

AIRCRAFT RISK ANALYSIS

INTRODUCTION

THIS PRESENTATION AIMS TO ASSESS THE RISKS INVOLVED IN ACQUIRING DIFFERENT MAKES AND MODELS OF AIRCRAFT.

THE INTENTION IS TO PROVIDE INSIGHT AS TO THE IDEAL OPTION(S) TO MOVE FORWARD WITH IN THE CONTEXT OF A NEW AVIATION ENTERPRISE.

PROJECT OVERVIEW

YOUR COMPANY IS EXPANDING IN TO NEW INDUSTRIES TO DIVERSIFY ITS PORTFOLIO. SPECIFICALLY, THEY ARE INTERESTED IN PURCHASING AND OPERATING AIRPLANES FOR COMMERCIAL AND PRIVATE ENTERPRISES, BUT ARE UNINFORMED ON THE POTENTIAL RISKS OF AIRCRAFT.

YOU ARE CHARGED WITH DETERMINING WHICH AIRCRAFT ARE THE LOWEST RISK FOR THE COMPANY TO START THIS NEW BUSINESS ENDEAVOR. YOU MUST THEN TRANSLATE YOUR FINDINGS INTO ACTIONABLE INSIGHTS THAT THE HEAD OF THE NEW AVIATION DIVISION CAN USE TO HELP DECIDE WHICH AIRCRAFT TO PURCHASE.

DATA

THE DATA USED IS FROM THE NATIONAL TRANSPORTATION SAFETY BOARD. IT INCLUDES AVIATION ACCIDENT DATA FROM 1962 TO 2023 ABOUT CIVIL AVIATION ACCIDENTS AND SELECTED INCIDENTS IN THE UNITED STATES AND INTERNATIONAL WATERS.

THE DATA WAS CLEANED, ORGANIZED AND VISUALIZED FOR EASY INTERPRETATION BY THE CLIENT.

PROCESS STEPS

- STREAMLINE THE DATASET BY DROPPING COLUMNS IRRELEVANT TO THE ANALYSIS
- CLEAN THE DATA BY OMITTING NULL AND MISSING VALUES WHERE NECESSARY WITHOUT SIGNIFICANTLY DAMAGING THE SET.
- PLOTTING VISUALIZATIONS(GRAPHS, TABLES ETC) TO PRESENT THE DATA IN A MORE CONSUMABLE WAY.
- DRAWING CONCLUSIONS GUIDED BY THE RESULTS FROM THE STEPS ABOVE AND MAKING APPROPRIATE RECOMMENDATIONS.

RESULTS

-THE DATA SHOWED LITTLE VARIATION IN RISK FACTOR AT THE BOTTOM END OF THE ACCIDENT DATA. AS SUCH, IT WAS RATHER DIFFICULT TO DRAW CLEAR CONCLUSIONS ON SPECIFIC MODELS TO ACQUIRE CONSIDERING SO SO MANY MODELS ARE, BY AND LARGE, SAFE

RECOMMENDATIONS

-THE RECOMMENDATION IS TO TAKE THE MODELS INCLUDED IN THE ATTACHED VISUALISATIONS AS THOSE ARE THE SAFER OPTIONS AND CONSULT ON PRICE TO NARROW DOWN OPTIONS IN LINE WITH WHAT THE BUDGET PERMITS

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