

Aircraft Risk Assessment for Business Growth Opportunities

entry points into the airline sector



Summary

Find entry points into airline sector with the ***lowest*** risk of serious incidents.

Analysis is based upon the National Transportation Safety Board database of aviation accidents.

Recommendations are to:

- Purchase aircraft from Boeing & Bell.
- 2-engine planes
- 757 and 777 models

Outline

- Business Problem
- Data
- Methods
- Results
- Conclusions



Business Problem

Identify the safest aircraft for purchase and use in operating commercial flights.

Gain a clear understanding of which variables are associated with low risk (aircraft type, flight details) .

Data

data set: National Transportation Safety Board database of aviation accidents.

entries: rows describe details of one U.S. flight incident [aircraft make, model, flight details, etc.]

target variables: incident count, serious passenger injuries

Data Limitations

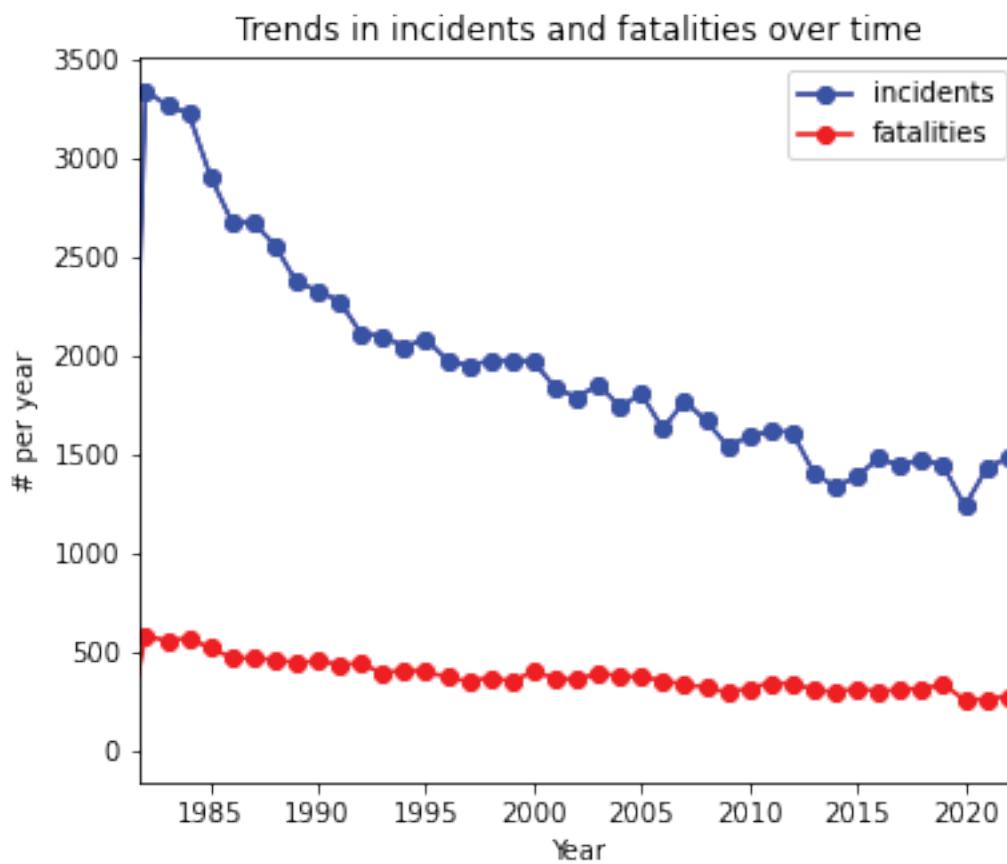
This database **only** lists those flights that had incidents.

Unknown: total number of flights (with- and without-incident)

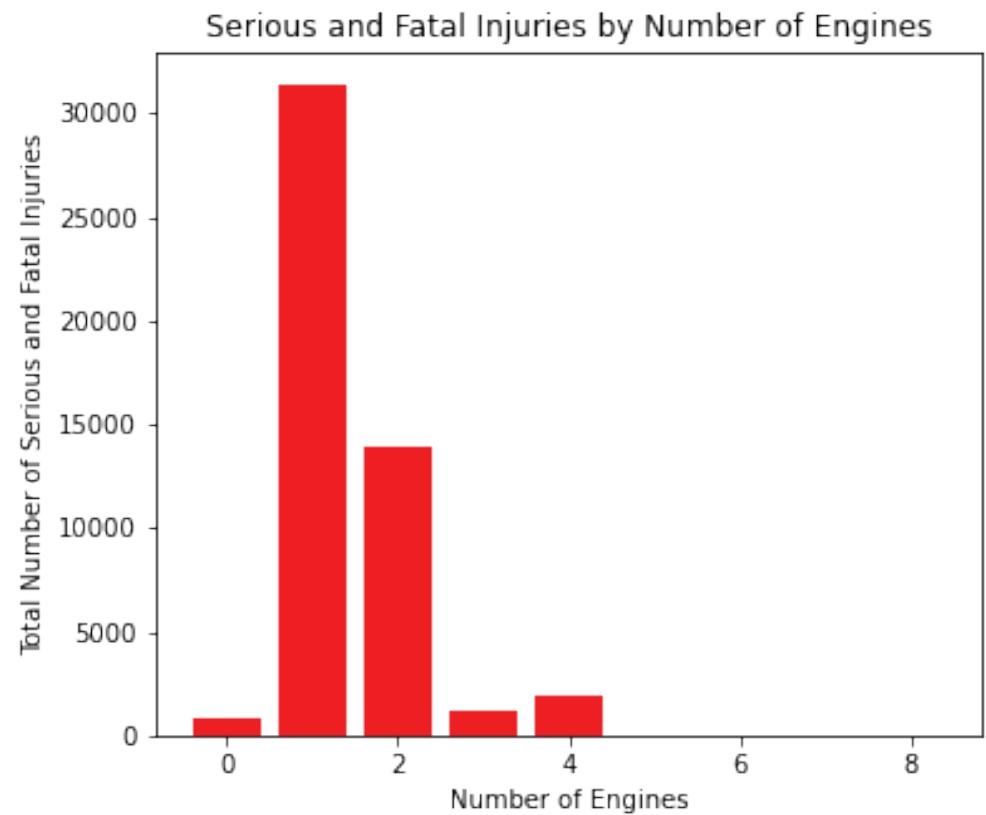
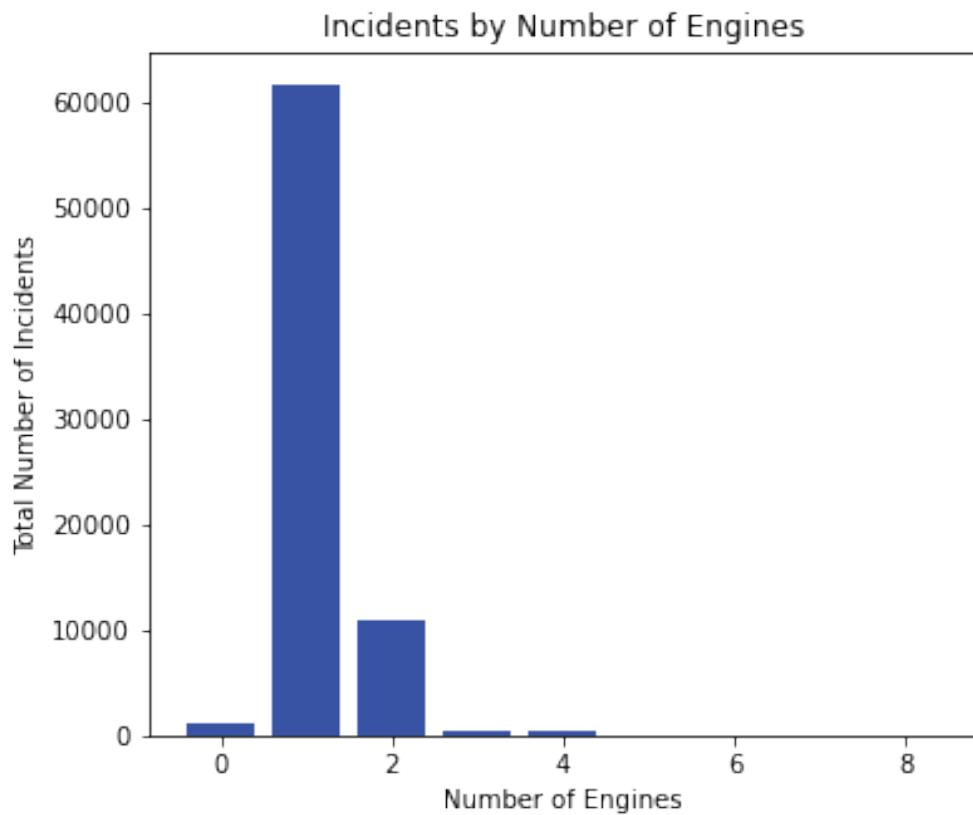
Goals: choose aircraft with low number of incidents and fatalities



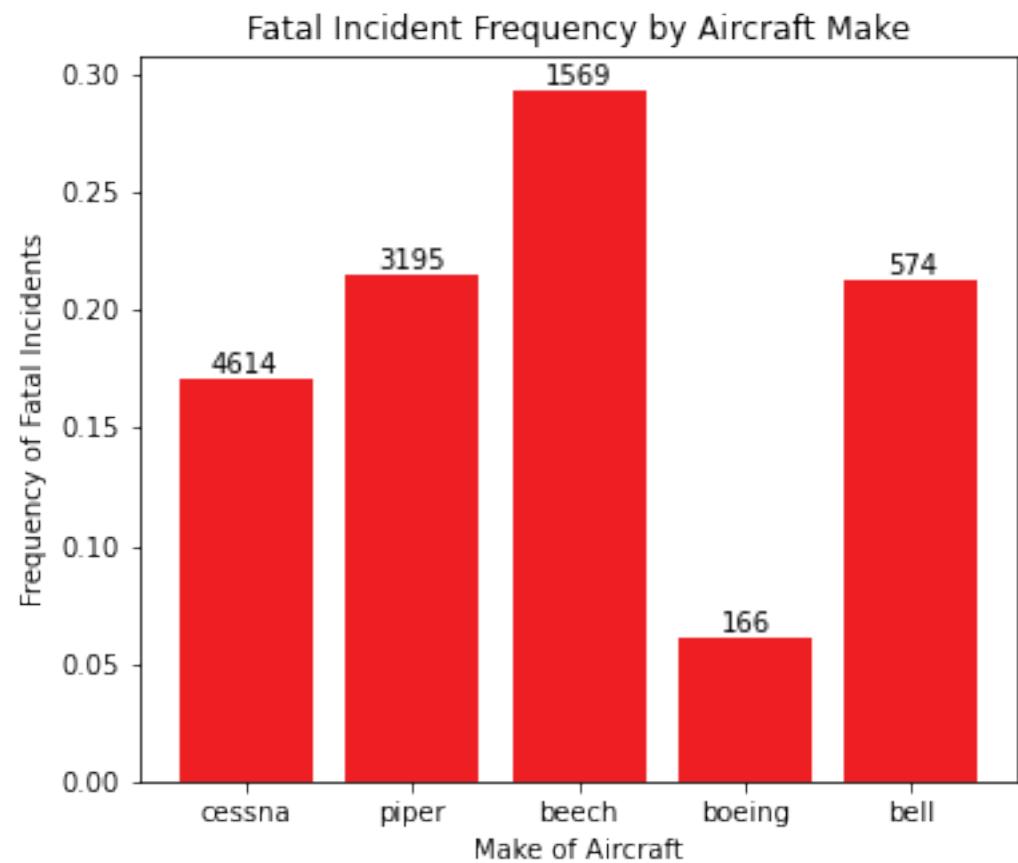
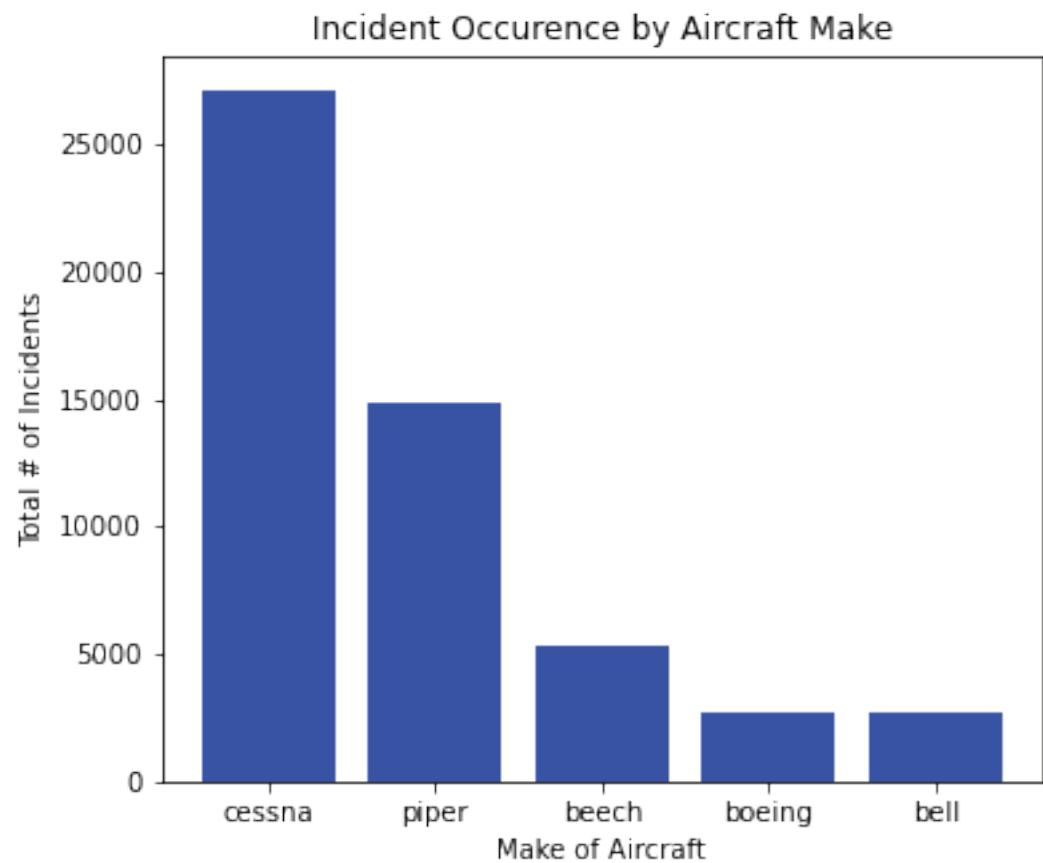
Incidents have been decreasing over time



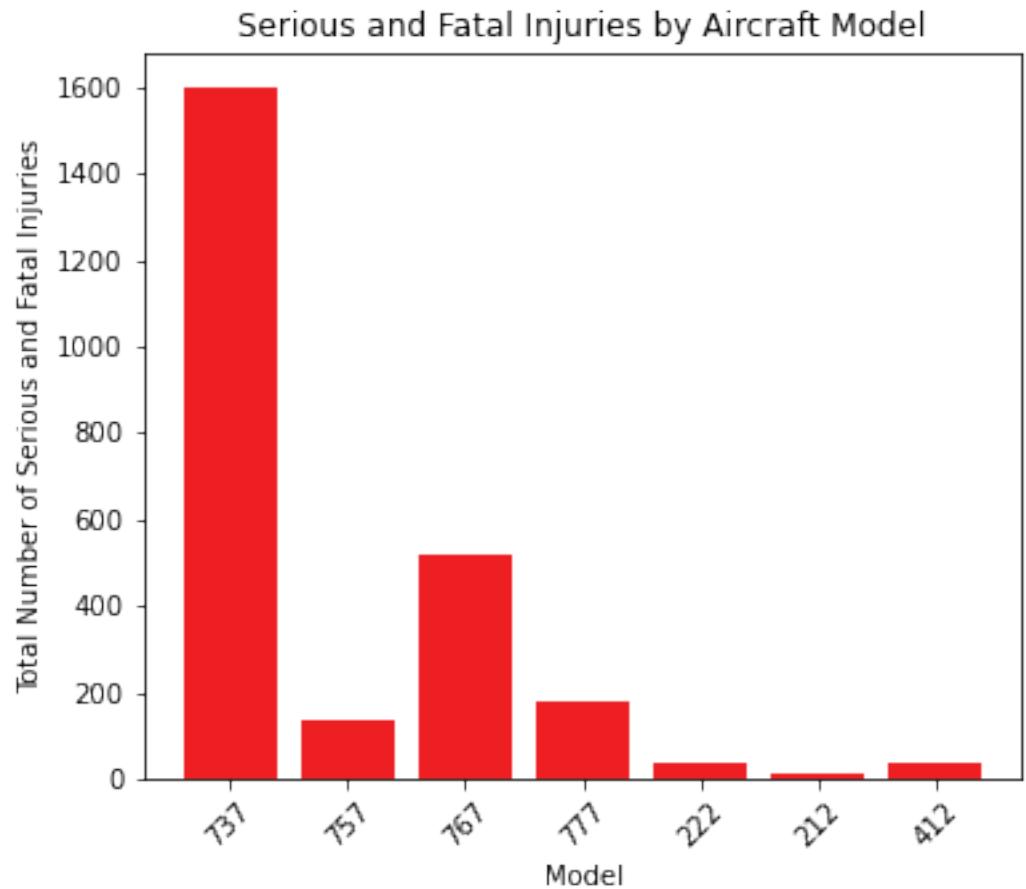
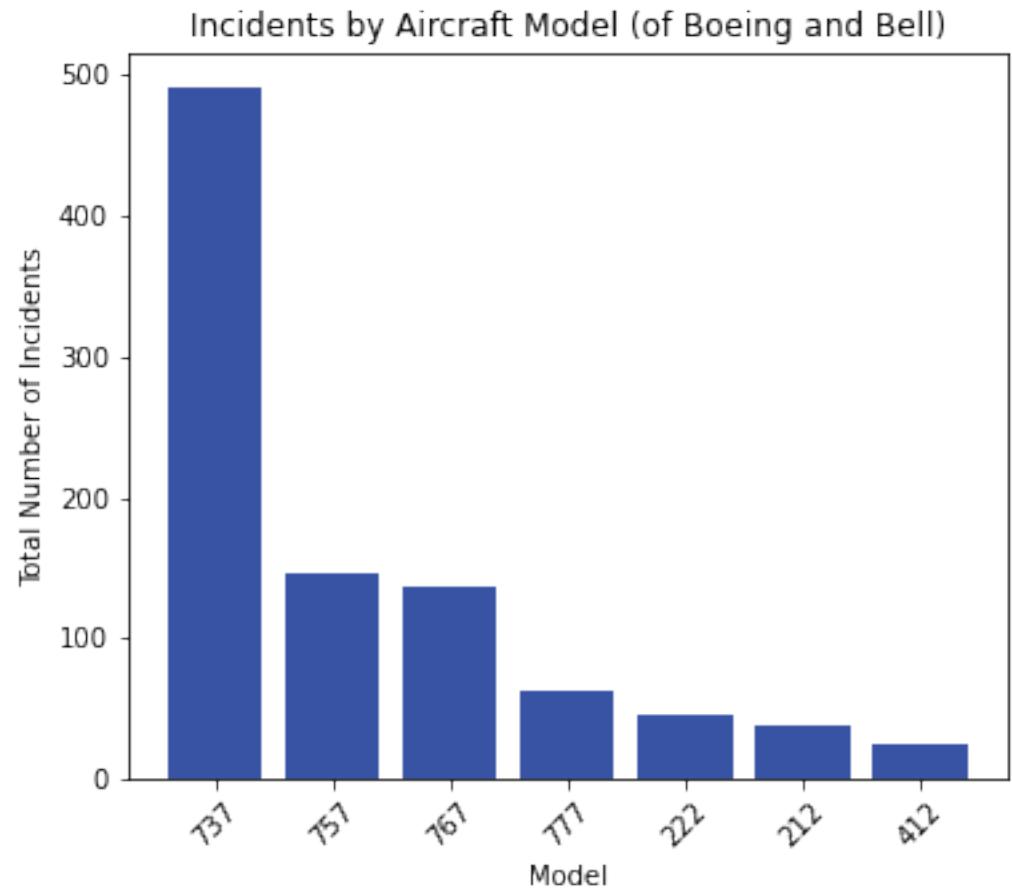
2 Engine Aircraft have fewer incidents and fatalities



Boeing and Bell have fewer incidents



Models 757 and 777 carry lower risk



Conclusions

In order to minimize the risk of serious and fatal incidents, we recommend a focus on:

- 2-engine aircraft
- Boeing and Bell
- 757 and 777 models

Future Steps



We might ask:

- Best flight routes?
- Safest times of day?
- Data sets beyond just incidents?

Thanks for your attention.



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