

# Analysis of Wildlife Strikes to Aircraft

Practicum I CS5200

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## Connect to database

```
# 1. Library
library("RMariaDB")
library("DBI")

# 2. Settings
db_user <- 'admin'           # use your value from the setup
db_password <- 'wuzongyu'    # use your value from the setup
db_name <- 'practicum1'      # use your value from the setup

db_host <- 'cs5200.ceko8sdfannu.us-east-1.rds.amazonaws.com' # for aws
db_port <- 3306

# 3. Connect to remote server database

mydb.aws <- DBI::dbConnect(RMariaDB::MariaDB(), user = db_user, password = db_password,
                           dbname = db_name, host = db_host, port = db_port)

# 4. Knit setting
knitr::opts_chunk$set(connection = "mydb.aws", echo = FALSE, warning = FALSE, message = FALSE)
```

## Test connection

### Create schemas

```
## [1] 0
## [1] 0
## [1] 0
## [1] 0
## [1] 0
## [1] 0
## [1] 0
## [1] 0
## [1] 0
## [1] 0
```

## Load csv

```
##      rid aircraft      airport      model      impact
## 1 202152 Airplane  LAGUARDIA NY B-737-400 Engine Shut Down
## 2 208159 Airplane DALLAS/FORT WORTH INTL ARPT MD-80      None
## 3 207601 Airplane  LAKEFRONT AIRPORT C-500      None
##      flight_date      damage      airline      origin flight_phase
## 1 11/23/2000 0:00      Damage      US AIRWAYS New York      Climb
## 2 7/25/2001 0:00      Damage AMERICAN AIRLINES Texas Landing Roll
## 3 9/14/2001 0:00 No damage      BUSINESS Louisiana Approach
##      wildlife_size sky_conditions pilot_warned_flag altitude_ft heavy_flag
## 1      Medium      No Cloud      N      1,500      Yes
## 2      Small      Some Cloud      Y      0      No
## 3      Small      No Cloud      N      50      No
```

## Import data

### Top Airports with Strikes

Table 1: Displaying records 1 - 10

State	NumberOfIncidents
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

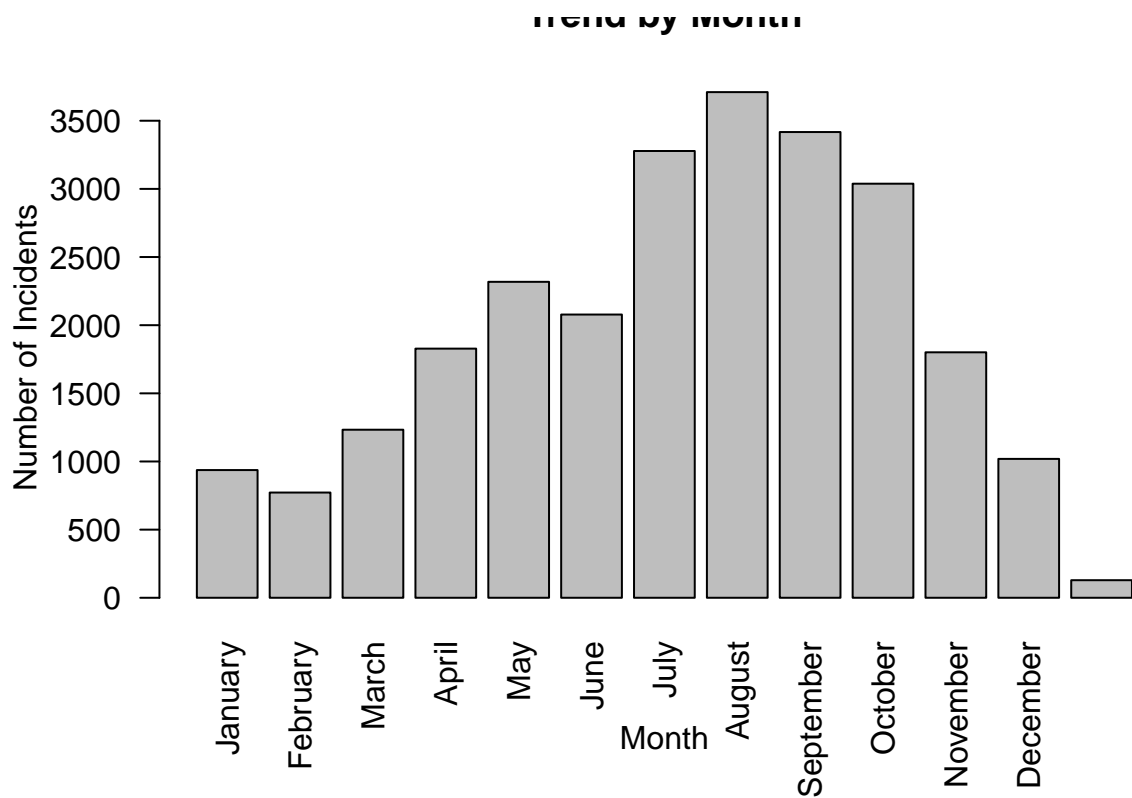
airlineName	NumberOfIncidents
SOUTHWEST AIRLINES	4628
BUSINESS	3074
AMERICAN AIRLINES	2058
DELTA AIR LINES	1349
US AIRWAYS	1337
AMERICAN EAGLE AIRLINES	932
SKYWEST AIRLINES	891
JETBLUE AIRWAYS	708
UPS AIRLINES	590
UNITED AIRLINES	506

## Analysis by Month

```
##      Month NumberOfIncidents
```

```
## 1      August          3710
## 2 September          3417
## 3       July          3278
## 4    October          3038
## 5       May          2318
## 6       June          2078
```

## Trend by Month



## Create stored procedure

```
## [1] 0
## [1] 0
## [1] 0
## [1] 0

##      sid fid numbirds impact damage altitude conditions
## 1 1195 747      1   None      0          2          3

## [1] 1

## [1] sid      fid      numbirds  impact    damage    altitude  conditions
## <0 rows> (or 0-length row.names)

##      auid modificationType tableName tablePK      modificationTime
## 1      1      Removal    strikes    1195 2024-03-07 21:24:14
```

## Clean up