Analysis of Wildlife Strikes to Aircraft

Practicum I CS5200

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Connecting to Database

Defining the DB Schema

Testing DB Schema

Loading the CSV

Preprocessing the data frame

Importing Data into airports table

Importing Data into conditions table

Importing Data into flights table

Importing Data into strikes table

Displaying updated tables

Top Airports with Strikes

Table 1: Displaying records 1 - 10

airportState	numIncidents
California	2520
Texas	2453
Florida	2055
New York	1319
Illinois	1008
Pennsylvania	986
Missouri	960
Kentucky	812
Ohio	778
Hawaii	729

Analysis by Airline

Table 2: Displaying records 1 - 10

airlineName	numIncidents
SOUTHWEST AIRLINES	4628
BUSINESS	3074
AMERICAN AIRLINES	2058
DELTA AIR LINES	1349
US AIRWAYS	1337
AMERICAN EAGLE AIRLINES	932
SKYWEST AIRLINES	891
JETBLUE AIRWAYS	708
UPS AIRLINES	590
UNITED AIRLINES	506

Analysis by Month

Table 3: Displaying records 1 - 6

month	numIncidents
January	937
February	772
March	1233
April	1828
May	2318
June	2078

Trend by Month

Number of Incidents by Month
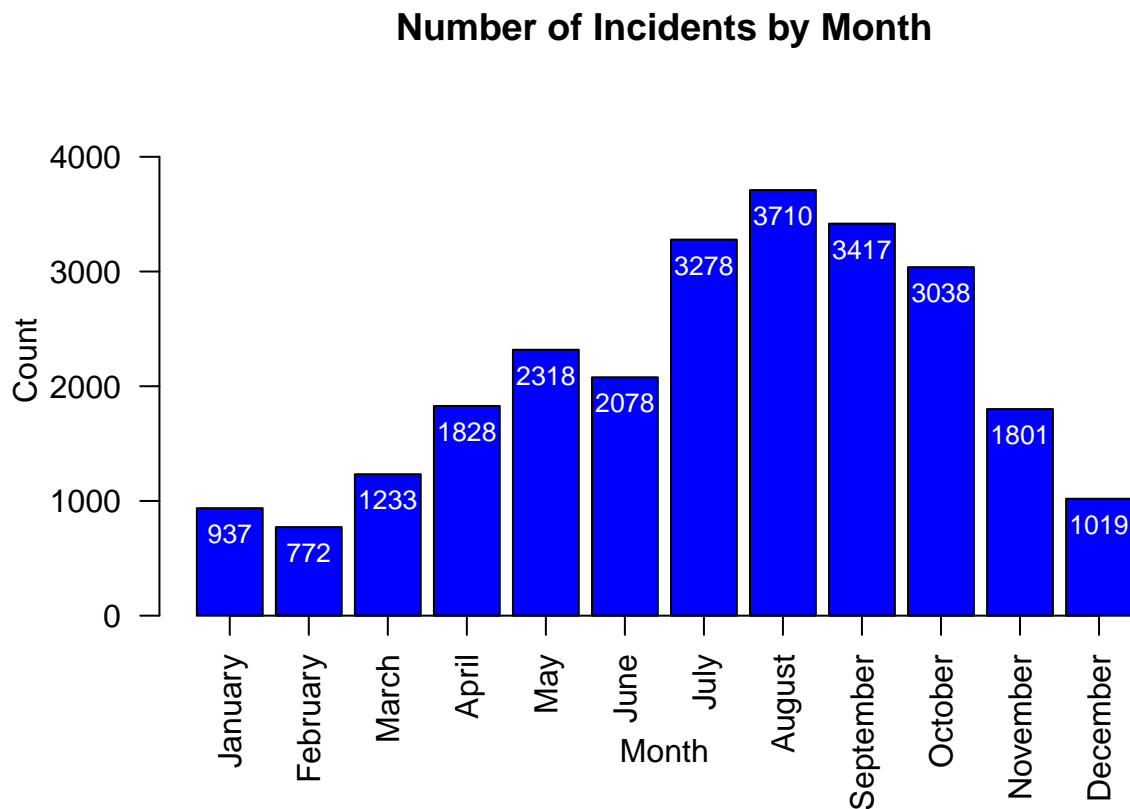
Create Stored Procedure

Test Stored Procedure

```r
# Call stored procedure
dbExecute(con, "CALL remove_strike(2);")
```

```
## [1] 1
```

```r
# Show updated strikes table
dbGetQuery(con, "SELECT * FROM strikes LIMIT 10;")
```

```
##   sid    fid numBirds              impact damage altitude conditions
## 1   1 202152        1    Engine Shut Down      0     1500          1
## 2   3 207601        1                None      0       50          1
## 3   4 215953        1 Precautionary Landing      0       50          2
## 4   5 219878        1                None      0       50          1
## 5   6 218432        1                None      0        0          1
## 6   7 221697        1               Other      0      150          1
## 7   8 236635        1               Other      0      100          2
```

```
## 8     9 207369         1      Aborted Take-off      0       0           2
## 9    10 204371         1               None      0       0           2
## 10   11 201589         1               None      0     200           2
```

```r
# Show updated audit_log table
dbGetQuery(con, "SELECT * FROM audit_log;")
```

```
##   log_id modification_type table_name          date_time primary_key
## 1      1           removal    strikes 2024-03-14 02:39:47           2
```

Disconnect from Database