White Lotus

Martha's Vineyard

"Luxury from Backyard to Beachfront"

The Problem: VIP Transportation

Sicily

2 Flights, Limo

- Original Location to Venice
- Venice to Sicily
- Limousine to Resort

Maui

2 Flights, Limo

- Original Location to Honolulu
- Honolulu to Maui
- Limousine to Resort

MV

1 Flight

Direct Flight – Original Location to Resort

The Solution: White Lotus Charter Flights

SAFETY

Analyze data to select the safest planes

COST

Use cost analysis to remain within $5M budget

COMFORT

Choose planes that will provide experience consistent with White Lotus' reputation

The Data

NTSB DATA

Data provided by National Transportation Safety Board

SAFETY STATISTICS

Determination of safest aircraft by data analysis

COST ANALYSIS

Data from Global Air used to determine best planes to suit our need

VISUALIZATIONS

Creative visuals to portray findings

Analysis Part 1 – Zeroing In

ELIMINATING UNNECESSARY INFO

- Impractical
- Ungroupable/ Unique
- Incomplete
- Redundant
- Irrelevant

88,889 Data Points
31 Categories

NARROWING DOWN SPECIFIC DATA POINTS

- Data only from 1993 on
- Professionally built only
- USA Only
- Private and Small Planes

21,119 Data Points
22 Categories

MISSING DATA

- Removed data without Make/Model
- Cleaned numbers to perform statistical analysis

15,781 Data Points
15 Categories

Event.Id	Amateur.Built
Investigation.Type	Number.of.Engines
Accident.Number	Engine.Type
Event.Date	FAR.Description
Location	Schedule
Country	Purpose.of.flight
Latitude	Air.carrier
Longitude	Total.Fatal.Injuries
Airport.Code	Total.Serious.Injuries
Airport.Name	Total.Minor.Injuries
Injury.Severity	Total.Uninjured
Aircraft.damage	Weather.Condition
Aircraft.Category	Broad.phase.of.flight
Registration.Number	Report.Status
Make	Publication.Date
Model	

~~Event.Id~~	~~Amateur.Built~~
Investigation.Type	Number.of.Engines
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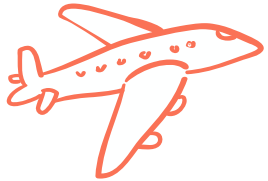
Aircraft.damage	~~Weather.Condition~~
~~Aircraft.Category~~	~~Broad.phase.of.flight~~
~~Registration.Number~~	~~Report.Status~~
Make	~~Publication.Date~~
Model	

Analysis Part 2 - Safety Score

Fatality/Injury Score

$$1 - \frac{8(Fatalities) + 4(Serious\ Injuries) + 2(Minor\ Injuries) + 0(Uninjured)}{14(Total\ Passengers)}$$



Plane Damage Score

$$1 - \frac{2(Destroyed) + 1(Substantial) + 0(Minor)}{4}$$

Prevention Score

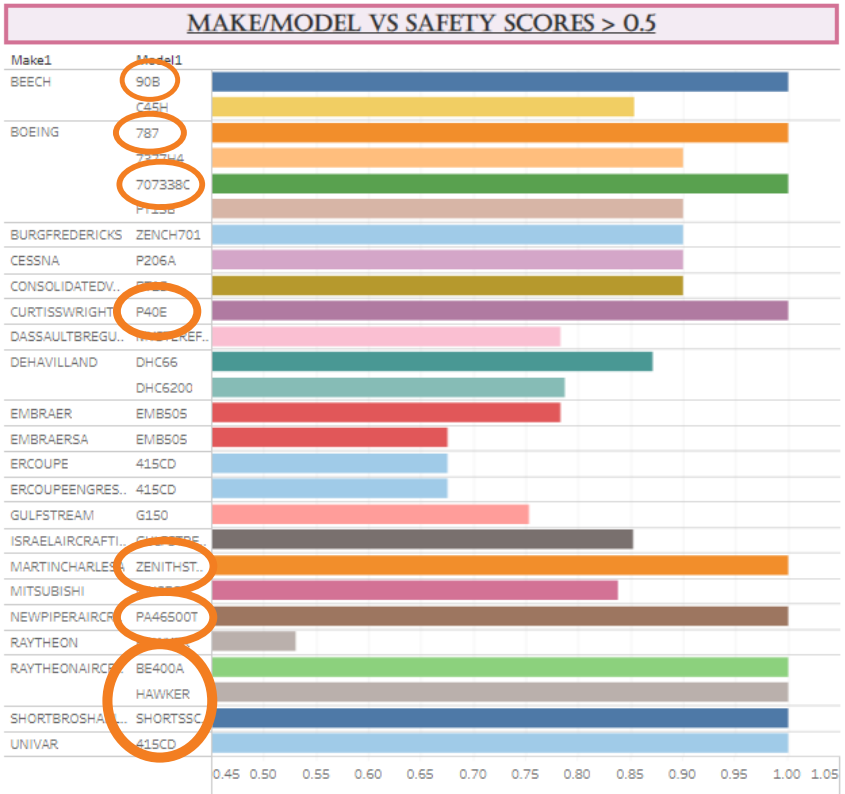
0.9 (Accident)

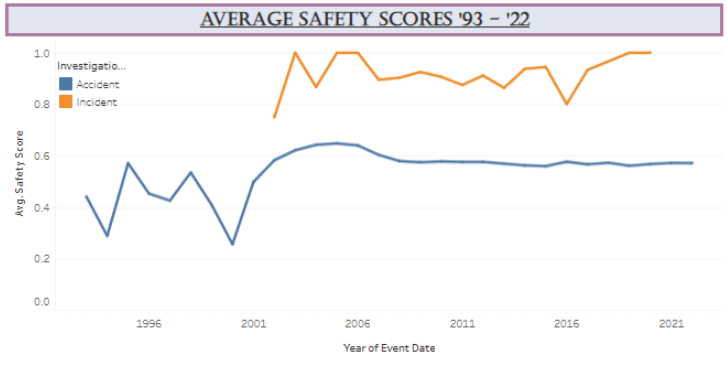
1.0 (Incident)

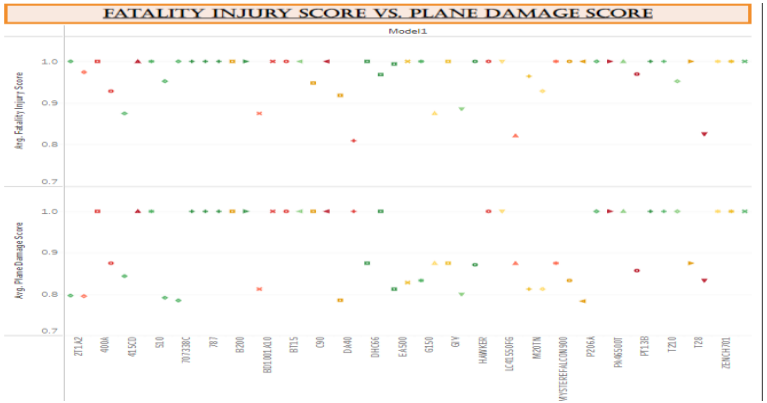
A Look at the Numbers

	Event Date	Aircraft Damage	Number Of Engines	Total Fatal Injuries	Total Serious Injuries	Total Minor Injuries	Total Uninjured	Total Passengers	Investigation Type Score	Fatality Injury Score	Plane Damage Score	Safety Score
count	15781	15781.000000	15781.000000	15781.000000	15781.000000	15781.000000	15781.000000	15781.000000	15781.000000	15781.000000	15781.000000	15781.000000
mean	2013-09-17 17:30:43.913567232	1.069766	1.098790	0.271656	0.218237	0.163298	1.197516	1.852544	0.901001	0.873495	0.732559	0.583265
min	1993-04-23 00:00:00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.900000	0.428571	0.500000	0.192857
25%	2009-06-23 00:00:00	1.000000	1.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.900000	0.785714	0.750000	0.482143
50%	2013-07-07 00:00:00	1.000000	1.000000	0.000000	0.000000	0.000000	1.000000	2.000000	0.900000	1.000000	0.750000	0.675000
75%	2018-04-08 00:00:00	1.000000	1.000000	0.000000	0.000000	0.000000	2.000000	2.000000	0.900000	1.000000	0.750000	0.675000
max	2022-12-26 00:00:00	2.000000	8.000000	14.000000	9.000000	13.000000	179.000000	179.000000	1.000000	1.000000	1.000000	1.000000
std	NaN	0.293453	0.310667	0.796078	0.585870	0.510981	2.252999	2.212361	0.009956	0.197435	0.073363	0.154818

Visualizations – The Safety Score







The Right Choice

Cost

Which plane is most financially viable?

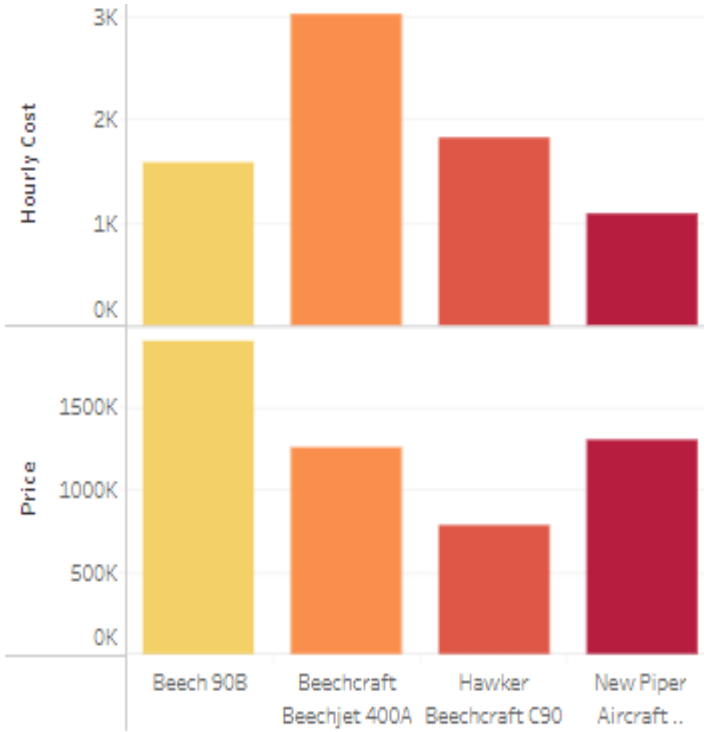
Capacity

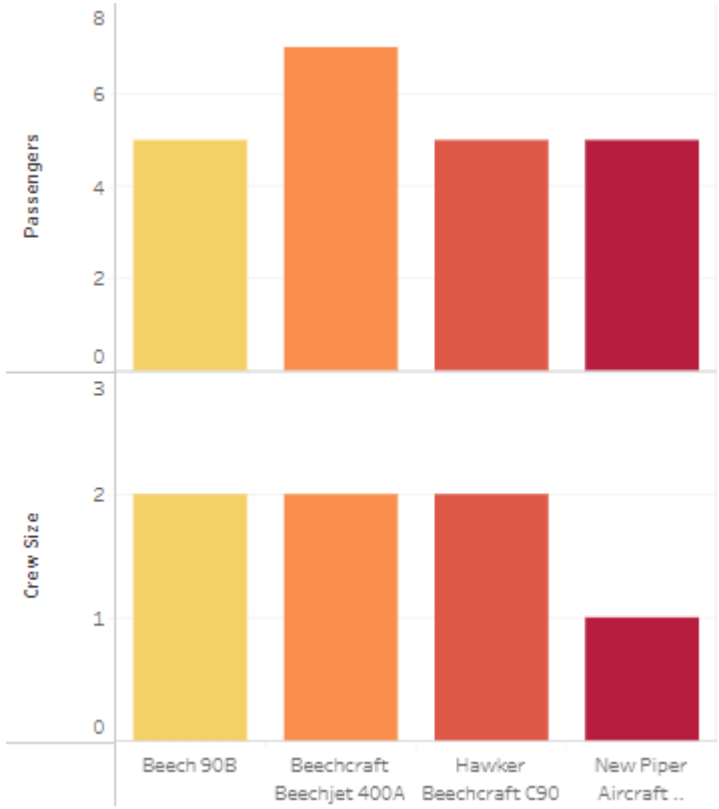
Which plane can carry the largest family/group sizes?

Comfort

Which plane provides the highest quality experience?

Visualizations – Aircraft Specifications





Interiors

New Piper PA-46-500T

Beechjet 400A

Beech 90B

Conclusion – Aircraft Recommendations

Option 1

Cost-Effective

New Piper PA-46-500T
Initial - $1,207,417.66
10 Year Cost - $6,219,107.66
25 Year Cost - $13,586,642.66

Option 2

Largest Capacity

Beechjet 400A
Initial - $1,256,666.67
10 Year Cost - $14,842626.67
25 Year Cost - $35,221,566.67

Option 3

Luxury

Beech 90B
Initial - $1,903,750.00
10 Year Cost - $9,057,220.00
25 Year Cost - $19,787,425.00

Next Steps

Questions?