CHRIST (Deemed to be University) YESHWANTHPUR CAMPUS, BENGALURU, KARNATAKA

IV M.Sc. DATA SCIENCE

CAC I - Tableau Dashboard Creation Assignment

Insights into British Airway Reviews

Dashboard Analysis and Strategic Insights

Submitted By

Yashashwy Alok 2348467

Submitted to

Dr. Priya Stella Mary

TABLE OF CONTENTS

INTRODUCTION

PURPOSE OF THE ANALYSIS:

This report gives an in-depth analysis of the reviews of the british airways. Here we attempt to analyse the ratings and identify trends and patterns across various flights taken over various places in order to find gaps in services and hospitality. Finding these gaps and correcting them will result in better customer retention.

SCOPE OF THE DASHBOARD:

The dashboard for British Airways reviews will provide a comprehensive overview of customer satisfaction by displaying average ratings across various categories such as value for money, seat comfort, ground service, and cabin staff service, with trends tracked from March 2016 to October 2023. Users will be able to filter the data by factors like seat type, traveler type, aircraft group, and continent, allowing for detailed segmentation and analysis. Additionally, the dashboard will offer geographical insights by showing average ratings by country and comparative analysis across different aircraft types, highlighting strengths and weaknesses in service performance. This will enable stakeholders to understand customer satisfaction trends and identify key areas for improvement.

SIGNIFICANCE:

The importance of such a study, or rather an analysis, is considerable because it provides detailed information about customer satisfaction regarding many different aspects in relation to British Airways. This will help the airline to build on trends in ratings over time and different segments such as aircraft type, seat type, and geographical regions, therefore noticing patterns that indicate some strengths and areas that need improvement. It helps British Airways in superior decision-making, which in turn would improve the quality of service, optimize the allocation of resources, and adjust the offer to customers in relation to demand. In the long term, it may result in enhanced customer experiences, fostering greater loyalty and greatly improving the competitive position.

DATASET OVERVIEW

DATASET SOURCE:

The data used in making the dashboard was taken from Kaggle

https://www.kaggle.com/datasets/girishchowdary22/british-airways-review-dataset2012-2023 , titled "British

airways review dataset."

DATASET COMPOSITION:

The dataset consists of 1324 records with 19 columns, capturing a wide range of information related to

customer reviews, customer experiences, and ratings.

header	author	date	place	content
service was mediocre at best	Gary Storer	3/10/2023	United Kingdom	Just returned from Chicago, flew out 10 days ago on Americ
BA standards continue to decline	A Jensen	2/10/2023	United Kingdom	BA standards continue to decline every time I fly with them
won the race to the bottom"	John Rockett	2/10/2023	United Kingdom	Awful. Business class check in queue just as long as for eco
Not a reliable airline	Tatiana Bobrovskaya	2/10/2023	United Kingdom	Not a reliable airline. You cannot trust the timing at all. I ha
Very disappointed	Tom Slowbe	28/09/2023	United States	The airplanes and the lounges are worn out, old and broken
the service was shockingly bad	E Anderson	28/09/2023	United Kingdom	One of the worst experiences on the worst airline. The fligh
not a single feedback from British Airways	Selcuk Benter	20/09/2023	Germany	My initial flight was cancelled 8 hours prior the flight. Then
Club Europe doesnâ€™t feel very premium	41 reviews	18/09/2023	United Kingdom	Check in and security clearance very quick at LHR T5. My wi
service on board was impeccable	Peter Costello	11/9/2023	United Kingdom	Despite boarding being the usual free for all at LHR with gro
a national disgrace	Brent Davies	10/9/2023	United Kingdom	Flight cancelled, no crew! 9th September 2023, not peak ho
Cannot recommend	E Durken	6/9/2023	Germany	4/4 flights we booked this holiday were delayed about 1-2
less than a premium experience	73 reviews	4/9/2023	Iceland	London Heathrow to Keflavik, Iceland in Business Class on a
good, but not spectacular	73 reviews	4/9/2023	Iceland	Mumbai to London Heathrow in Business Class on an ageing
avoid BA like the plague	R H	2/9/2023	Australia	Flying A380 business class should be a pleasure but BA has
British Airways absolutely does not care	May Porter	1/9/2023	United Kingdom	British Airways absolutely does not care. My reserved seat
they are the worst in Europe	Rich Glasier	30/08/2023	United Kingdom	I flew London to Malaga on 27 August in Club Europe. We s
appalling customer service	C Hill	28/08/2023	United Kingdom	Filthy plane, cabin staff ok, appalling customer service staff
standards are worse than ever"	E Michaels	27/08/2023	United Kingdom	Â Â Chaos at Terminal 5 with BA cancellations and delays, a
Nice flight, good crew, very good seat	6 reviews	26/08/2023	United States	Nice flight, good crew, very good seat, food was what you v
ravioli pasta had dried out	1 reviews	24/08/2023	United Kingdom	Ground and cabin crew always provide good customer serv
Great customer service	S Brydon	19/08/2023	United States	My family flew from Washington to London on a British Air
Cabin crew were all fantastic	E Smyth	13/08/2023	United Kingdom	Easy check in a T5. Galleries south and North lounges pack
superior to mainline British Airways	S Deynal	8/8/2023	United Kingdom	Good domestic flight operated by BA Cityflyer. Ground serv
They lost my baggage	G Maysev	8/8/2023	Poland	They lost my baggage in a very simple situation. It's been th
leaving two hours late"	2 reviews	5/8/2023	United Kingdom	Â Â Late boarding led to a one hour flight leaving two hours
Couldn't recommend BA more	Andrew Ling	1/8/2023	Hong Kong	I had the most fantastic BA Flight today. The cabin crew in

aircraft	traveller_type	seat_type	route	date_flown	recommended	trip_verified	rating	seat_comfort	cabin_staff_service
A380	Couple Leisure	Economy Class	Chicago to Manchester via Heathrow	1/10/2023	no	Not Verified	2	2	
A320	Business	Business Class	London Heathrow to Munich	1/9/2023	no	Verified	2	2	
A320	Couple Leisure	Business Class	Heathrow to Istanbul	1/9/2023	no	Not Verified	2	2	
A320	Business	Economy Class	London to Geneva	1/10/2023	no	Verified	3	4	4
777-300 and A320	Couple Leisure	First Class	Dallas to Dubrovnik via Heathrow	1/9/2023	no	Verified	1	1	4
A321	Business	Business Class	London to Seville	1/9/2023	no	Verified	3	2	
A350	Business	Premium Economy	Hamburg to Las Vegas via London	1/8/2023	no	Not Verified	4	2	
A320	Couple Leisure	Business Class	London Heathrow to Porto	1/9/2023	yes	Verified	1	3	4
Boeing 787	Couple Leisure	Business Class	London to Santiago	1/9/2023	yes	Verified	1	3	5
A320	Couple Leisure	Business Class	London Heathrow to Faro	1/9/2023	no	Not Verified	1	-1	-1
A320	Couple Leisure	Economy Class	London to Munich	1/9/2023	no	Verified	1	1	
A321	Couple Leisure	Business Class	London to Keflavik	1/8/2023	yes	Verified	1	3	4
Boeing 777-200	Couple Leisure	Business Class	Mumbai to London	1/8/2023	yes	Verified	1	4	
A380	Solo Leisure	Business Class	London to Miami	1/9/2023	no	Verified	1	1	
Boeing 777		Economy Class	Los Angeles to London	1/8/2023	no	Verified	1	1	
A320	Solo Leisure	Business Class	London to Malaga	1/8/2023	no	Verified	6	1	
A320	Couple Leisure	Business Class	Tenerife to Gatwick	1/8/2023	no	Verified	1	1	
A320	Business	Business Class	London Heathrow to Malaga	1/8/2023	no	Verified	2	2	
Boeing 777-300	Couple Leisure	Business Class	LHR to LAX	1/8/2023	yes	Verified	1	4	5
A320neo	Solo Leisure	Business Class	Larnaca to London Heathrow	1/7/2023	yes	Verified	8	3	
A380	Family Leisure	Economy Class	Washington to London	1/8/2023	yes	Verified	1	4	5
A380	Family Leisure	Business Class	London to Miami	1/8/2023	yes	Verified	1	4	5
Embraer-190	Couple Leisure	Economy Class	Edinburgh to London City	1/7/2023	yes	Verified	1	4	4
A380 / A320	Business	Business Class	San Francisco to Warsaw via London	1/7/2023	no	Verified	1	3	5
Embraer	Business	Economy Class	Frankfurt to London City	1/8/2023	no	Verified	8	3	
Boeing 777	Solo Leisure	Business Class	London to Hong Kong	1/7/2023	yes	Verified	8	5	5

food_beverages	ground_service	value_for_money	entertainment
1	2	2	-1
2	1	1	-1
2	1	1	-1
2	1	1	-1
4	3	2	3
1	1	1	-1
2	1	1	3
3	4	4	-1
4	2	5	-1
-1	1	1	-1
1	1	1	1
3	4	4	-1
3	4	4	3
2	3	1	1
1	1	1	1
1	1	1	1
1	1	1	-1
2	1	2	-1
3	5	4	5
1	3	1	-1
3	1	4	2
5	4	4	5
3	5	5	-1
4	1	1	5
1	1	1	-1
5	5	5	5

DATA DESCRIPTION:

Categorical Variables:

header: The title of the review.

author: The name of the reviewer.

date: The date when the review was posted.

place: The location of the reviewer.

content: The text content of the review.

aircraft: The type of aircraft used for the flight.

traveller_type: The type of traveler (e.g., Couple Leisure, Business).

seat_type: The class of the seat (e.g., Economy Class, Business Class).

route: The route taken during the flight.

date_flown: The date when the flight was taken.

recommended: Whether the reviewer recommends the airline (yes/no).

trip_verified: Indicates whether the trip was verified by the platform (Verified/Not Verified).

Numerical Variables:

rating: Overall rating given by the reviewer (integer).

seat_comfort: Rating for seat comfort (integer).

cabin_staff_service: Rating for cabin staff service (integer).

food_beverages: Rating for food and beverages (integer).

ground_service: Rating for ground service (integer).

value_for_money: Rating for value for money (integer).

entertainment: Rating for in-flight entertainment (integer, with -1 likely indicating no entertainment available).

SCOPE OF THE DATA:

This dataset provides the overall view of reviews by customers who traveled with British Airways, covering all major aspects that relate to a traveling experience. It is based on quantitative ratings, like seat comfort, cabin staff service, value for money, along with qualitative feedback in the form of textual reviews, plus type of traveler, seat class, route, and aircraft type. Temporal data (review and flight dates) allows for trend analysis, and recommendation variable gives views on overall customer satisfaction. All this information can be used in analyzing customer sentiment, pinpointing the key drivers of satisfaction or dissatisfaction, and guiding improvements in service and targeted marketing efforts.

DATA RELEVANCE:

The relevance of this dataset lies in its ability to provide valuable insights into customer satisfaction and the overall performance of British Airways. By capturing detailed customer feedback through ratings and written reviews, the dataset allows for a nuanced understanding of passenger experiences across different flight routes, seat classes, and aircraft types. This data is particularly relevant for identifying trends in customer sentiment, pinpointing areas of service that require improvement, and understanding the factors that influence customer loyalty and recommendations. Additionally, the inclusion of verified reviews enhances the reliability of the insights, making the dataset a critical resource for airlines aiming to enhance customer experience and maintain a competitive edge in the industry.

DASHBOARD OVERVIEW

DASHBOARD DESIGN AND LAYOUT:

This dashboard can be used to gain insight into the review and rating of British Airways services. The dashboard sections are distinct, which helps a user engage with different contexts of customer behavior and service quality. It is interactive which allows user to filter data and drill down into areas of specific interest.

KEY COMPONENTS OF THE DASHBOARD:

Geographical Distribution Map:

It helps to visualize the ratings with respect to different metrics like overall rating, food etc in different geographical entities like continents and countries.

It has filters by continent, traveller type, seat type, aircraft type

Monthly Rating line chart:

This line chart highlights the ratings with respect to the months in the years between 2016 and 2023.

Rating by aircraft bar chart:

This bar chart represents number of reviews and rating for specific aircraft models.

OVERALL LAYOUT:

This is designed with the user experience in mind through strategically placed maps, charts, and filters, which won't raise any problem to any user going through the data. Independent views of all these visuals used in this dashboard contribute to one overall story of key insights and trends.

INTERACTIVE ELEMENTS:

This dashboard includes interactive filters by geographical location(Continents), metrics like overall rating, Food rating, ground service etc making it easy to personalize a view of the data and perform analysis on various customer classes, different locations with respect to different services like ground service, seat comfort.
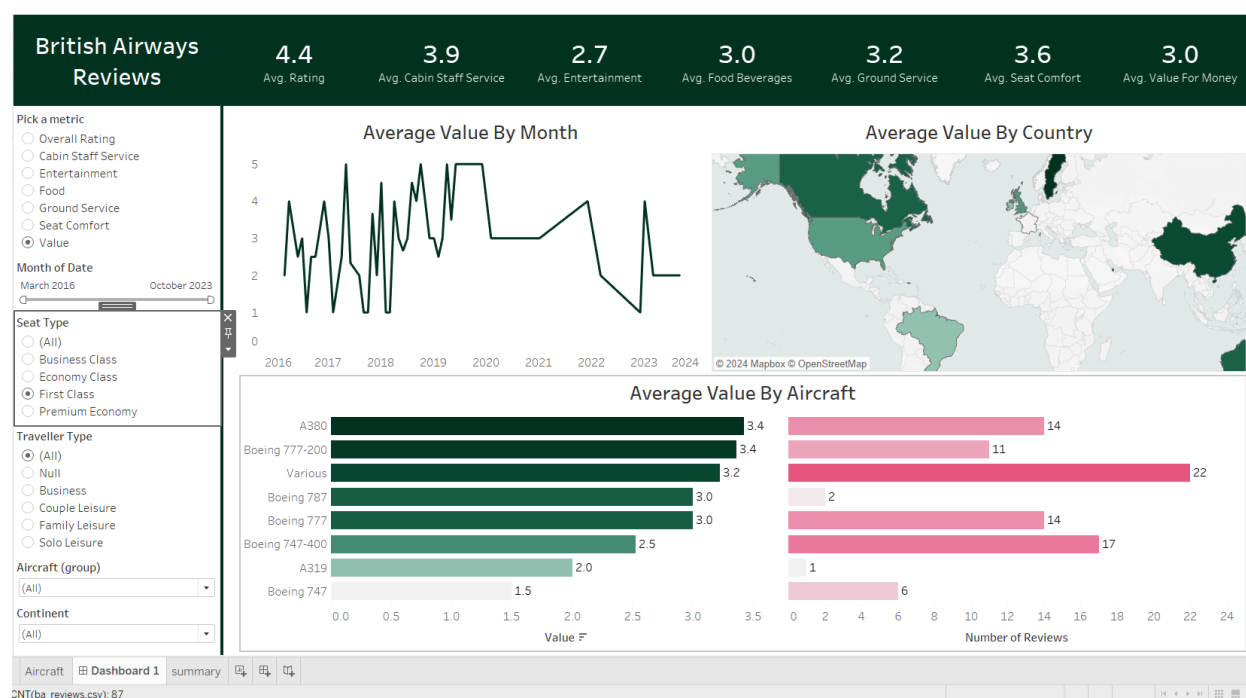
GEOGRAPHICAL DISTRIBUTION MAP
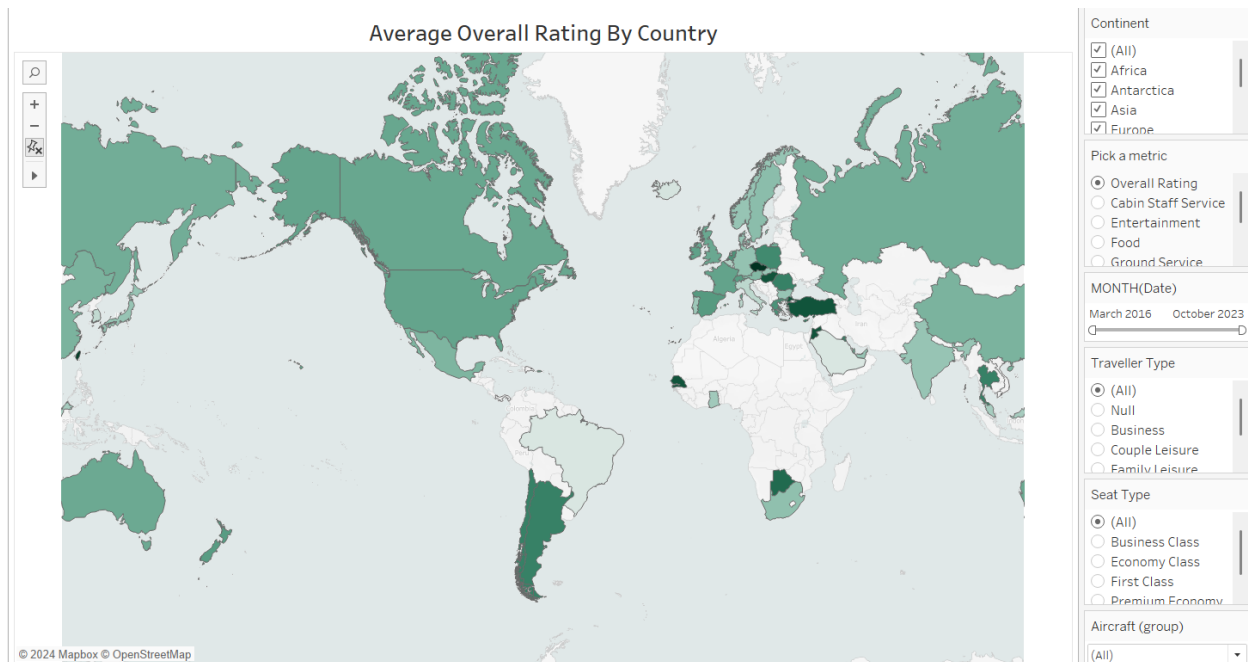
INTERPRETATION:

This geographical distribution map will help you visualize the ratings on the basis of different metrics for different countries

Key Insights:

The map indicates that most of the reviews came from united kingdom and united states of America with overall average rating of 4.2 and 4.4.

The cabin staff service was found to be better than average in most countries

Most of the first class flights came out of UK

Also in recent times the british airways has lost quite a lot of customers and is now mainly operating in Europe, North America and some parts of Asia and Africa.

IMPLICATIONS FOR BUSINESS:

Most of British airways customers are situated in Europe and North America and it has lost quite a lot of customers in markets of Asia and Africa. British Airways should try to gain some customers in Asian and African markets by implementing targeted marketing strategies to acquire more passenger.

Although the cabin staff services on average are quite good but british airways should focus on other services like food, seat comfort.

MONTHLY RATING LINE CHART

Average Overall Rating By Month
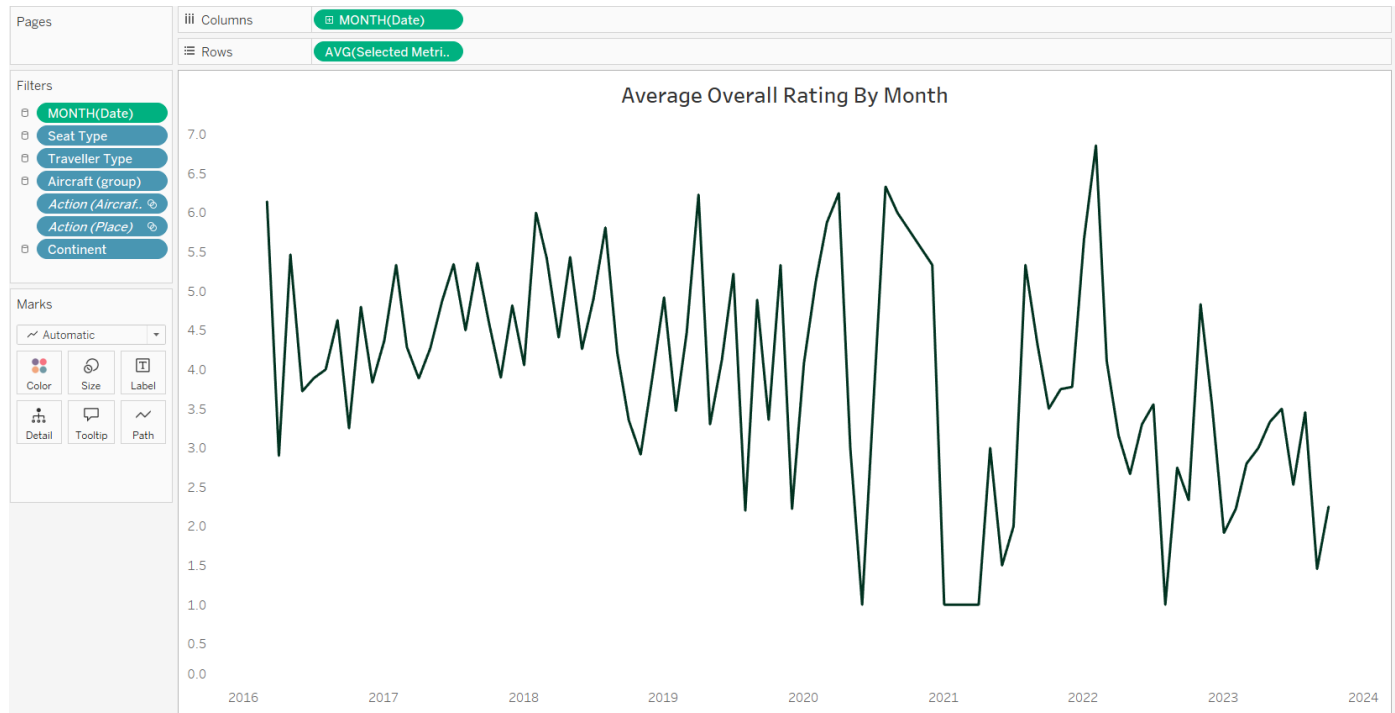
INTERPRETATION:

Using the line chart we can gain insight into the influence of different decisions taken at different point of time on the ratings and whether the ratings change with the seasons meaning one type of service strategy, pricing strategy might not work for all seasons.

Key Insights:

The overall rating keeps oscillating between 3 and 6 between the years of 2016 and 2019.

From 2019 there is a overall decline in ratings which could be caused by covid. Also ratings reached the minimum during start of 2020 and 2021.

From 2021 to 2023 the overall ratings have increased as the world started to move again

STRATEGIC IMPLICATIONS:

The british airways can give out seasonal offers in when there is quite low number of travelers which may boost the number of passengers in those particular months.

As the data is quite oscillatory the airways should find the reason behind the dips and try to find some solution to overcome it.

RATING BY AIRCRAFT BAR CHART
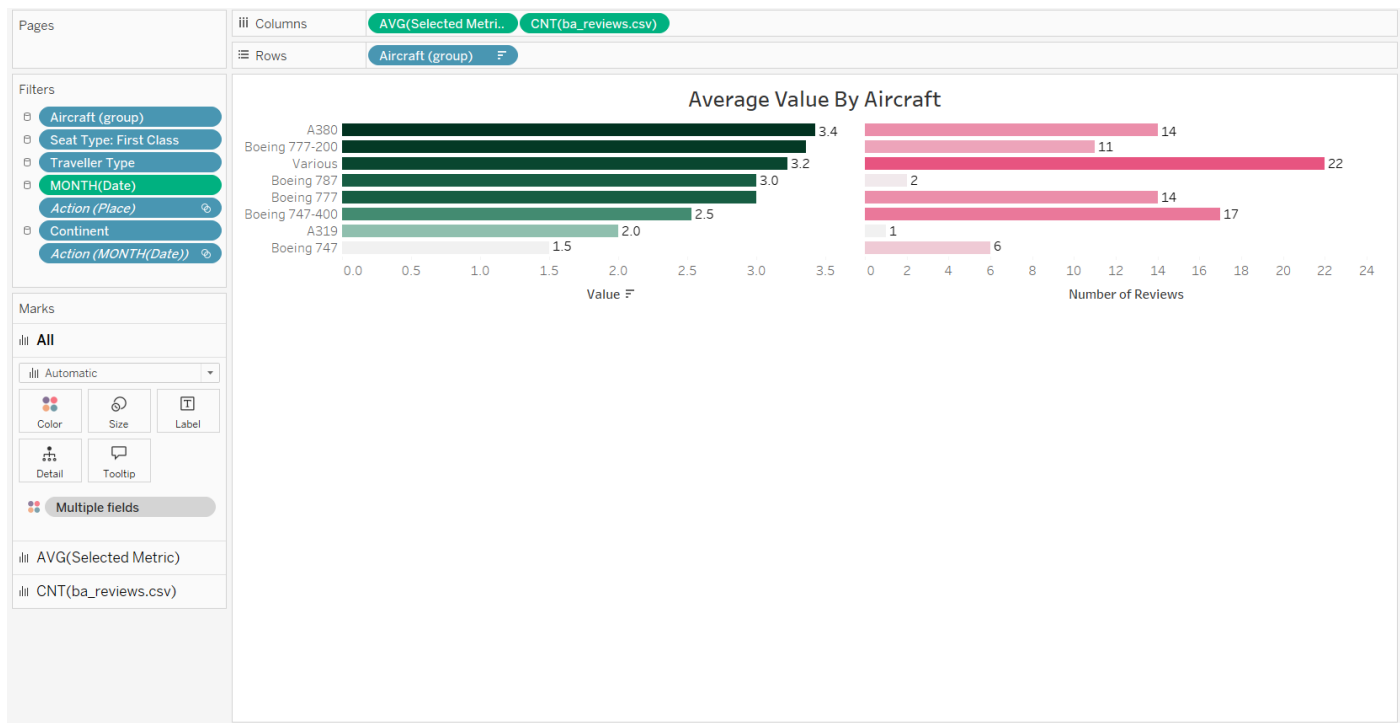
INTERPRETATION:

This bar chart denotes the rating with respect to the aircraft model as there are multiple models of aircraft operated by the airlines each aircraft has some unique properties and accommodates passenger in a unique different way which might make a difference in customer's satisfaction.

Key Insights:

The A380 model of aircraft made by a company called Airbus is the highest rated aircraft model which might be due to the reason that it is one of the newer generation of aircrafts whereas models like Boeing 747 are quite old models which might not contain the latest technologies resulting in lower ratings.

STRATEGIC IMPLICATIONS:

The british airways can focus on upgrading the older models with newer technologies to make them more tech savvy or replace them with newer generation of aircrafts which might seem costly but will result in better passenger retention.

CONCLUSION

In conclusion, the analysis of British Airways reviews highlights the need for a multifaceted approach to enhance customer satisfaction and regain market share, particularly in Asia and Africa. The airline's newer aircraft models, like the Airbus A380, are well-received, while older models may benefit from technological upgrades or replacement. Despite strong cabin staff performance, improvements in food quality and seat comfort are necessary to elevate the overall customer experience. By implementing targeted marketing strategies in regions where customer numbers have declined, and introducing seasonal offers during low travel periods, British Airways can attract more passengers. Addressing the causes of fluctuating ratings will also be crucial for long-term success. These combined efforts will position British Airways to better meet customer expectations, improve retention, and strengthen its presence in both established and emerging markets.