

The background features a dark blue gradient with a subtle pattern of white dots. Overlaid on the left side are several concentric circular patterns and arcs. Some of these arcs are accompanied by numerical labels: 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, and 260. There are also dashed lines and arrows indicating a clockwise direction of movement or rotation.

KENGELE AVIATION

AN INVESTMENT AND SAFETY ANALYSIS INTO THE AVIATION INDUSTRY

BUSINESS OVERVIEW

- Kengele Aviation is a new subsidiary of Kengele Group that is keen on joining the aviation market.
- They are willing to buy and operate airplanes for both its commercial and private enterprises.
- There is no risk analysis that has been undertaken in order to establish the viability of the business.



BUSINESS OVERVIEW

- The aviation industry is a very high risk industry as the players in the sector have to purchase expensive aircrafts.
- Aircrafts have both fixed and variable costs.
- The fixed costs are irrespective of the distance travelled. Such as staff salaries and insurance.
- The variable costs are dependent on the distance travelled such as fuel
- As aircraft safety keeps on increasing the number of fatal accidents have reduced due to the technological advancements in the industry.



UNDERSTANDING THE DATA

- For our research, we have obtained data from the National Transportation Safety Board that includes aviation accident data.
- The data contains key variables such as : the make and model of the aircraft and the number of injuries whether fatal or not
- This data therefore, would help us identify the correct plane to purchase based on the safety standards of the plane.



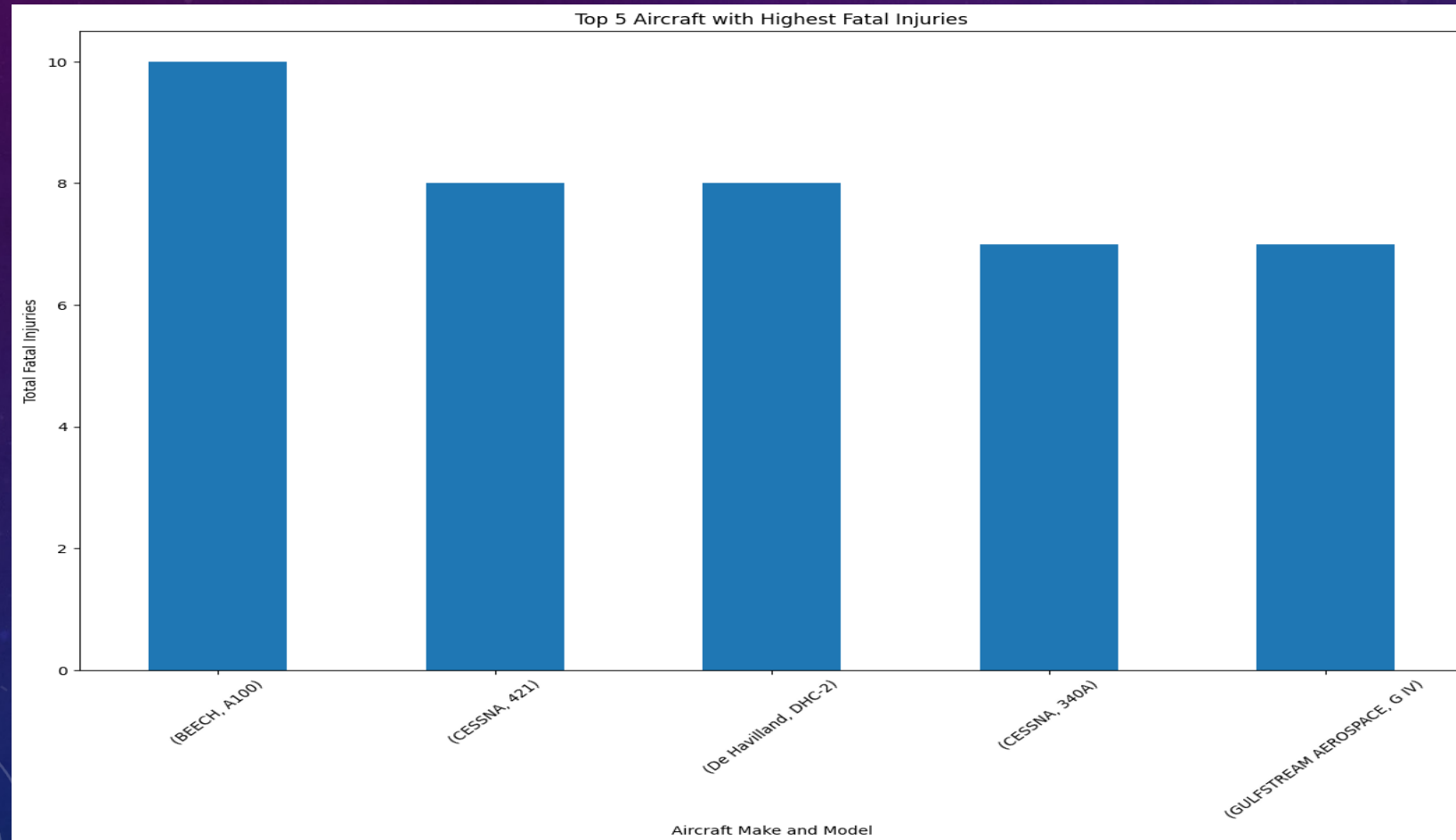
DATA ANALYSIS

- The dataset used had to be sorted and filtered to ensure that we remain with relevant and adequate data.
- Filtering and replacing empty values to create visualizations that accurately represent the aircrafts data.
- I filtered the data to only include certain key columns such as the type of aircraft, the purpose of the aircraft, total number of fatalities as these are the ones that mainly relate to Kengele aviation.
- For the aim of this analysis, we shall focus on Business and executive purposes of flight as those planes relate to the Kengeles business.



WHAT THE DATA IS SAYING

MOST FATAL AIRCRAFT



WHAT THE DATA IS SAYING

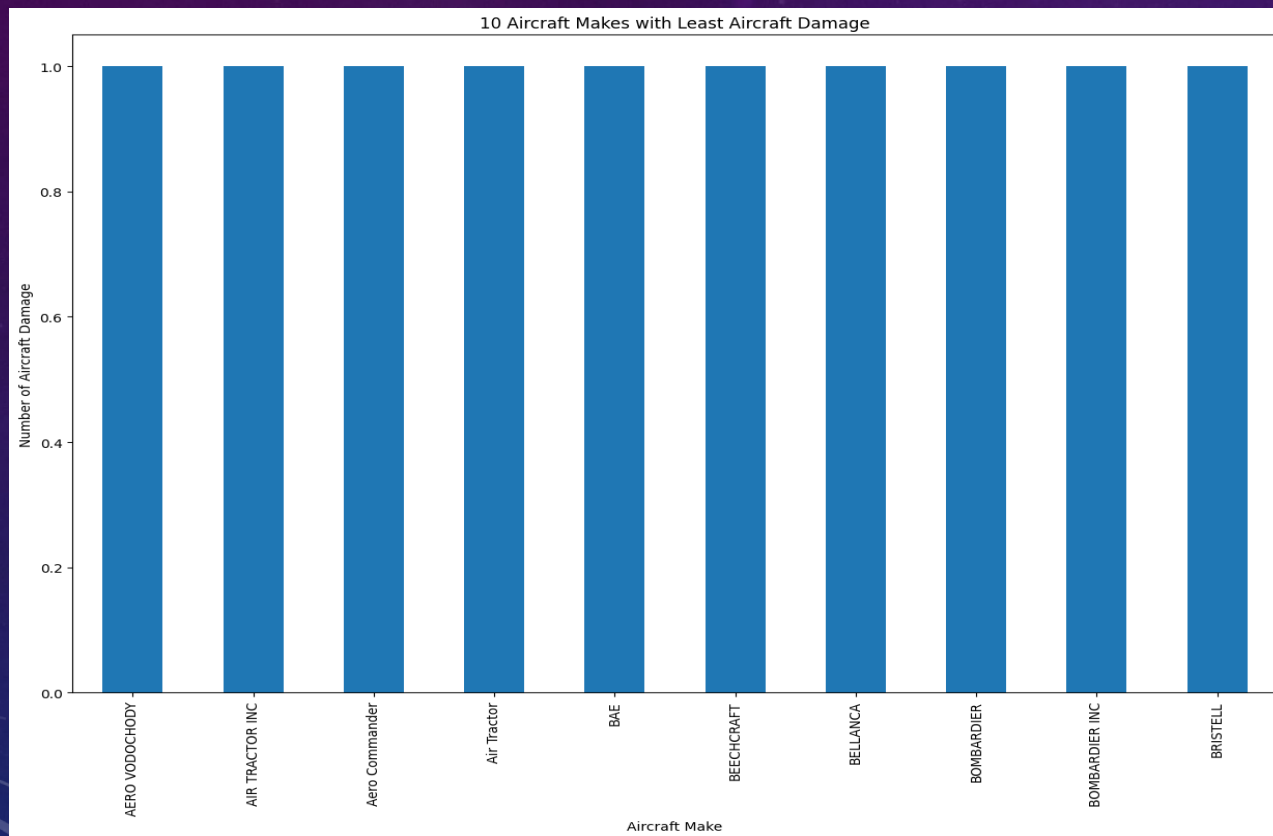
MOST FATAL AIRCRAFTS

- From the above it can be noted that the BEECH model A100 and CESSNA MODEL 421 and 340A makes have very unreliable aircrafts leading to the highest number of fatalities.
- It should also be noted that the CESSNA has the most aircraft damage with 109 aircrafts followed by PIPER and BEECH with 43 and 38 aircrafts damaged.
- Therefore CESSNA aircrafts are the least advisable option to purchase as they will lead the company into serious challenges.



WHAT THE DATA IS SAYING

LEAST FATAL AIRCRAFTS



WHAT THE DATA IS SAYING

LEAST FATAL AIRCRAFTS

- From the above it can be noted that the AERO COMMANDER has one of the safest planes with the models 100, 500, 685 and 695 having no fatalities .
- The AIR TRACTOR with the models AT502, AT802 and AT-302 having no fatalities as well.
- They also have the least damage to the aircraft in the event of an accident.



CONCLUSION

- From the above data presented, the following aircrafts would be suitable for purchase by KENGELE AVIATION as they would pose the least risk to them : Aero commander or Air tractor.

