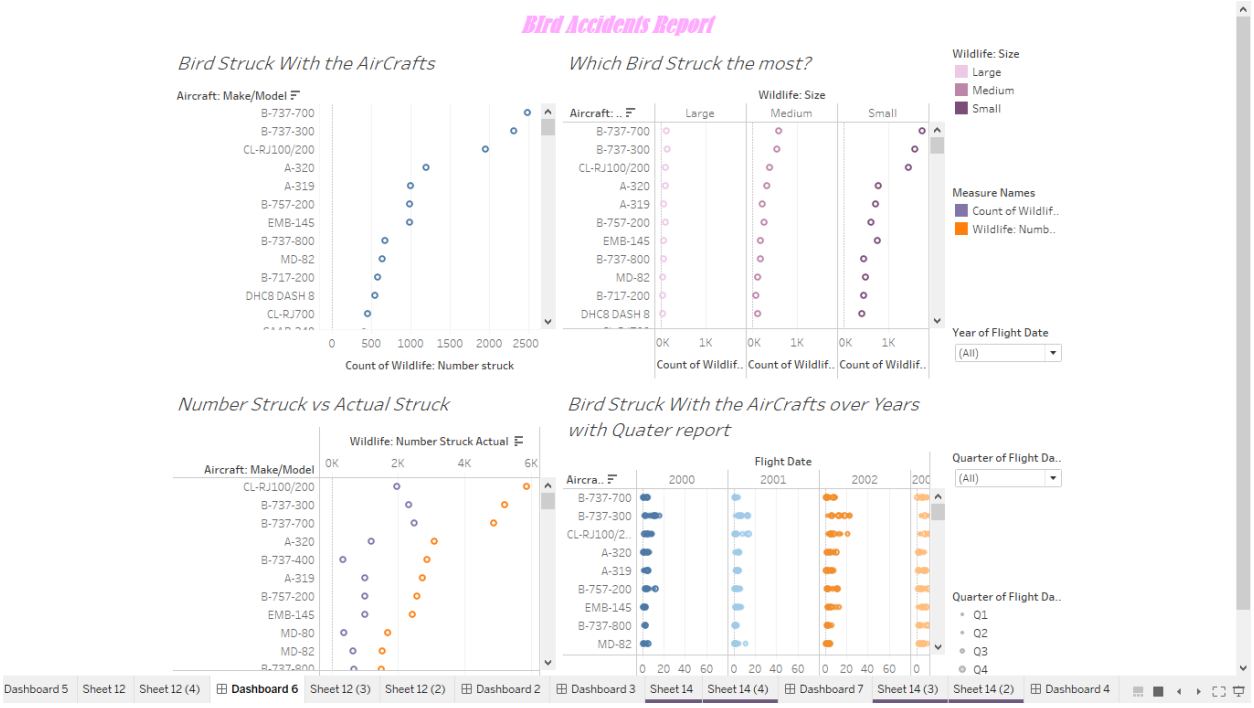
Target Audience Commercial Business People



6. Bird Accident Reports

This board address about the Accidental report on the birds. Bird Categorize into Large, Medium, Small. Here we identify which aircraft model Suffers the most number of bird accident. Also we can filter the year with most number of accidents and with the Quarterly Result also by using appropriate filters.

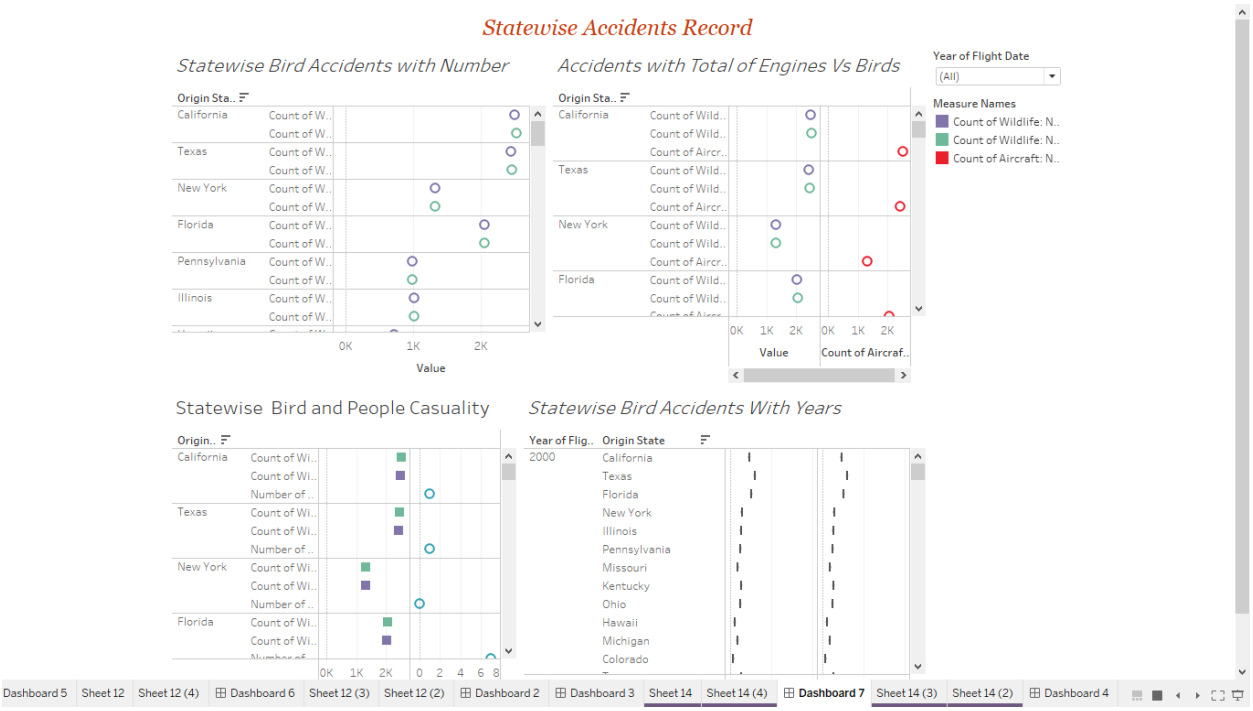
Target Audience – Business People , Public and Government



7. State wise Accidents Record

Here it explains about the State which produces the most number of accidents, with birds and humans. Mainly it concerns about the birds. Sometimes human's causality also occurred with these accidents. So it also consolidate the both the accident record on state wise. We can filter which year which state occurs the most number of accidents with the use of the filter.

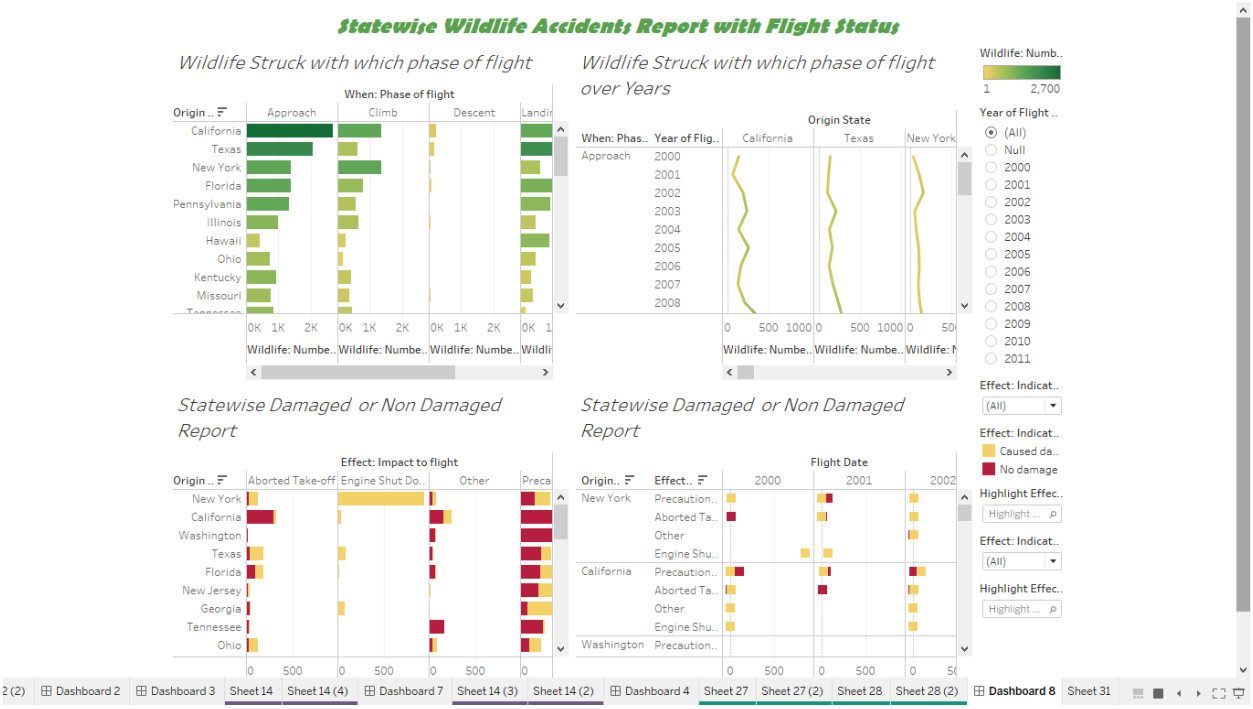
Target Question – Lack of Management Structure and Security Feature



8. State wise Accident Annual report with Flight Status and Impact on Flight

Last Dashboard shows the State wise Accidental Report over Years this one explains the Which Phase those states occurs the Accident and what impact made on those accidents. This explains the deep insights about the Air- Engineering management of the state. And also explains the damaged and non-damaged reports by the state.

Target Question – Lack of Architectural of Management and Land operative Feature



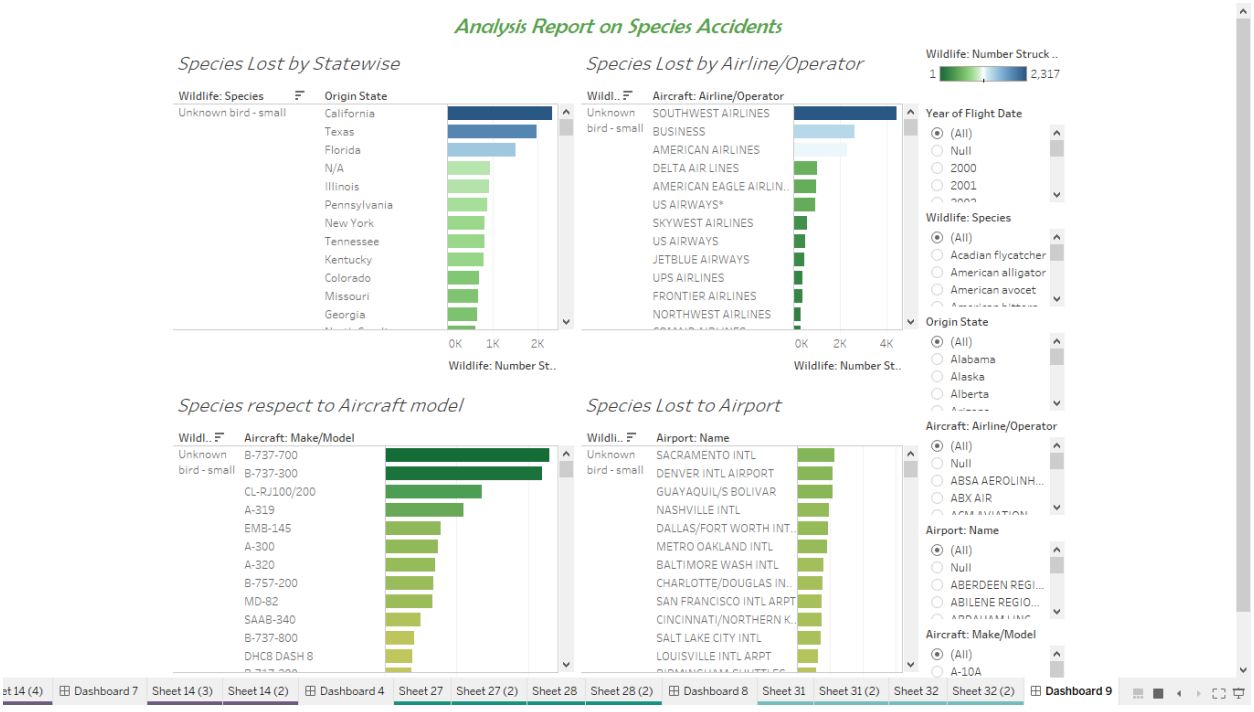
9. Species Accident Analysis over the State, Airport, Air-craft, Air-Operator

Multiple sources are integrated into one dashboard. Here it explains about which species occurs the most lost by the State, Airline/Operator, Airport, Air-craft Model. We can filter year wise, species wise, State, Airline/Operator, Airport, and Air-craft Model.

Targets: Which Species by which subject(State, Airline/Operator, Airport, Air-craft Model) annually.

From this we can identify who are the people with lack of attention in the environment of natural habits by state and Business models like Air crafts and Airline operators.

Target People- Observer of the Data

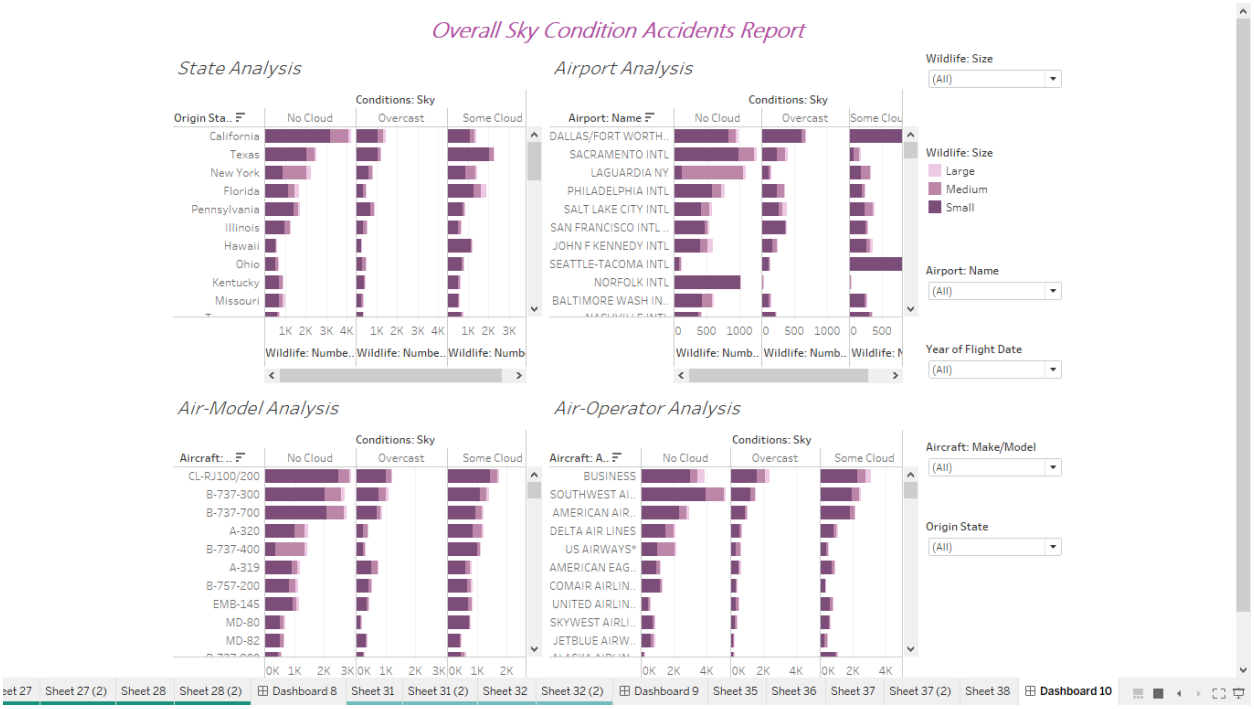


10. Overall Sky Condition Accident Report

This explain about the which Sky Condition made more accidents with the species and also we can visualize which categories of species occurs the most on all aspects like state , Aircraft, Airport and Air – operator.

Targets – On Which Condition the most case of accidents on which Species occurred

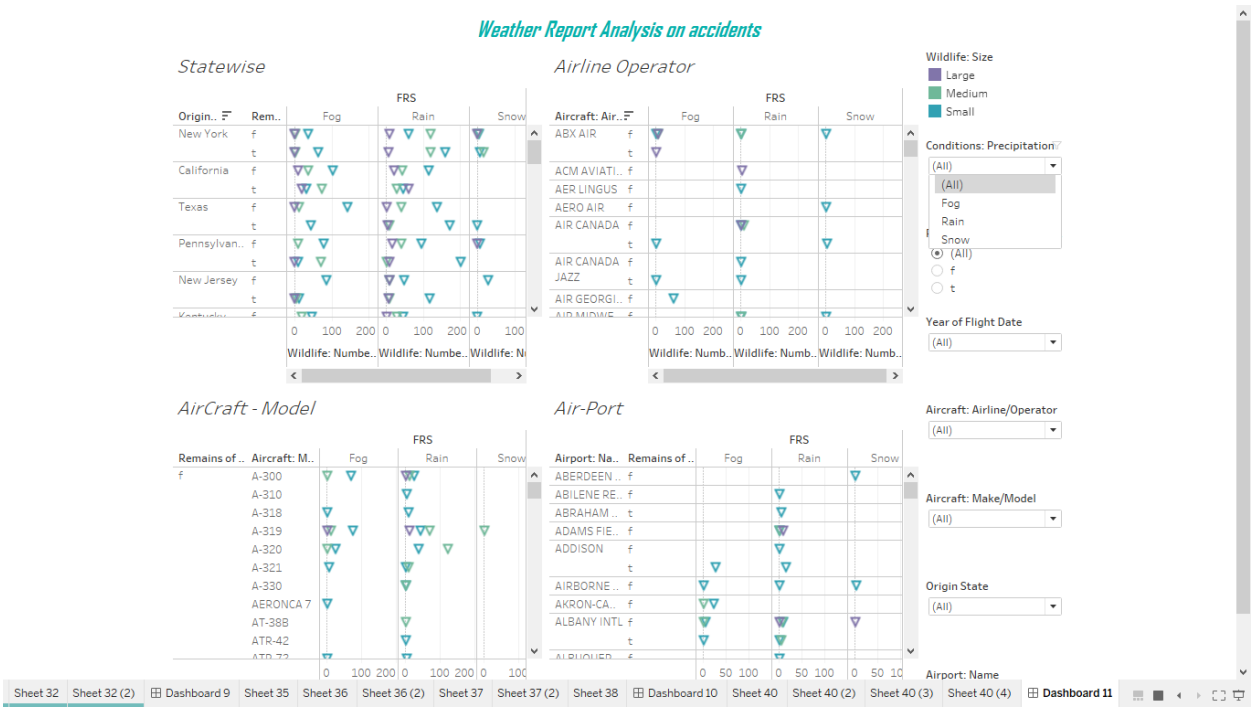
We can analyses with respect to State, Aircraft, Airport and Air – operator.



11. Weather Report Analysis on Accidents

Here we report on weather condition like fog, rain, snow. From this we can observe the accidents happened on which period of time, like fog, snow and rain. Maximum here we absorb the rainy season we can see the most number of accidents. By deep we went like State, Aircraft, Airport and Air – operator.

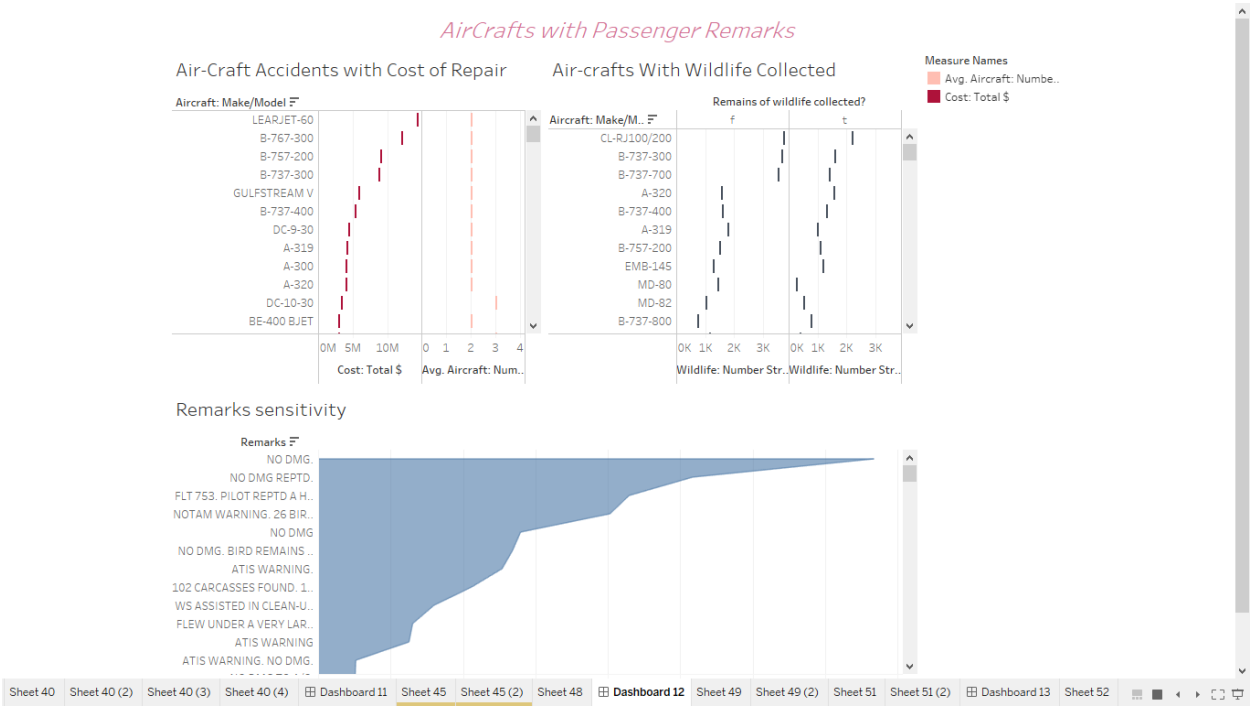
Target - Air Officials



12. Air-Craft Report with Passenger Remarks

This shows the cost of repair with accidental air-craft model with how many engines got damaged and also with whether the remains get collected or not. By the customer feedback and remarks we analyses what measure need to take and what not to.

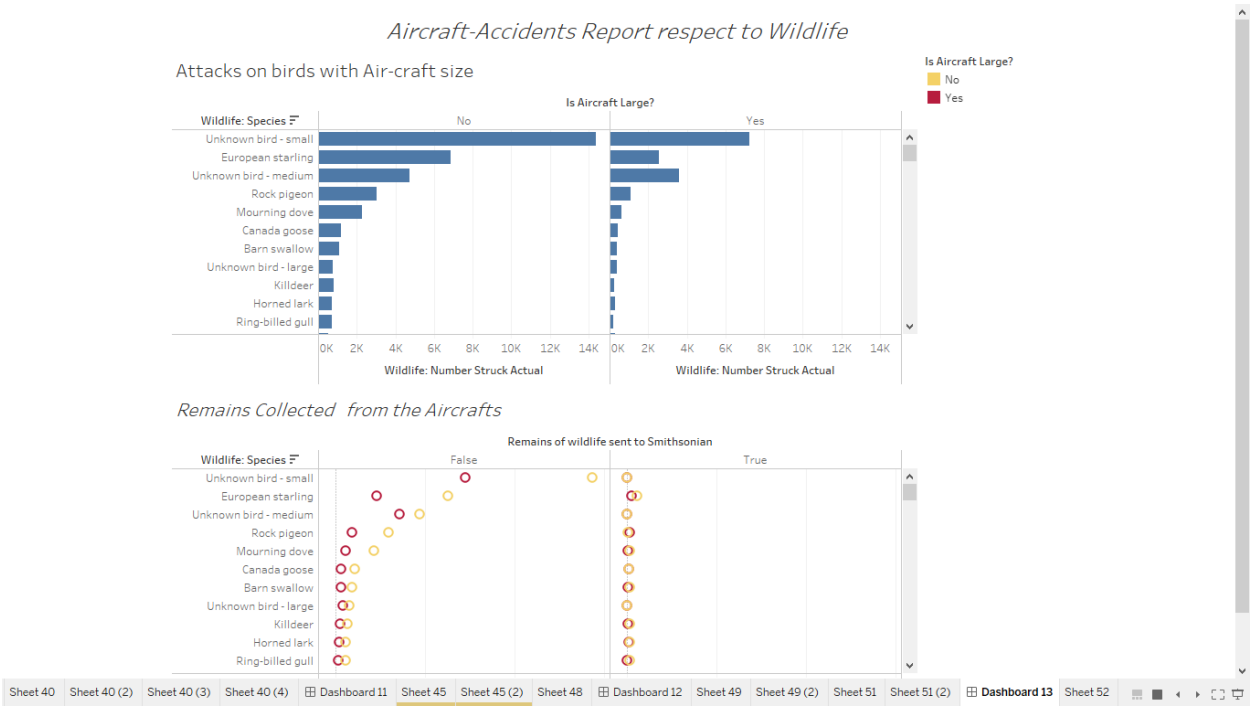
Target: Mainly the remarks over the craft.



13. Analysis on Large or Small Aircrafts

This explains about which aircraft pass off those species accidents most whether small or large and also those accidental species sent to the proper Smithsonian(organization for natural habits) institution by the airport authorities or not, if does which aircrafts accidental species went. Mostly we observe by the result species are not sent to the Smithsonian, which shows the lack of ground facility.

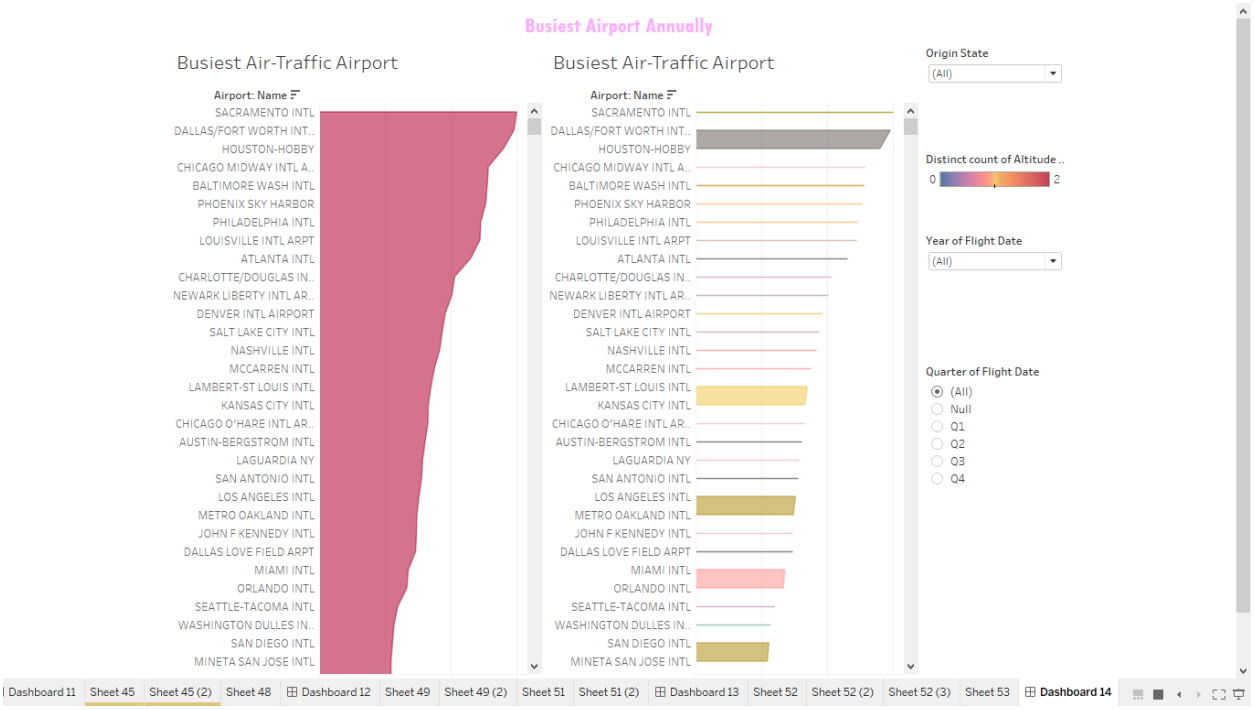
Target – Air Officials



14. Busiest Air-Port Air Traffic

The above Dashboards Spent about state, aircraft models, air-operators and busiest airport with number of aircrafts visit. This explains about which airport does produces the air traffic mostly i.e. larger number of air-crafts spent hours on airports sky area. We can filter the state with year.

Target – Air Officials

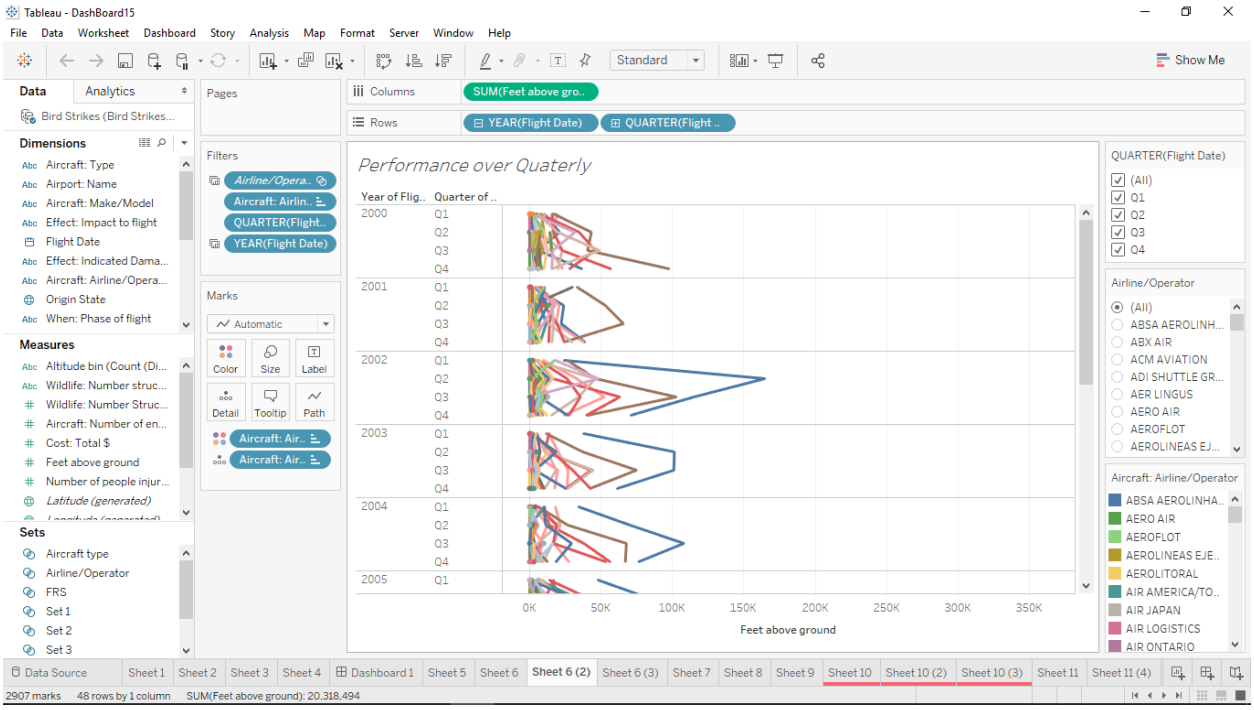


15. Impact on Pilot Warning

From this we can see the impact on pilot warning, what is the status of the Warning, also how the damaged occurs on what status are described as confusion matrix and the final sheet occurs with which phase of the flight.

Target – Air Officials

Random Screen Shots



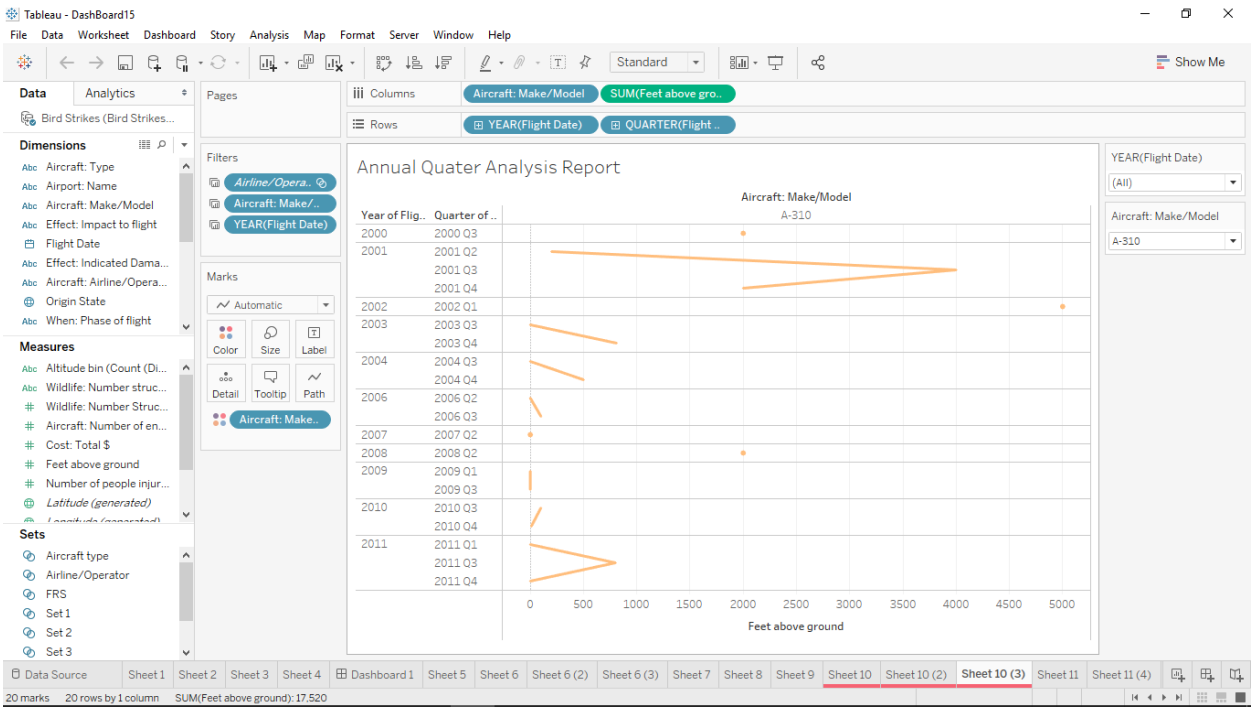


Tableau - DashBoard15
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
Data
Analytics
Bird Strikes (Bird Strikes...
Dimensions
Abc Aircraft: Type
Abc Airport: Name
Abc Aircraft: Make/Model
Abc Effect: Impact to flight
Flight Date
Abc Effect: Indicated Dama...
Abc Aircraft: Airline/Opera...
Origin State
Abc When: Phase of flight
Measures
Abc Altitude bin (Count (Di...
Abc Wildlife: Number struc...
Wildlife: Number Struc...
Aircraft: Number of en...
Cost: Total $
Feet above ground
Number of people injur...
Latitude (generated)
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Aircraft type
Airline/Operator
FRS
Set 1
Set 2
Set 3
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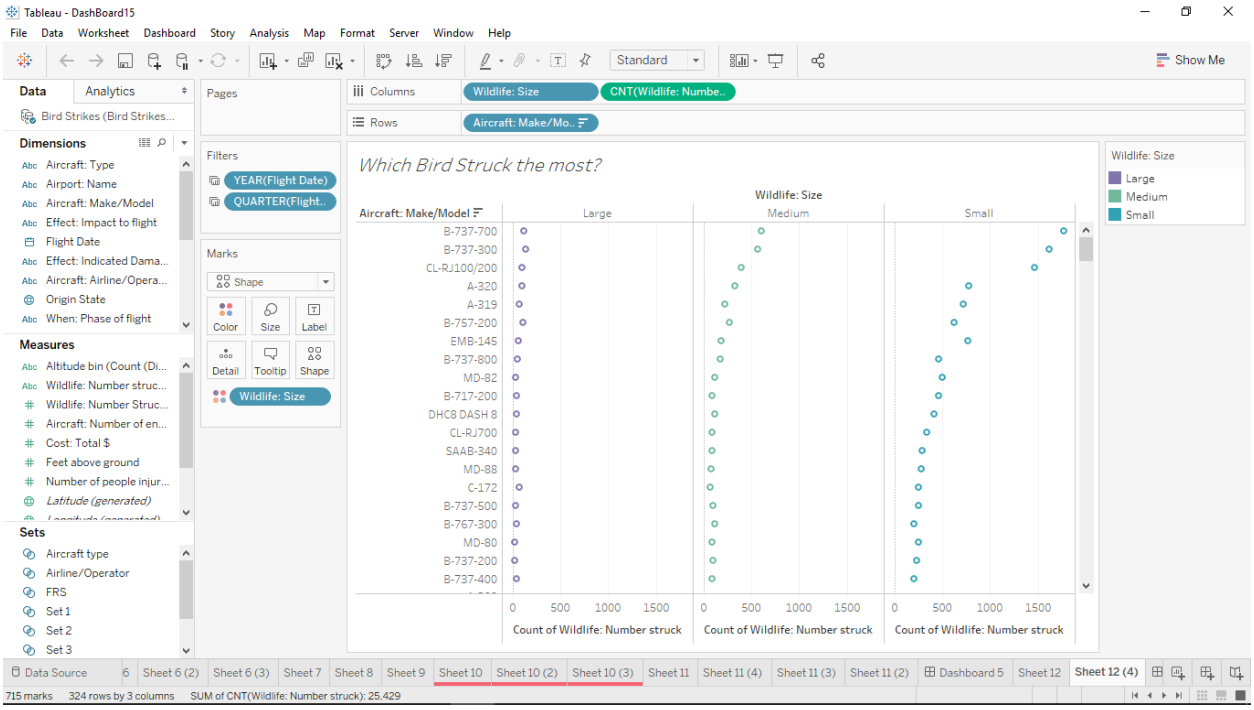
Filters
Airline/Opera..
Aircraft: Make/..
YEAR(Flight Date)
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Path
Aircraft: Make..
Columns
Aircraft: Make/Model
SUM(Feet above gro..
Rows
YEAR(Flight Date)
QUARTER(Flight ..
Annual Quater Analysis Report
Aircraft: Make/Model
A-310
Year of Flig..
Quarter of ..
2000 2000 Q3
2001 2001 Q2
2001 Q3
2001 Q4
2002 2002 Q1
2003 2003 Q3
2003 Q4
2004 2004 Q3
2004 Q4
2006 2006 Q2
2006 Q3
2007 2007 Q2
2008 2008 Q2
2009 2009 Q1
2009 Q3
2010 2010 Q3
2010 Q4
2011 2011 Q1
2011 Q3
2011 Q4
0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000
Feet above ground
YEAR(Flight Date)
(All)
Aircraft: Make/Model
A-310
Data Source Sheet 1 Sheet 2 Sheet 3 Sheet 4 Dashboard 1 Sheet 5 Sheet 6 Sheet 6 (2) Sheet 6 (3) Sheet 7 Sheet 8 Sheet 9 Sheet 10 Sheet 10 (2) Sheet 10 (3) Sheet 11 Sheet 11 (4)
20 marks 20 rows by 1 column SUM(Feet above ground): 17,520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Origin State
Abc When: Phase of flight
Measures
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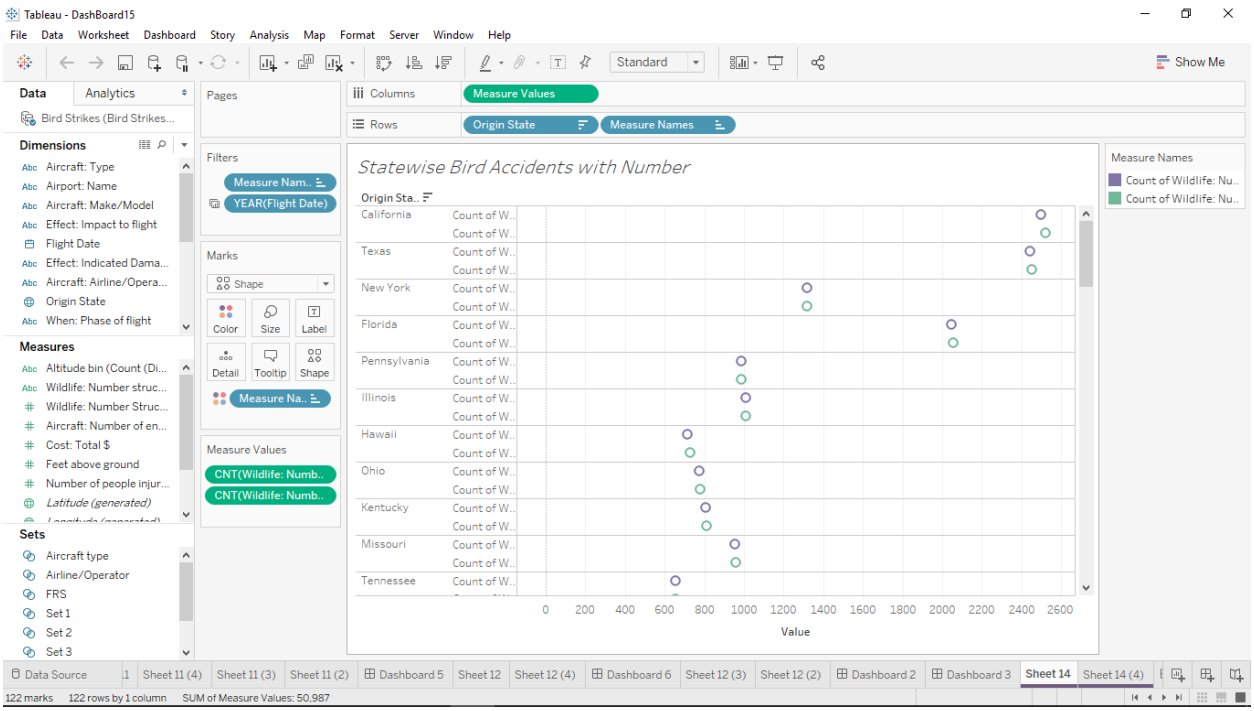
Wildlife: Number Struc...
Aircraft: Number of en...
Cost: Total $
Feet above ground
Number of people injur...
Latitude (generated)
Sets
Aircraft type
Airline/Operator
FRS
Set 1
Set 2
Set 3
Pages
Filters
YEAR(Flight Date)
QUARTER(Flight..
Marks
Shape
Color
Size
Label
Detail
Tooltip
Shape
Wildlife: Size
Columns
Wildlife: Size
CNT(Wildlife: Numbe..
Rows
Aircraft: Make/Mo..
Which Bird Struck the most?
Wildlife: Size
Large
Medium
Small
Aircraft: Make/Model
B-737-700
B-737-300
CL-RJ100/200
A-320
A-319
B-757-200
EMB-145
B-737-800
MD-82
B-717-200
DHC8 DASH 8
CL-RJ700
SAAB-340
MD-88
C-172
B-737-500
B-767-300
MD-80
B-737-200
B-737-400
0 500 1000 1500
Count of Wildlife: Number struck
Wildlife: Size
Large
Medium
Small
Data Source 6 Sheet 6 (2) Sheet 6 (3) Sheet 7 Sheet 8 Sheet 9 Sheet 10 Sheet 10 (2) Sheet 10 (3) Sheet 11 Sheet 11 (4) Sheet 11 (3) Sheet 11 (2) Dashboard 5 Sheet 12 Sheet 12 (4)
715 marks 324 rows by 3 columns SUM of CNT(Wildlife: Number struck): 25,429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File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Bird Strikes (Bird Strikes...
Dimensions
Aircraft: Type
Airport: Name
Aircraft: Make/Model
Effect: Impact to flight
Flight Date
Effect: Indicated Dama...
Aircraft: Airline/Opera...
Origin State
When: Phase of flight
Measures
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Aircraft: Number of en...
Cost: Total $
Feet above ground
Number of people injur...
Latitude (generated)
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Aircraft type
Airline/Operator
FRS
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Set 2
Set 3
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YEAR(Flight Date)
Marks
Shape
Color
Size
Label
Detail
Tooltip
Shape
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Measure Values
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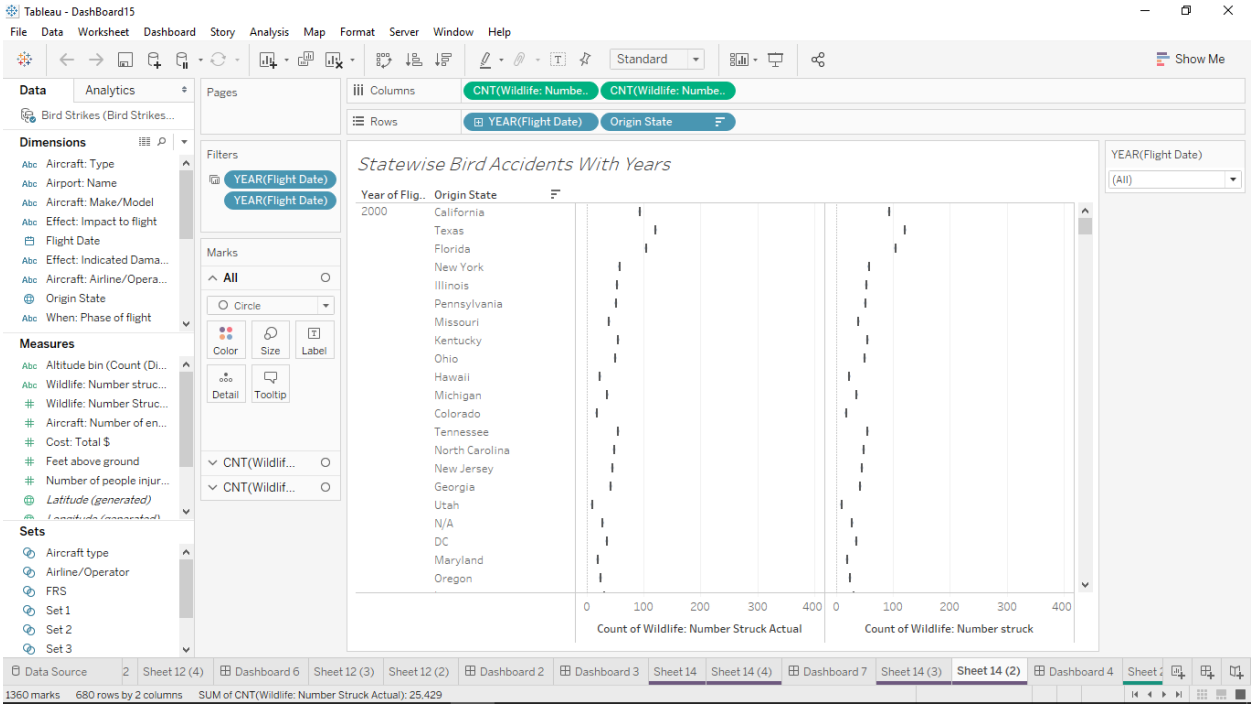
CNT(Wildlife: Numb..
Columns
Measure Values
Rows
Origin State
Measure Names
Statewise Bird Accidents with Number
Origin Sta..
California
Texas
New York
Florida
Pennsylvania
Illinois
Hawaii
Ohio
Kentucky
Missouri
Tennessee
Count of W..
0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600
Value
Measure Names
Count of Wildlife: Nu..
Count of Wildlife: Nu..
Data Source
Sheet 11 (4)
Sheet 11 (3)
Sheet 11 (2)
Dashboard 5
Sheet 12
Sheet 12 (4)
Dashboard 6
Sheet 12 (3)
Sheet 12 (2)
Dashboard 2
Dashboard 3
Sheet 14
Sheet 14 (4)
122 marks
122 rows by 1 column
SUM of Measure Values: 50,987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Data Analytics
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Flight Date
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Aircraft: Airline/Opera...
Origin State
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Altitude bin (Count (Di...
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Origin State
Statewise Bird Accidents With Years
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Origin State
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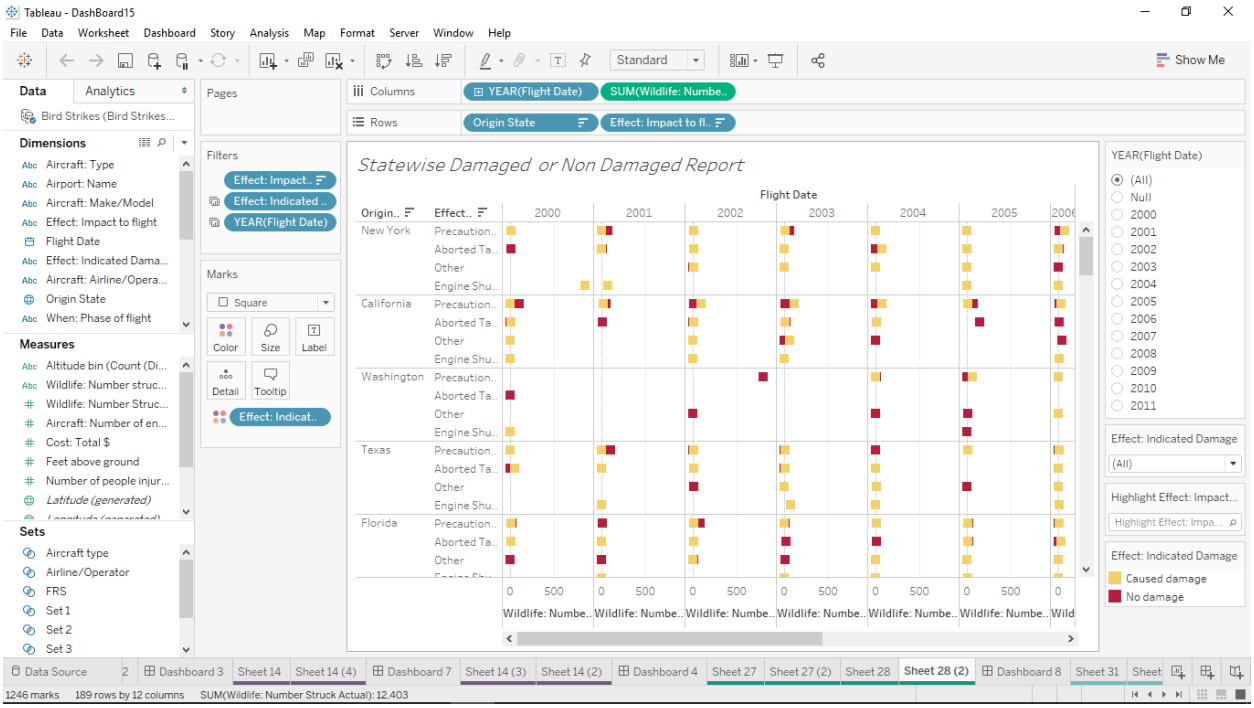
California
Texas
Florida
New York
Illinois
Pennsylvania
Missouri
Kentucky
Ohio
Hawaii
Michigan
Colorado
Tennessee
North Carolina
New Jersey
Georgia
Utah
N/A
DC
Maryland
Oregon
0 100 200 300 400
Count of Wildlife: Number Struck Actual
0 100 200 300 400
Count of Wildlife: Number struck
YEAR(Flight Date)
(All)
Data Source
Sheet 12 (4)
Dashboard 6
Sheet 12 (3)
Sheet 12 (2)
Dashboard 2
Dashboard 3
Sheet 14
Sheet 14 (4)
Dashboard 7
Sheet 14 (3)
Sheet 14 (2)
Dashboard 4
1360 marks
680 rows by 2 columns
SUM of CNT(Wildlife: Number Struck Actual): 25,429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Effect: Impact to fl..
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Flight Date
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Effect..
New York
California
Washington
Texas
Florida
Precaution..
Aborted Ta..
Other
Engine Shu..
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2003
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2005
2006
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Wildlife: Numbe..
YEAR(Flight Date)
(All)
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2000
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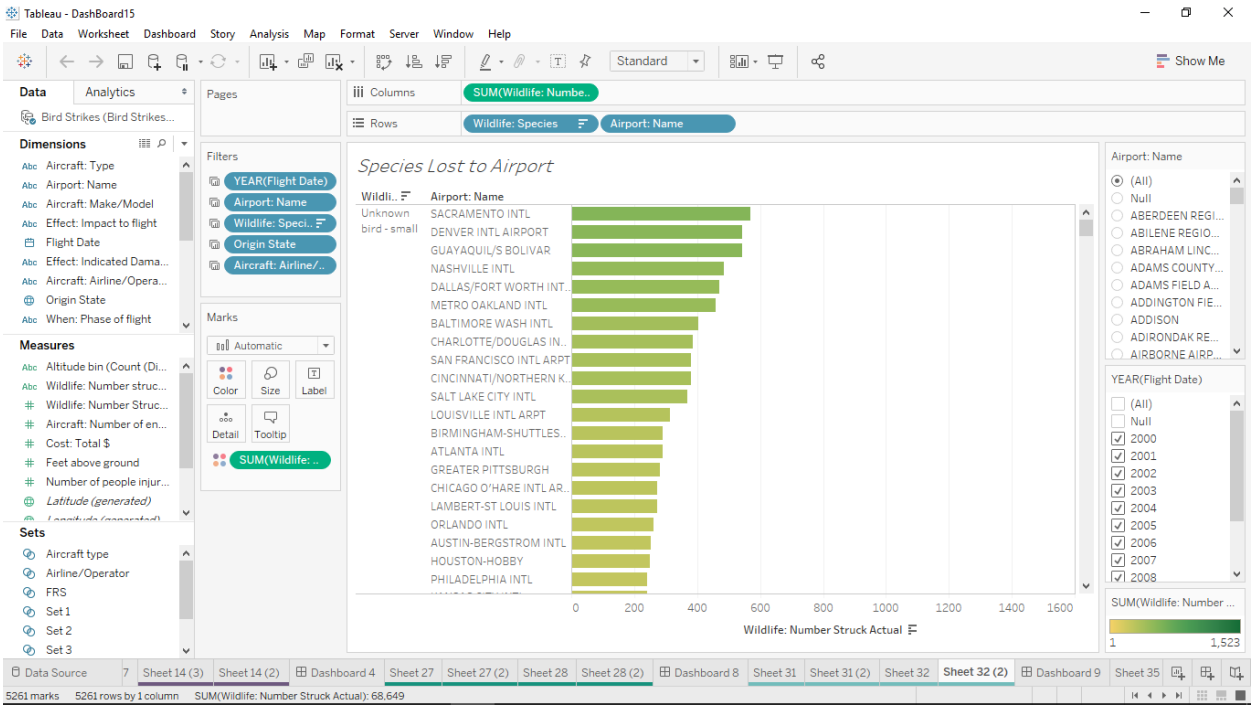
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Effect: Indicated Damage
(All)
Highlight Effect: Impact...
Highlight Effect: Impa...
Effect: Indicated Damage
Caused damage
No damage
Data Source
Dashboard 3
Sheet 14
Sheet 14 (4)
Dashboard 7
Sheet 14 (3)
Sheet 14 (2)
Dashboard 4
Sheet 27
Sheet 27 (2)
Sheet 28
Sheet 28 (2)
Dashboard 8
Sheet 31
1246 marks
189 rows by 12 columns
SUM(Wildlife: Number Struck Actual): 12,403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Aircraft: Type
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YEAR(Flight Date)
Airport: Name
Wildlife: Speci..
Origin State
Aircraft: Airline/..
Marks
Automatic
Color
Size
Label
Detail
Tooltip
SUM(Wildlife: ..
Columns
SUM(Wildlife: Numbe..
Rows
Wildlife: Species
Airport: Name
Species Lost to Airport
Wildli..
Airport: Name
Unknown bird - small
SACRAMENTO INTL
DENVER INTL AIRPORT
GUAYAQUIL/S BOLIVAR
NASHVILLE INTL
DALLAS/FORT WORTH INT..
METRO OAKLAND INTL
BALTIMORE WASH INTL
CHARLOTTE/DOUGLAS IN..
SAN FRANCISCO INTL ARPT
CINCINNATI/NORTHERN K..
SALT LAKE CITY INTL
LOUISVILLE INTL ARPT
BIRMINGHAM-SHUTTLES..
ATLANTA INTL
GREATER PITTSBURGH
CHICAGO O'HARE INTL AR..
LAMBERT-ST LOUIS INTL
ORLANDO INTL
AUSTIN-BERGSTROM INTL
HOUSTON-HOBBY
PHILADELPHIA INTL
0
200
400
600
800
1000
1200
1400
1600
Wildlife: Number Struck Actual
Airport: Name
(All)
Null
ABERDEEN REGI...
ABILENE REGIO...
ABRAHAM LINC...
ADAMS COUNTY...
ADAMS FIELD A...
ADDINGTON FIE...
ADDISON
ADIRONDAK RE...
AIRBORNE AIRP...
YEAR(Flight Date)
(All)
Null
2000
2001
2002
2003
2004
2005
2006
2007
2008
SUM(Wildlife: Number ...
1
1,523
Data Source
Sheet 14 (3)
Sheet 14 (2)
Dashboard 4
Sheet 27
Sheet 27 (2)
Sheet 28
Sheet 28 (2)
Dashboard 8
Sheet 31
Sheet 31 (2)
Sheet 32
Sheet 32 (2)
Dashboard 9
Sheet 35
5261 marks
5261 rows by 1 column
SUM(Wildlife: Number Struck Actual): 68,649

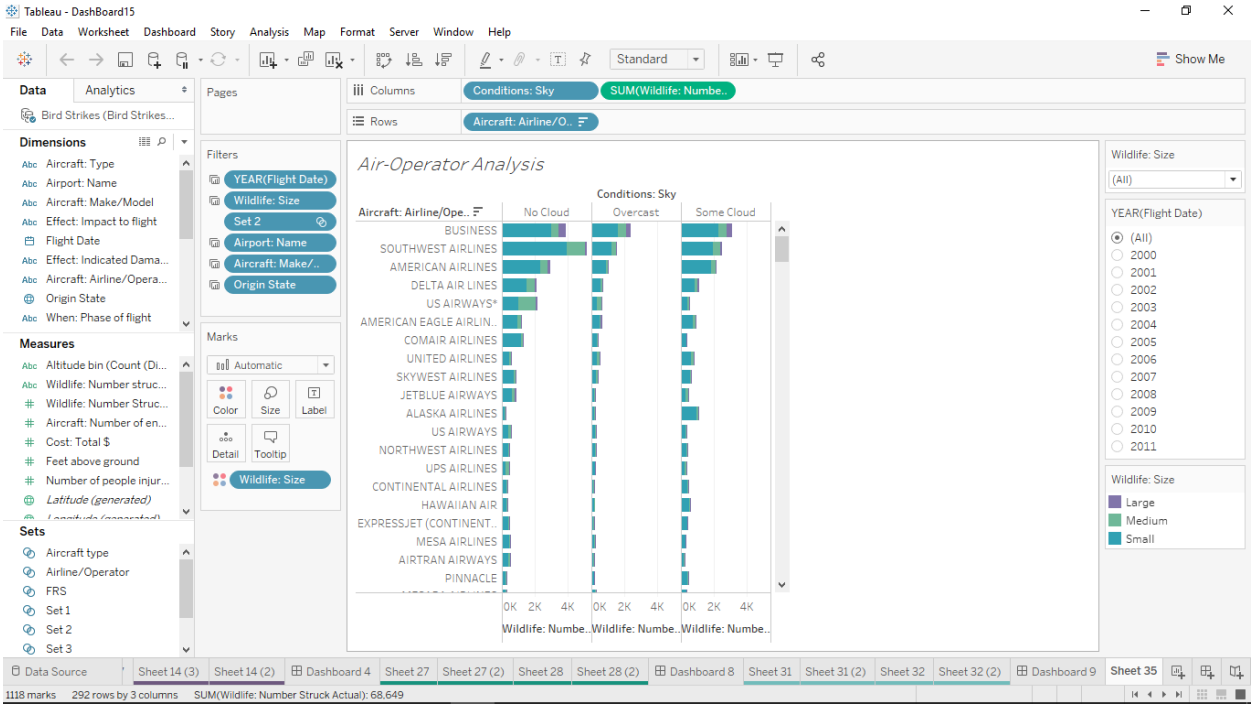
Tableau - DashBoard15
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
Data
Analytics
Bird Strikes (Bird Strikes...
Dimensions
Aircraft: Type
Airport: Name
Aircraft: Make/Model
Effect: Impact to flight
Flight Date
Effect: Indicated Dama...
Aircraft: Airline/Opera...
Origin State
When: Phase of flight
Measures
Altitude bin (Count (Di...
Wildlife: Number struc...
Wildlife: Number Struc...
Aircraft: Number of en...
Cost: Total $
Feet above ground
Number of people injur...
Latitude (generated)
Sets
Aircraft type
Airline/Operator
FRS
Set 1
Set 2
Set 3
Pages
Filters
YEAR(Flight Date)
Wildlife: Size
Set 2
Airport: Name
Aircraft: Make/..
Origin State
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Wildlife: Size
Columns
Conditions: Sky
SUM(Wildlife: Numbe..
Rows
Aircraft: Airline/O..
Air-Operator Analysis
Conditions: Sky
Aircraft: Airline/Ope..
No Cloud
Overcast
Some Cloud
BUSINESS
SOUTHWEST AIRLINES
AMERICAN AIRLINES
DELTA AIR LINES
US AIRWAYS*
AMERICAN EAGLE AIRLIN..
COMAIR AIRLINES
UNITED AIRLINES
SKYWEST AIRLINES
JETBLUE AIRWAYS
ALASKA AIRLINES
US AIRWAYS
NORTHWEST AIRLINES
UPS AIRLINES
CONTINENTAL AIRLINES
HAWAIIAN AIR
EXPRESSJET (CONTINENT..
MESA AIRLINES
AIRTRAN AIRWAYS
PINNACLE
0K 2K 4K
Wildlife: Numbe..
Wildlife: Size
(All)
YEAR(Flight Date)
(All)
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Wildlife: Size
Large
Medium
Small
Data Source
Sheet 14 (3)
Sheet 14 (2)
Dashboard 4
Sheet 27
Sheet 27 (2)
Sheet 28
Sheet 28 (2)
Dashboard 8
Sheet 31
Sheet 31 (2)
Sheet 32
Sheet 32 (2)
Dashboard 9
Sheet 35
1118 marks
292 rows by 3 columns
SUM(Wildlife: Number Struck Actual): 68,649