Clint Valentine

Week 12 Assignment

# 1. How many bird strike events occurred for American Airlines?

query <- "

SELECT COUNT (DISTINCT record\_id)

FROM events

INNER JOIN flights

ON events.airport\_name = flights.airport\_name

AND events.flight\_date = flights.flight\_date

WHERE flights.aircraft\_airline\_operator = 'AMERICAN AIRLINES'

"

result <- unlist(dbGetQuery(conn, query))

cat('\nNumber of bird strike events with American Airlines: ', result, '\n')

Number of bird strike events with American Airlines: 5803

# 2. How many bird strikes were there for each airline? Show the airline name,

# including UNKNOWN, and the number of strikes.

query <- "

SELECT flights.aircraft\_airline\_operator, COUNT (DISTINCT record\_id)

FROM events

INNER JOIN flights

ON events.airport\_name = flights.airport\_name

AND events.flight\_date = flights.flight\_date

GROUP BY flights.aircraft\_airline\_operator

"

result <- dbGetQuery(conn, query)

cat('\nNumber of bird strikes per airline:\n\n')

print(result)

Number of bird strikes per airline:

aircraft\_airline\_operator COUNT (DISTINCT record\_id)

1 ABSA AEROLINHAS BRASILEIRAS 1

2 ABX AIR 2592

3 ACM AVIATION 2

4 ACTION AIRLINES 12

5 ADI SHUTTLE GROUP 55

6 AER LINGUS 32

7 AERO AIR 2

8 AERO CHARTER AND TRANSPORT 2

9 AERO COSTA RICA 4

10 AERO INDUSTRIES 1

11 AEROFLOT 1

12 AEROLINEAS EJECUTIVAS 4

13 AEROLITORAL 4

14 AEROMEXICO 6

15 AERONAVES TSM 1

16 AEROSUN INTL 1

17 AIR 2000 2

[ rows omitted ]

# 3. Which airline had the most bird strikes, excluding military and unknown?

query <- "

SELECT subquery.airline, MAX(subquery.count)

FROM (

SELECT flights.aircraft\_airline\_operator as airline,

COUNT (DISTINCT record\_id) as count

FROM events

INNER JOIN flights

ON events.airport\_name = flights.airport\_name

AND events.flight\_date = flights.flight\_date

WHERE flights.aircraft\_airline\_operator != 'UNKNOWN'

AND flights.aircraft\_airline\_operator != 'MILITARY'

GROUP BY flights.aircraft\_airline\_operator) subquery

"

result <- dbGetQuery(conn, query)

print('\nAirline with the most bird strikes (excluding military/unknown):\n\n')

print(result)

Airline with the most bird strikes (excluding military/unknown):

airline MAX(subquery.count)

1 UNITED AIRLINES 13081

# 4. Which bird strikes occurred for Helicopters? List all the bird strike

# incidents with date.

query <- "

SELECT events.record\_id, events.flight\_date

FROM events

INNER JOIN flights

ON events.airport\_name = flights.airport\_name

AND events.flight\_date = flights.flight\_date

INNER JOIN aircraft

ON flights.make\_model = aircraft.make\_model

WHERE aircraft.type = 'Helicopter'

"

result <- dbGetQuery(conn, query)

cat('\nBird strikes (by ID) for helicopters and date of flight:\n\n')

print(result)

record\_id flight\_date

1 312197 5/12/2011 0:00

2 261350 3/24/2009 0:00

3 213040 2/17/2003 0:00

4 208985 3/8/2001 0:00

5 312006 5/5/2011 0:00

6 231499 11/12/2004 0:00

7 311762 5/26/2011 0:00

8 254548 5/28/2008 0:00

9 200830 4/29/2000 0:00

10 242729 9/22/2006 0:00

11 215783 5/15/2002 0:00

12 202457 12/11/2000 0:00

13 253249 9/26/2007 0:00

14 208561 8/16/2000 0:00

15 254613 8/8/2008 0:00

16 236369 11/22/2005 0:00

17 224515 5/16/2004 0:00

18 213825 11/15/2001 0:00

19 303254 7/25/2010 0:00

20 316957 9/21/2011 0:00

21 310146 1/23/2011 0:00

[ rows omitted ]

# 5. Which airlines had more than 10 bird strikes? List the airline names only

# excluding military and unknown.

query <- "

SELECT DISTINCT flights.aircraft\_airline\_operator

FROM flights

INNER JOIN events

ON events.airport\_name = flights.airport\_name

AND events.flight\_date = flights.flight\_date

WHERE

(events.wildlife\_number\_struck = '11 to 100'

OR events.wildlife\_number\_struck = 'Over 100')

AND flights.aircraft\_airline\_operator != 'UNKNOWN'

AND flights.aircraft\_airline\_operator != 'MILITARY'

"

result <- dbGetQuery(conn, query)

cat('\nAirlines with more than 10 bird strikes excluding unknown/military:\n\n')

print(result)

Airlines with more than 10 bird strikes excluding unknown/military:

aircraft\_airline\_operator

1 TRANS WORLD AIRLINES

2 NORTHWEST AIRLINES

3 UNITED AIRLINES

4 BUSINESS

5 FEDEX EXPRESS

6 US AIRWAYS\*

7 AMERICAN AIRLINES

8 CONTINENTAL AIRLINES

9 SOUTHWEST AIRLINES

10 AMERICAN EAGLE AIRLINES

11 DELTA AIR LINES

12 PIEDMONT AIRLINES

13 MESABA AIRLINES

14 MIDWEST AIRLINES

15 HARBOR AIRLINES

16 SPIRIT AIRLINES

17 HORIZON AIR

18 UPS AIRLINES

19 ZANTOP INTL AIRLINES

20 GOVERNMENT

21 SKYWEST AIRLINES

22 COMAIR AIRLINES

23 LUFTHANSA

24 HAWAIIAN AIR

25 ATLANTIC SOUTHEAST

26 ATLANTIC COAST AIRLINES

27 FRONTIER AIRLINES

28 AIR CANADA

29 CAPE AIR

30 CCAIR

31 EXECUTIVE JET AVIATION

32 AMERICA WEST AIRLINES

33 MESA AIRLINES

34 ABX AIR

35 AIR MIDWEST

36 SKYWAY AIRLINES

37 SKYWAYS EXPRESS

38 PRIVATELY OWNED

39 JETBLUE AIRWAYS

40 ALASKA AIRLINES

41 ALOHA AIRLINES

42 CHAUTAUQUA AIRLINES

43 FLIGHT OPTIONS

44 NETJETS

45 AMERIFLIGHT

46 JAPAN AIRLINES

47 AIR CHINA

48 GREAT LAKES AIRLINES

49 CHICAGO EXPRESS

50 SWIFT AIR

51 PSA AIRLINES

52 US EXPRESS

53 ATA AIRLINES

54 EXPRESSJET (CONTINENTAL EXPRS)

55 COMMUTAIR

56 AIR WISCONSIN AIRLINES

57 AIRTRAN AIRWAYS

58 AIR GEORGIAN

59 PINNACLE

60 SUBURBAN AIR FREIGHT

61 AIRNET EXPRESS

62 INDEPENDENCE AIR

63 SALMON AIR

64 NETJETS AVIATION

65 VIRGIN ATLANTIC

66 SHUTTLE AMERICA

67 REPUBLIC AIRLINES

68 LYNX AVIATION

69 XL AIRWAYS UK

70 ALOHA AIR CARGO

71 US AIRWAYS

72 BRITISH AIRWAYS

73 ERA HELICOPTERS

74 LUFTHANSA CARGO

75 EMPIRE AIRLINES

76 SOUTHERN AIR

77 VISION AIRLINES

78 COLGAN AIRWAYS

79 COMPASS AIRLINES

80 EXECUTIVE JET MGMNT

81 ALL NIPPON AIRWAYS

82 XOJET

83 EVA AIR

84 TRANS STATES AIRLINES

85 USA 3000

86 FLIGHT EXPRESS

87 NORTH AMERICAN