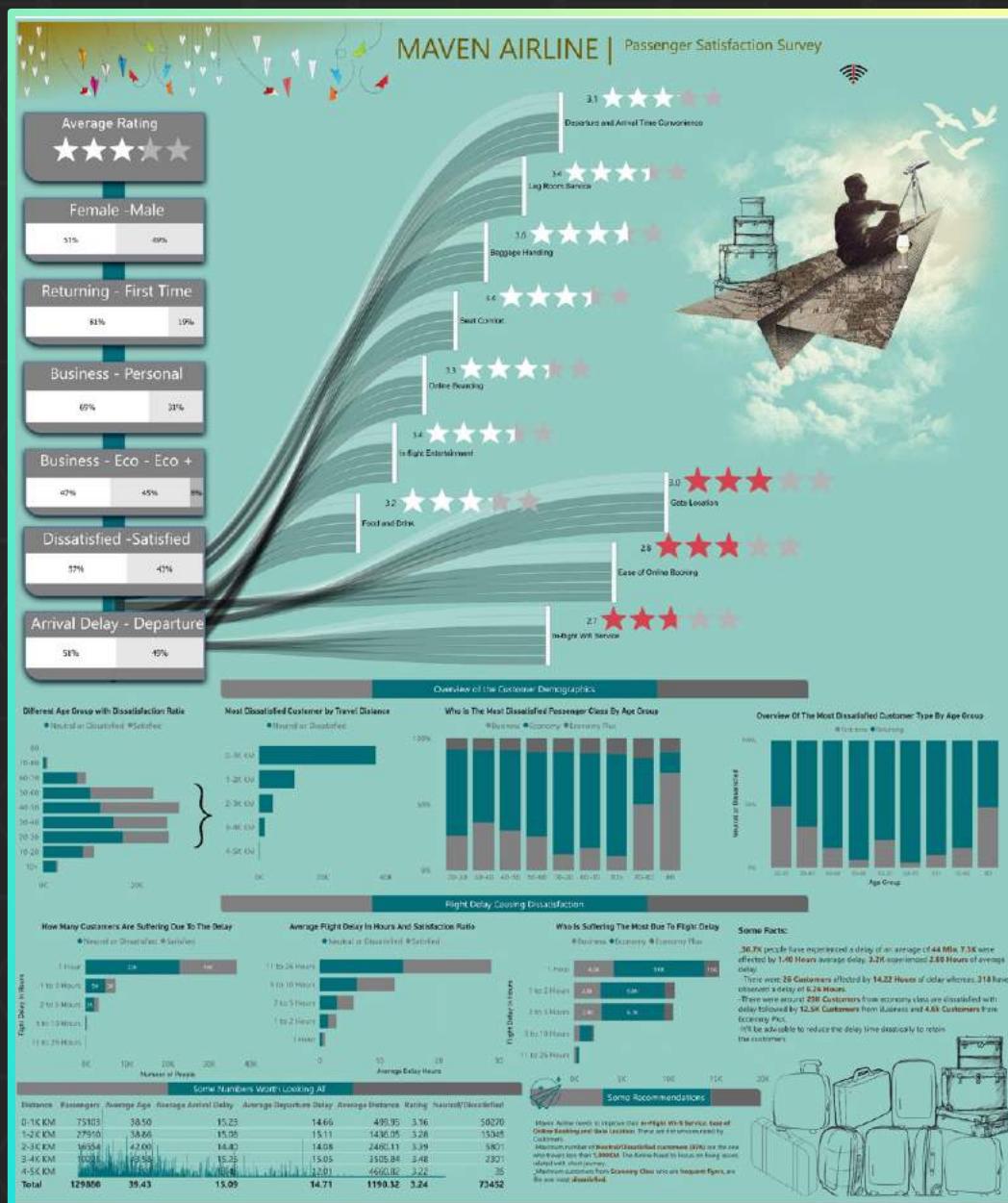
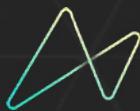


# AIRLINES CHALLENGE



**Yogesh Joshi**



# AIRLINES CHALLENGE

**Actions from Maven Airlines CSAT Survey**

n=129880 ; 52% Economy, Economy Plus

**OUR ECONOMY GUESTS AREN'T HAPPY**



Econ./+ 80% 20%

Business 31% 69%

80% of Econ./+ travelers reported they were either neutral or not satisfied with Maven Airlines

**PARTICULARLY WITH OUR DIGITAL SERVICES**



Service	Satisfaction Score
Food and Drink	3.0
Gate Location	3.0
Entertainment	3.0
Online Boarding	2.7
Online Booking	2.5
In-flight Wifi	2.4

Among the 80% of Econ./+ travelers, satisfaction was particularly low for Online Boarding, Online Booking and In-flight Wifi

**INVEST IN IMPROVEMENTS TO GUEST CONNECTIVITY AND DIGITAL CONVENIENCE**

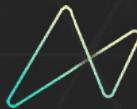


	In-flight Wifi	Online Boarding	Online Booking
Neutral or Dissatisfied	20% 33% 33%	12% 28% 31% 19%	19% 31% 31%
Satisfied	48% 44%	42% 39%	31% 31%

Guests who responded in the top 2 boxes for satisfaction of each of these metrics were far more likely to be satisfied with their experience with Maven Airlines overall

While other areas such as departure delay, seat comfort and leg room show need for improvement, immediate investment in connectivity and convenience will lead to improved satisfaction scores from Economy and Economy Plus guests

Owen Price



# AIRLINES CHALLENGE

## M&VEN AIRLINE CHALLENGE | Driving customer satisfaction rate

**43%**

Customer Satisfaction Rate

**129.88K** # of passengers



45% Economy

7% Economy+

48% Business

Under 18 8%  
18-30 24%  
31-59 59%  
60 & above 9%



**18%** First-time  
**82%** Returning

**Personal 31%**  
**Business 69%**



### Key Dissatisfied Customer Segments

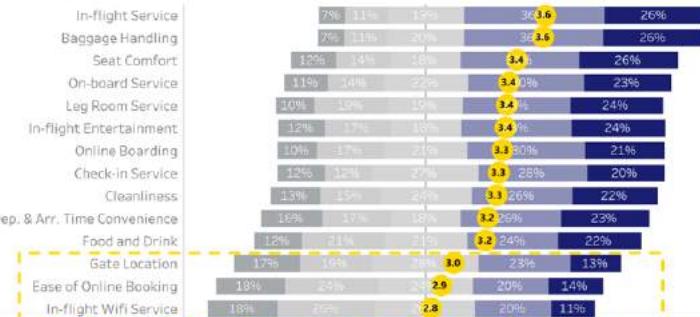
**90%** of Personal Purposes Customers

**81%** of Economy and **76%** Economy+ Class

**76%** of First-time Customers

**73%** of Senior Citizens (60 & Above)

### Three Major Contributors to Customer Dissatisfaction (Likert Scale Analysis)



Very Satisfied  
Satisfied  
Neutral  
Dissatisfied  
Very Dissatisfied

### In-flight Wi-Fi Service

In-focus Customer Segments (% Dis/Neutral)

**Personal 60 & Above (80%)** **60 & Above (75%)** **Economy (73%)**

#### Recommendation:

Where 15% of working adults (18-60 years) are highly satisfied with the service, only 3.6% of senior citizens (> 60 years) traveling for personal purposes are highly satisfied. **Upgrading the Wi-Fi facility along with training senior citizens to use the facility could reflect a better feedback score.**

### Ease of Online Booking

In-focus Customer Segments (% Dis/Neutral)

**Personal (78%)** **Economy (73%)** **First Time (69%)**

#### Recommendation:

People who booked economy tickets for themselves for the first time with the airline (esp. senior citizens) evidently faced difficulties. A **quick user-friendly process** with sufficient prompts along with **enticing rewards** would not only attract customers but also reduce the churn rate.

### Gate Location

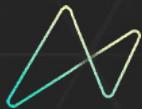
In-focus Customer Segments (% Dis/Neutral)

**Personal (68%)** **Economy (65%)** **First Time (65%)**

#### Recommendation:

Although the gate location is dependent on the airport layout, airlines can **direct their customers to the gate and provide an ETA** from the check-in spot while providing boarding passes. Introducing a **geo-location guide** on the airline application would definitely enhance user experience.

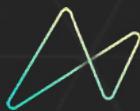
Anushka Baid



# AIRLINES CHALLENGE



# Mark Cunningham



# AIRLINES CHALLENGE

## Fly The Friendly Skies - Maven Airlines

### 129.9K

Passenger Reviews

57% of passengers were Dissatisfied/Neutral with the airline



### 82%

Returning Passengers compared to 18% First-Time Passengers

Passenger Age Group



Youth ≤25

Old >60

Passenger Class Preference



Economy

45%

Economy +

7%

Average Rating of Airline Services

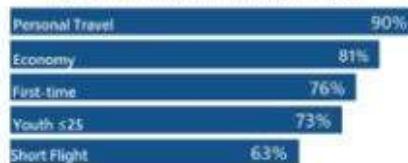


exceeded average rating

Expected Average Passenger Rating (3.5)

averagely ranked very low

Top 5 Dissatisfied/Neutral Passenger Category



### Friendly Skies?

#### 1 IMPROVE IN-FLIGHT WIFI SERVICES

In-flight Wi-Fi has the largest dissatisfaction amongst passengers. To achieve higher rating, improving in-flight Wi-Fi is key.

#### 2 IMPROVE ONLINE BOOKING SERVICES

- Use of customer friendly user interface, easy to navigate and responsive.
- Add live chat for better customer interaction and support.
- Make pictures and 3D maps available to allow passenger choose seat preference.
- Design and make available apps for booking.

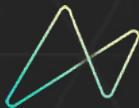
#### 3 IMPROVE DIRECTIONS TO GATE LOCATION

Provide/ include airport maps on booking apps to help passengers plan the best way to get to exact gate.

#### 4 FIRST IMPRESSION COUNTS

Though first-time passengers account for only 18% of our total customer service, it is critical to generate a positive first impression. As a result, there is a pressing need to improve the first-time passenger experience.

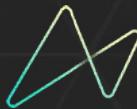
# Jessica Addy



# AIRLINES CHALLENGE



Azad Ismayilov



# AIRLINES CHALLENGE

In-flight Wifi Services and Online Booking are the largest contributors to lower Satisfaction Scores.

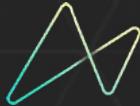
Economy & Economy Plus class rated **Ease of Online Booking** the lowest, with **In-flight Wifi Services** slightly above.

Business class rated **In-flight Wifi Services** the lowest. **Gate Location** is the next lowest rating, but near neutral.



			PRE and POST Flight							During Flight						
Customer Type	# Customers	Overall Rating	Ease of Online Booking	Online Boarding	Check-in Service	Gate Location	Departure and Arrival Time Convenience	Baggage Handling	Leg Room Service	Cleanliness	Seat Comfort	On-board Service	In-flight Service	In-flight Wifi Service	In-flight Entertainment	Food and Drink
Returning	106,100	3.31	▲ 2.89	3.44	3.33	▲ 2.97	3.29	3.62	3.40	3.34	3.54	3.62	3.65	2.81	3.43	3.21
First-time	23,780	3.13	◆ 2.84	2.84	3.22	▲ 2.00	2.89	3.56	3.22	3.06	3.01	3.24	3.70	2.82	3.06	3.05
Total	129,880	3.28	2.88	3.33	3.31	2.98	3.22	3.63	3.37	3.25	3.44	3.38	3.64	2.81	3.36	3.21
Class	# Customers	Overall Rating	Ease of Online Booking	Online Boarding	Check-in Service	Gate Location	Departure and Arrival Time Convenience	Baggage Handling	Leg Room Service	Cleanliness	Seat Comfort	On-board Service	In-flight Service	In-flight Wifi Service	In-flight Entertainment	Food and Drink
Business	62,156	3.50	3.04	3.76	3.52	▲ 2.09	3.05	3.84	3.66	3.48	3.76	3.08	3.85	3.89	3.64	3.33
Economy	58,306	3.08	◆ 2.72	2.92	3.12	▲ 2.07	3.40	3.45	3.10	3.11	3.14	3.12	3.47	2.73	3.10	3.09
Economy Plus	9,618	3.07	◆ 2.80	3.00	3.01	▲ 2.97	3.32	3.35	3.07	3.12	3.17	3.04	3.38	2.83	3.12	3.12
Total	129,880	3.28	2.88	3.33	3.31	2.98	3.22	3.63	3.37	3.25	3.44	3.38	3.64	2.81	3.36	3.21

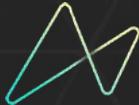
Jennifer Bigby



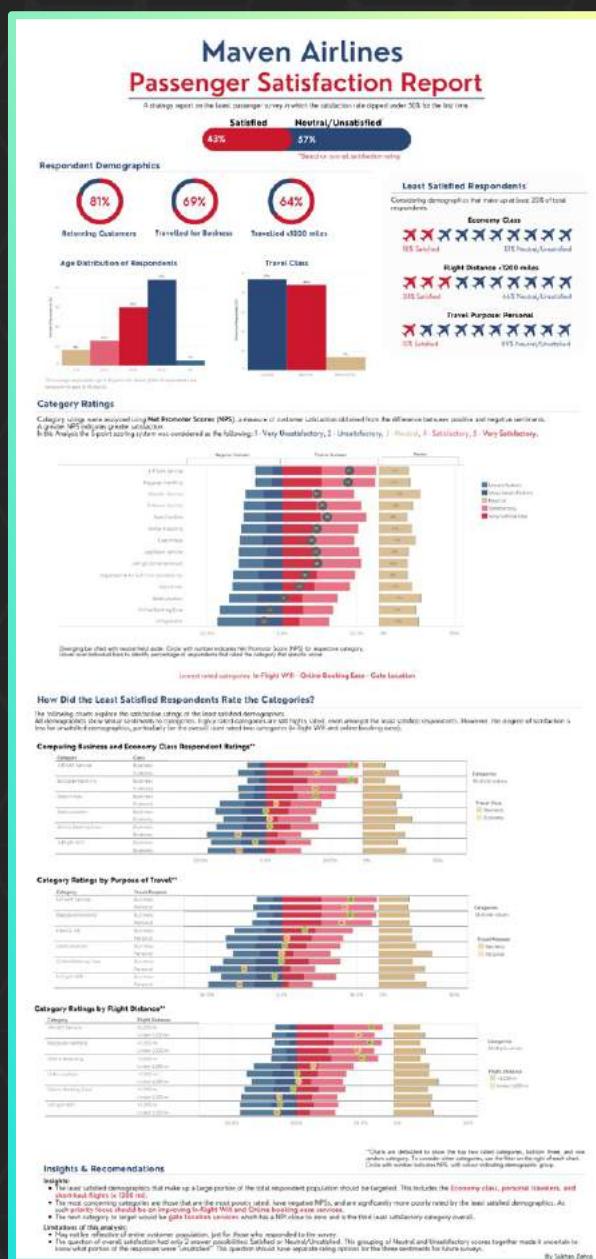
# AIRLINES CHALLENGE



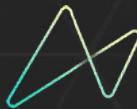
# Arno Wakfer



# AIRLINES CHALLENGE

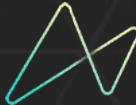


# Sukhan Zehra



# AIRLINES CHALLENGE

# Travis John Villanueva



# AIRLINES CHALLENGE

**MAVEN AIR** from Boston to anywhere

Analyzing passengers' recent dissatisfaction & actions to improve satisfaction's rate

**PASSENGERS' INFO**

**BUSINESS PASSENGERS**

Distance (Avg)	
First-time	772 Miles
Returning	1,834 Miles

Age (Avg)	
First-time	33.00 y.o
Returning	43.12 y.o

Avg. Arrival Delay	
First-time	14 min
Returning	14 min

**ECONOMY & ECO+ PASSENGERS**

Distance (Avg)	
First-time	677 Miles
Returning	763 Miles

Age (Avg)	
First-time	28.67 y.o
Returning	39.81 y.o

Avg. Arrival Delay	
First-time	16 min
Returning	15 min

**OVERALL SATISFACTION**

**BY PASSENGER'S TYPE**

Out of 6 categories only the returning Business passengers shows a superior ratio of satisfactions vs neutral or dissatisfied. The most neutral or dissatisfied age group are the 19 to 40 year old flying Economic.

**BY AGE**

**BOOKING, CHECKING & BOARDING / 5**

	Business	Economy	Economy Plus
Ease of Online Booking:	2.92	2.60	2.66
Check-in Service:	3.52	3.12	3.01
Online Boarding:	3.72	2.81	2.89
On-board Service:	3.68	3.12	3.04
Gate Location:	2.99	2.97	2.97
Baggage Handling:	3.84	3.45	3.35

**IN-FLIGHT / 5**

	Business	Economy	Economy Plus
Wifi Service:	2.78	2.67	2.76
In-flight Service:	3.85	3.47	3.38
Entertainment:	3.64	3.10	3.12
Food and Drink:	3.33	3.09	3.11
Cleanliness:	3.48	3.10	3.12

**COMFORT & CONVENIENCE / 5**

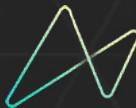
	Business	Economy	Economy Plus
Dep. & Arrival Time Convenience:	2.91	3.19	3.21
Seat Comfort:	3.76	3.14	3.17
Leg Room:	3.65	3.08	3.06

Improve UX of the online booking interface for all classes. Also, the online boarding scores low for both economy classes, try to emulate what's applicable from the business class formula. Gate location scores low across all classes. Is it distance related or difficulty to locate the gate? To solve this : improve communication (hire extra staff members, or check signage with the airport) or allow more time for passengers to arrive there.

The Wifi service doesn't score well. Since we cater to long distance business passengers it might be a good idea to update aircrafts. This service can be charged as done by British Airways, United airlines (10\$), and many others. Otherwise, improve the Entertainment offer.

#mavenairlineschallenge Maven Analytics data challenge Lucy F 06/22

# Lucy F.



# AIRLINES CHALLENGE

## MAVEN AIRLINES



### Airline Passengers' Satisfaction Report

**OVERALL**  
(129.8K)

★★★☆☆

**SATISFIED CUSTOMERS**  
(56.4K)

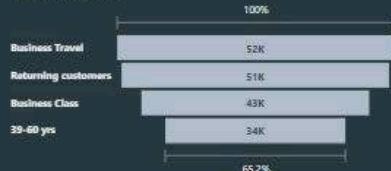
★★★★★

**NEUTRAL/DISSATISFIED CUSTOMERS**  
(73.4K)

★★★☆☆

**SATISFIED CUSTOMERS**

**CUSTOMER PROFILE**



Category	Value
Business Travel	52K
Returning customers	51K
Business Class	43K
39-60 yrs	34K
Total	160K

**AVG. FLIGHT DISTANCE (miles)**  
1529.54

**AVG. ARRIVAL DELAY (min)**  
12.53

**AVG. DEPARTURE DELAY (min)**  
12.51

**BOTTOM 5 RATED AIRLINE SERVICES**

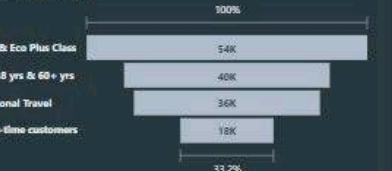
Rank	Service	Score
1	Dep and Arr Time Conv.	2.96
2	Gate Location	2.97
3	In-flight WiFi Service	3.16
4	Food and Drink	3.53
5	Ease of Online Booking	3.03

**TOP 5 RATED AIRLINE SERVICES**

Rank	Service	Score
1	Online Boarding	4.03
2	Seat Comfort	3.97
3	Baggage Handling	3.97
4	In-flight Service	3.96
5	In-flight Entertainment	3.96

**NEUTRAL/DISSATISFIED CUSTOMERS**

**CUSTOMER PROFILE**



Category	Value
Eco & Eco Plus Class	54K
18-38 yrs & 60+ yrs	40K
Personal Travel	36K
First-time customers	18K
Total	148K

**AVG. FLIGHT DISTANCE (miles)**  
929.72

**AVG. ARRIVAL DELAY (min)**  
17.06

**AVG. DEPARTURE DELAY (min)**  
16.41

**BOTTOM 5 RATED AIRLINE SERVICES**

Rank	Service	Score
1	In-flight WiFi Service	2.40
2	Ease of Online Booking	2.55
3	In-flight Entertainment	2.89
4	Cleanliness	2.93
5	Online Boarding	2.66

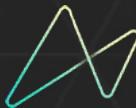
**TOP 5 RATED AIRLINE SERVICES**

Rank	Service	Score
1	In-flight Service	3.39
2	Baggage Handling	3.37
3	Dep and Arr Time Conv.	3.13
4	Check-in Service	3.04
5	Seat Comfort	3.04

**RECOMMENDATIONS**

-  **TYPICAL DISSATISFIED CUSTOMER** is Economy travelers who are young adults or elderly people flying for personal travel & are first-time users. The airline should focus on improving the overall experience for them.
-  **BOTTOM RATED AIRLINE SERVICES** include In-flight WiFi Service, Ease of online booking, and Gate Location. Since a lot of dissatisfied customers are young adults who rely heavily on technology, the airline needs to improve its online booking portal & WiFi services.
-  Focus on developing an intuitive portal with smart search & filter functionalities, an AI-driven recommendation system, lucrative pricing & discount options.
-  Value-added services like In-flight WiFi lure customers but if the quality of service is not adequate then it leads to a bad customer experience. The airline can think of disabling the WiFi service till the time connectivity is not improved.
-  The airline can explore an Augmented Reality (AR) location-based app to help users navigate through terminals & gates. Any gate change information should also be provided on a real-time basis for the ease & convenience of customers.

Nishu Singh



# AIRLINES CHALLENGE

## Key Attributes

129,880

Total Passengers

Gender	Percentage
Female	51%
Male	49%

## Overall Satisfaction Level

14.71

In Minutes

## Avg Departure Delay

15.09

In Minutes

## Avg Arrival Delay

10.99

In Minutes

## Type of Travel

Type of Travel	Percentage
Business	31%
Personal	69%

## Customer Type

Customer Type	Percentage
Returning	82%
First Time	18%

## Maven Airlines Passengers Satisfaction Survey Analysis

### Dissatisfied/Neutral Passengers - Key Influencers

74%

Passengers felt **Economy class** was the below par or at par from Maven Airlines.

"**45 Years above Passengers are the most Dissatisfied about the services**"

Age Group	Percentage
45 Years Above	33%
30 To 45 Years	29%
18 To 30 Years	27%
Less than 18 Years	11%

"**Looking at all the services, In-Flight Wi-Fi & Online Bookings are the lowest rated services by Passengers**"

● Dissatisfied ● Neutral ● Satisfied

Service Category	Percentage
Baggage Handling	22%
Gate Location	33%
Check-in Service	33%
Seat Comfort	35%
In-flight Service	22%
On-board Service	35%
<b>In-flight WiFi Service</b>	<b>54%</b>
Clearliness	40%
In-flight Entertainment	42%
Food and Drink	40%
Leg Room Service	38%
Online Boarding	43%
<b>Online Booking</b>	<b>48%</b>

"**Passengers who are Travelling for short distance are mostly not Satisfied with the Airline**"

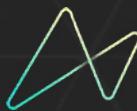
Travel Distance	Percentage
100 To 500 Miles	35%
500 To 1000 Miles	32%
1000 To 2000 Miles	20%
2000 To 5000 Miles	11%
Less Than 100 Miles	1%

### Key Recommendations

- It is important that Maven Airlines should focus on the **In-Flight Wi-Fi Services** with higher speed of **Internet** & also make the **Online booking service for travelling more user friendly**.
- Provide **Goodies/Gifts for First time Passengers** and provide **Discount to the Returning Passengers** this is critical because of the high Average of not satisfied passengers.
- Passengers who are travelling for short distance should be given more attention because **67%** of the passengers who are not satisfied are travelling for less than 1000 Miles.
- Economy and Economy Class passengers** should be given immediate attention since the satisfaction level of these passengers of services are very low.

Created by Dharmendar S for Maven Airlines Challenge May - 2022

# Dharmendar S



# AIRLINES CHALLENGE

**AVERAGE RATING**  
63% of Customers are Satisfied with On-Board Service

## MAVEN AIRLINES

### CUSTOMER INSIGHTS

**SATISFIED**  
16,420 Satisfied Respondents

**DISSATISFIED / NEUTRAL**  
75,452 Dissatisfied or Neutral Respondents

**63%** of Customers are Satisfied with On-Board Service

**70%** of Customers are Neutral or Dissatisfied with In-Flight WiFi Service

#### TOP 5 CUSTOMER SATISFACTION CATEGORIES

63%	On-Board Service
62%	In-Flight Entertainment
56%	Seat Comfort
53%	Baggage Handling
53%	In-Flight Service

#### BOTTOM 5 CUSTOMER SATISFACTION CATEGORIES

30%	In-Flight WiFi Service
32%	Ease of Online Booking
37%	Gate Location
45%	Food and Drink
46%	Departure and Arrival Time

#### TOP 5 DISSATISFIED OR NEUTRAL DEMOGRAPHICS

(BASED ON CATEGORIES WITH 10,000 OR MORE RESPONDENTS)

Demographic Category	10%	19%	24%	27%	33%
Personal Travel	90%	81%	76%	73%	67%

#### TOP 3 DISCREPANCIES BETWEEN SATISFIED AND NEUTRAL/DISSATISFIED RESPONDENTS

FOR RESPONDENTS AGED 60+, SHORT-HAUL TRAVELERS, AND PERSONAL TRAVELERS.

Category	% Satisfied	% Neutral or Dissatisfied
In-Flight WiFi Service	70%	30%
Gate Location	64%	36%
Ease of Online Booking	70%	20%

● ● ○ % Satisfied

● ○ ○ % Neutral or Dissatisfied

#### TOP 3 DISCREPANCIES BETWEEN SATISFIED AND NEUTRAL/DISSATISFIED RESPONDENTS

FOR FIRST-TIME TRAVELERS AND ECONOMY CLASS TRAVELERS.

Category	% Satisfied	% Neutral or Dissatisfied
Departure and Arrival Time	72%	28%
Ease of Online Booking	79%	20%
In-Flight WiFi Service	70%	30%
Ease of Online Booking	74%	26%
Online Booking	67%	33%
In-Flight WiFi Service	75%	25%

● ● ○ % Satisfied

● ○ ○ % Neutral or Dissatisfied

#### RECOMMENDATIONS

##### 1 UPGRADE IN-FLIGHT WIFI

In-Flight WiFi is the largest opportunity to raise satisfaction rates among customers as only 30% of customers are currently satisfied with the service.

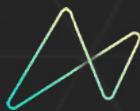
##### 2 PROVIDE MAPS TO GATE LOCATIONS

Provide maps of the airports and gate locations upon booking and flight confirmation. This will allow customers to plan accordingly based on the location of their gates.

##### 3 UPDATE TECHNOLOGY TO INCREASE EASE OF ONLINE BOOKING

- During peak travel times, limit third-party travel websites from monopolizing bandwidth to prevent slowdowns and allow individual customers to book with ease.
- Improve simplicity of user interfaces and booking options to accommodate all customers, no matter their level of technical knowledge.
- Provide mobile options for accessibility and ease of online booking with mobile devices; such as mobile boarding passes, digital airport map access, and flight delay notifications.

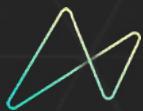
# Stephanie French



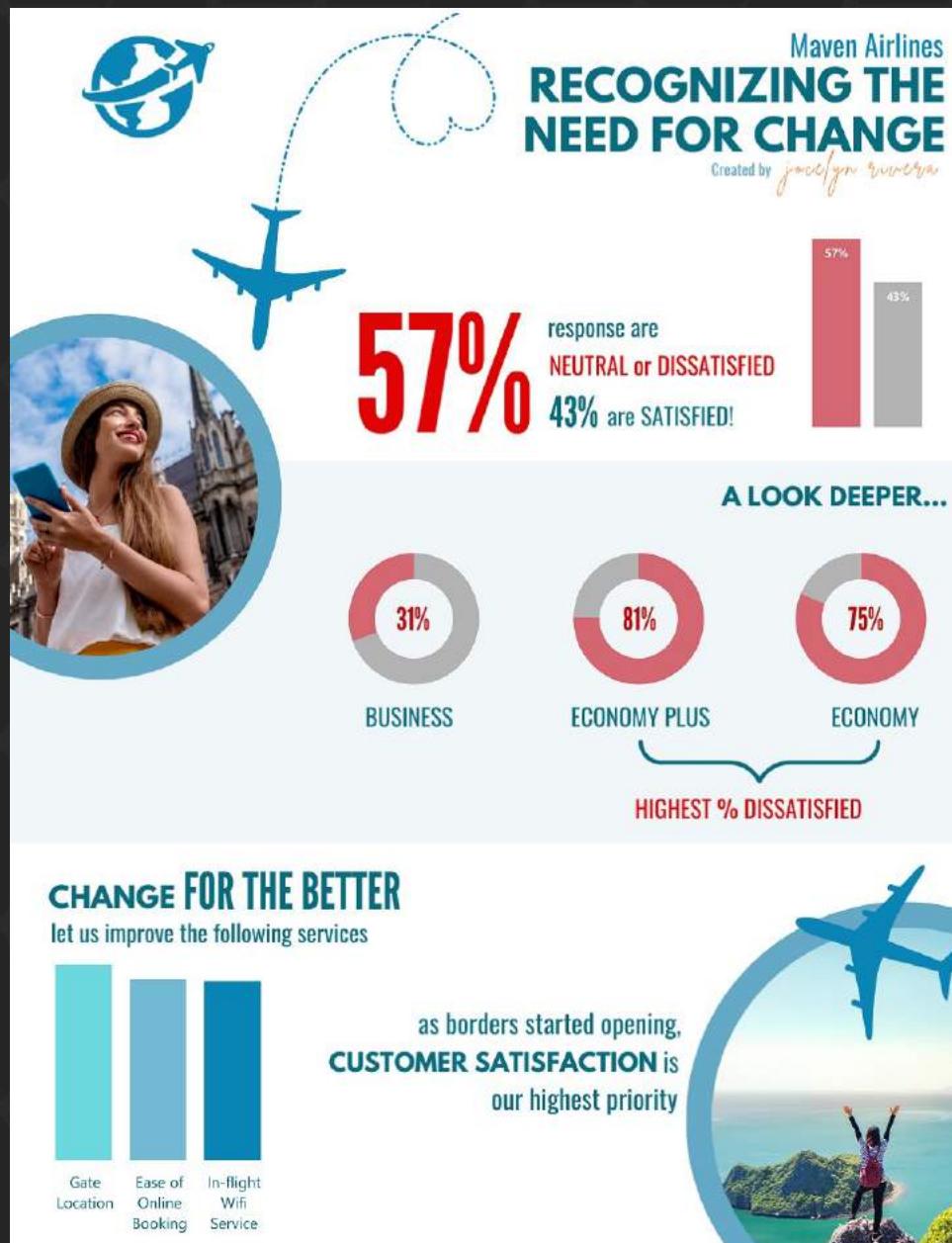
# AIRLINES CHALLENGE



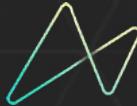
Anuoluwapo Abiodun Balogun



# AIRLINES CHALLENGE



**Jocelyn Rivera**



# AIRLINES CHALLENGE

## Maven Airlines Satisfaction Dashboard

2022

Passenger Analysis

Total and % Passenger by Type

Total and % Passenger by Age

Baggage Handling

Seat Comfort

In-flight Entertainment

Online Boarding

Food and Drink

Time Convenience

Gate Location

Ease Online Booking

In-flight Service

On-board Service

Leg Room Service

Check-in Service

Cleanliness

In-flight WiFi Service

Customer ID

Customer Gender

Customer Type

Customer categorie

Customer Age

Type Travel

Haul Type

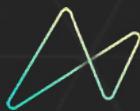
Satisfied ?!

Recommendations :

The overall satisfaction of our customers is 43.4%, which means that 56.6% of them are neutral or dissatisfied, 64.5% of them use economy class and 25.8% in business class. therefore the actions to be carried out require an intervention in this perimeter by taking actions :

- The **in-flight wifi service** is just poor, something that is claimed by all of our customers, an upgrade of this service is essential to improve overall satisfaction
- The **ease online booking** seems to be complicated for our customers or have many technical problems, so this service must be diagnosed
- The **gate location** is not very practical for our customers, consider changing the location
- Departure and arrival delays** are a real problems today for our customers, we must analyze the different causes of delays in order to avoid them via tangible actions
- Take/reinforce control measures to improve the quality of services: **Food and drink** and **Cleanliness**

# Ait El Hadj El Hassan



# AIRLINES CHALLENGE

Maven Airlines - Customer Satisfaction Report

Overall Satisfaction Level: 43%

Satisfaction Level by Class:

- Economy: 19%
- Economy Plus: 25%
- Business: 69%

Customer Satisfaction Score by Area:

Area	Score
Online	2,76
Airport	2,98
Airplane	2,73

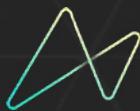
Bottom 5 Customer Satisfaction (0 - 5)

Area	Score
Ease of Online Booking	2,6
In-flight Wifi Service	2,7
Online Boarding	2,8
Gate Location	3,0
Leg Room Service	3,1

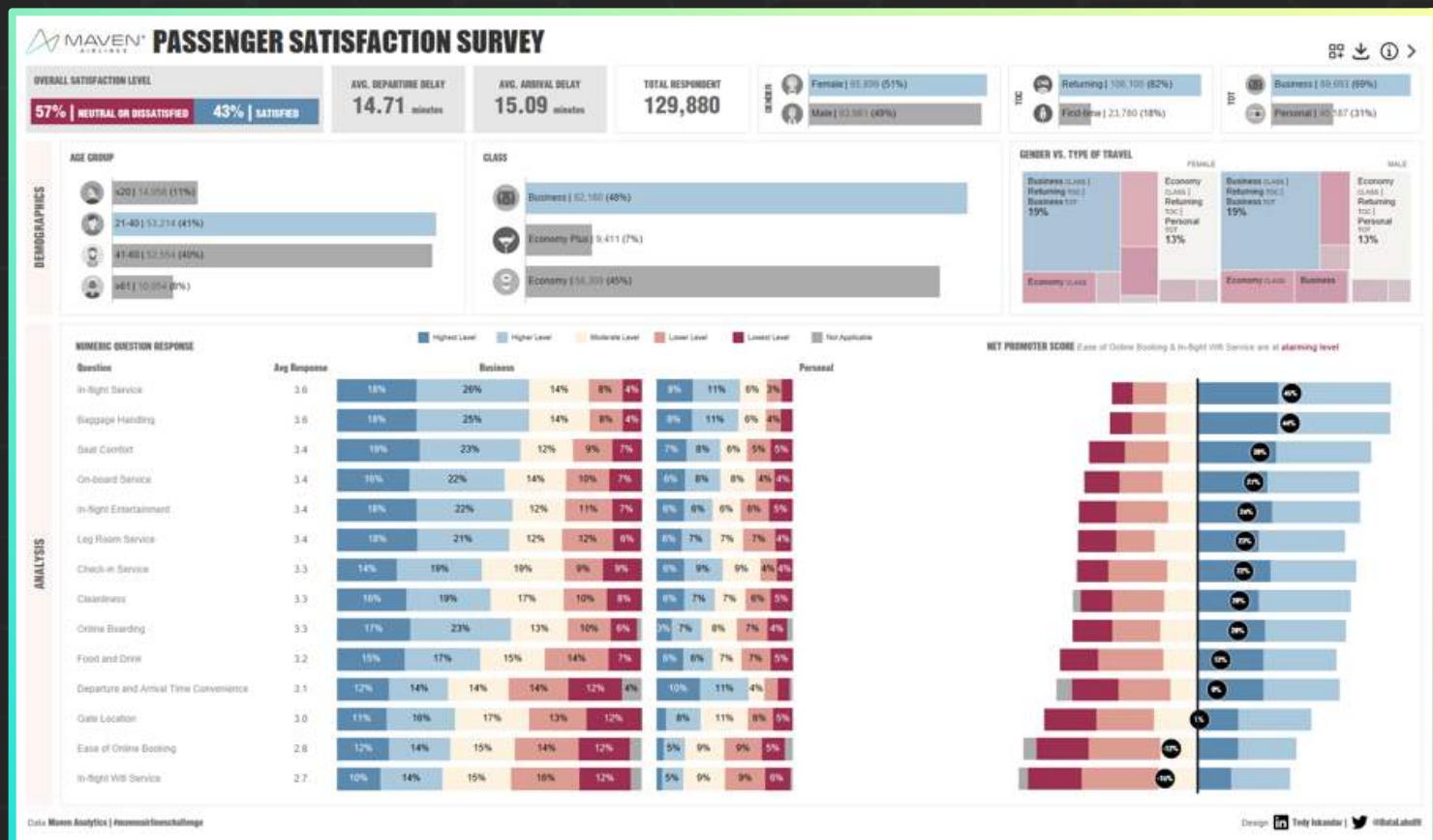
Deep Dive Class & Customer Type

Area	Class	Customer Type	Score
Online Boarding	Economy	First-time	2,81
Online Boarding	Economy Plus	First-time	2,89
Online Boarding	Business	Returning	2,86
Ease of Online Booking	Economy	First-time	2,60
Ease of Online Booking	Economy Plus	First-time	2,66
Ease of Online Booking	Business	Returning	2,92

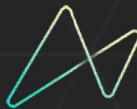
Valerie Junk



# AIRLINES CHALLENGE



# Tedy Iskandar



# AIRLINES CHALLENGE

## Passenger Satisfaction Survey

### Economy & Economy Plus Class

The level of **dissatisfaction** is most prevalent in the **20 to 35 year age bracket**.

A huge **80%** of economy and economy plus class passengers have a **neutral or dissatisfied** opinion of Maven Airlines.

**Business Class**

Generally all age groups experience high satisfaction rates, however **peak dissatisfaction** is in the **25 to 35 year age bracket**.

A noteworthy **31%** of business class passengers have a **neutral or dissatisfied** opinion of Maven Airlines.

### Potential Skewness

Almost 48% of respondents were from **business class**. However, typical commercial aircraft only have up to around 20% business class passengers, thus suggesting skewness.

Therefore this analysis has been conducted **separately** on business, and economy and eco plus.

### Likert Analysis\*\*

Responses with ratings of **1 or 2** have been assessed as **negative** values, **3** has been assessed as **neutral**, **4-5** as **positive**.

### Net Promoter Score\*

The NPS measures the **positive** against the **negative** values to gauge whether a category is an overall **detractor** or **promoter**.

### Key Recommendations

Proritise improvements in:

- In-flight WiFi Service**
- Ease of Online Booking**
- Online Boarding**

This will address some of the **largest NPS detractors** in both Economy and Business classes, and satisfy some of the **key tech demands of the younger demographic**.

Depending on budget, the next priorities would be:

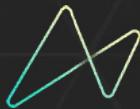
- In-flight Entertainment**
- Food and Drink**

An analysis of the Likert\*\* scores of **neutral or dissatisfied** passengers shows there are **5** areas which have a **Net Promoter Score (NPS)** of **less than zero**, indicating key target areas for **potential improvement**.

A similar analysis of **neutral and dissatisfied** passengers in **Business Class** shows there are actually **9** areas which have a **Net Promoter Score (NPS)** of **less than zero**, with **5** of these overlapping with **Economy and Economy plus**.

Gerard Duggan | dg-analysis.com

# Gerard Duggan



# AIRLINES CHALLENGE

## Airline Passenger Satisfaction by Category

Baggage Handling	Check in Service	Cleanliness	Ease of Online Booking	Food and Drink	Gate Location	In-Flight Entertainment	In-Flight Service	In-Flight Wifi	Avg. Leg Room	Onboard Service	Online Boarding	Seat Comfort	Time Convenience
3.6	3.3	3.3	2.8	3.2	3.0	3.4	3.6	2.7	3.4	3.4	3.3	3.4	3.1

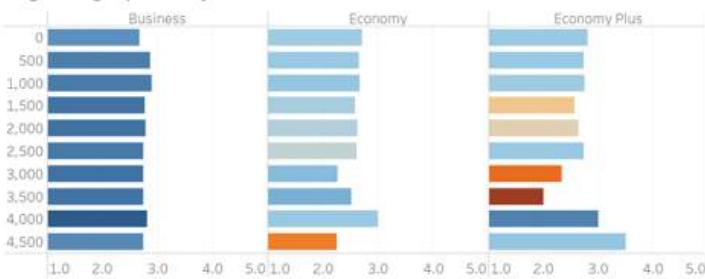
### Satisfaction Category

In-Flight Wifi

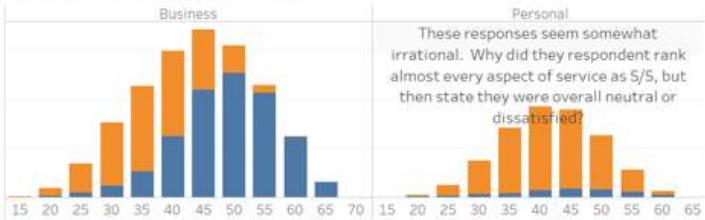
### Customer Attribute

Class

Flight Length positively contributes to satisfaction



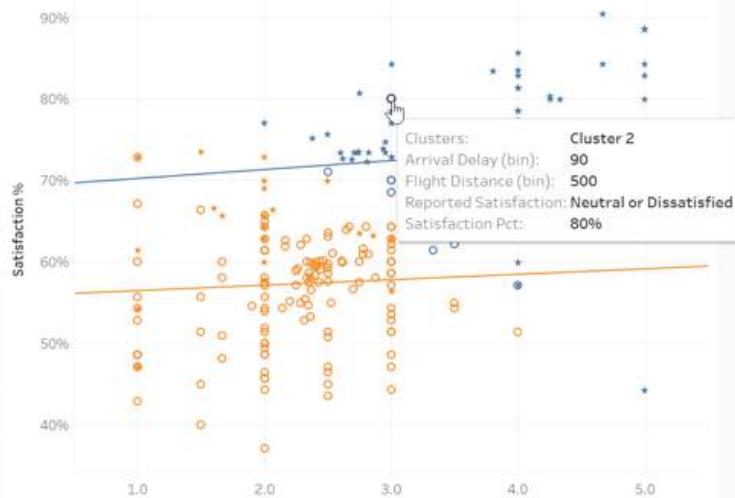
### Business Travelers Are More Satisfied



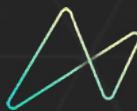
### Kmeans Prediction vs Reported Satisfaction

Type 1 Error - Blue Circles represent self-reported Neutral or Dissatisfied customers that Kmeans predicted to be overall Satisfied based on the Satisfaction Question Category selected in the chart

Type 2 Error - Orange Stars represent self-reported Satisfied customers that Kmeans predicted to be overall Neutral or Dissatisfied based on the Satisfaction Question Category selected in the chart



# Christine Carragee



# AIRLINES CHALLENGE



## Maven Airlines - Customer Satisfaction Analysis



In order to improve the overall satisfaction rate, we need to address that only **10%** of passengers traveling for **personal** reasons reports being **satisfied**



● = Satisfied travelers per 100 respondents

Satisfaction is expectedly higher for **Business travels** (58%) as they have a higher share of the more comfortable Business Class



**Personal travels** make up almost one out of three passengers (31%), so it will be well worth improving their experience

Let us see what will be the most **effective** ways to increase the **satisfaction** of passengers flying for **personal reasons** ➔

### The good news?

We have plenty of manageable areas to improve

#### Avg score from Personal Travelers (from 1-5)



Given the lowest scores, **Wifi** and **Ease of Online Booking** should be addressed.

Improving on areas such as **In-flight Entertainment** and **Cleanliness** may also give a high reward without being too expensive

**Departure delay** is a mood killer. Only **4%** of travelers with more than 30 minutes delay reports being satisfied



**Satisfaction rate** remains between 9 and 11% for all travelers with **flight distances** up to 3000 miles. Longer flights have higher satisfaction rate, but few travelers



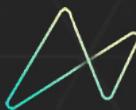
### Limitations and assumptions

1) Analysis assumes that survey sample is representative of the population of travelers

2) The analysis lack context of time. A score of 2.57 on "In-flight Wifi Service" may be considered great if it was 1.50 some months ago

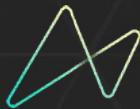
#MavenAirlinesChallenge by Eivind Austbø, www.finsikt.no

**Eivind Austbø**

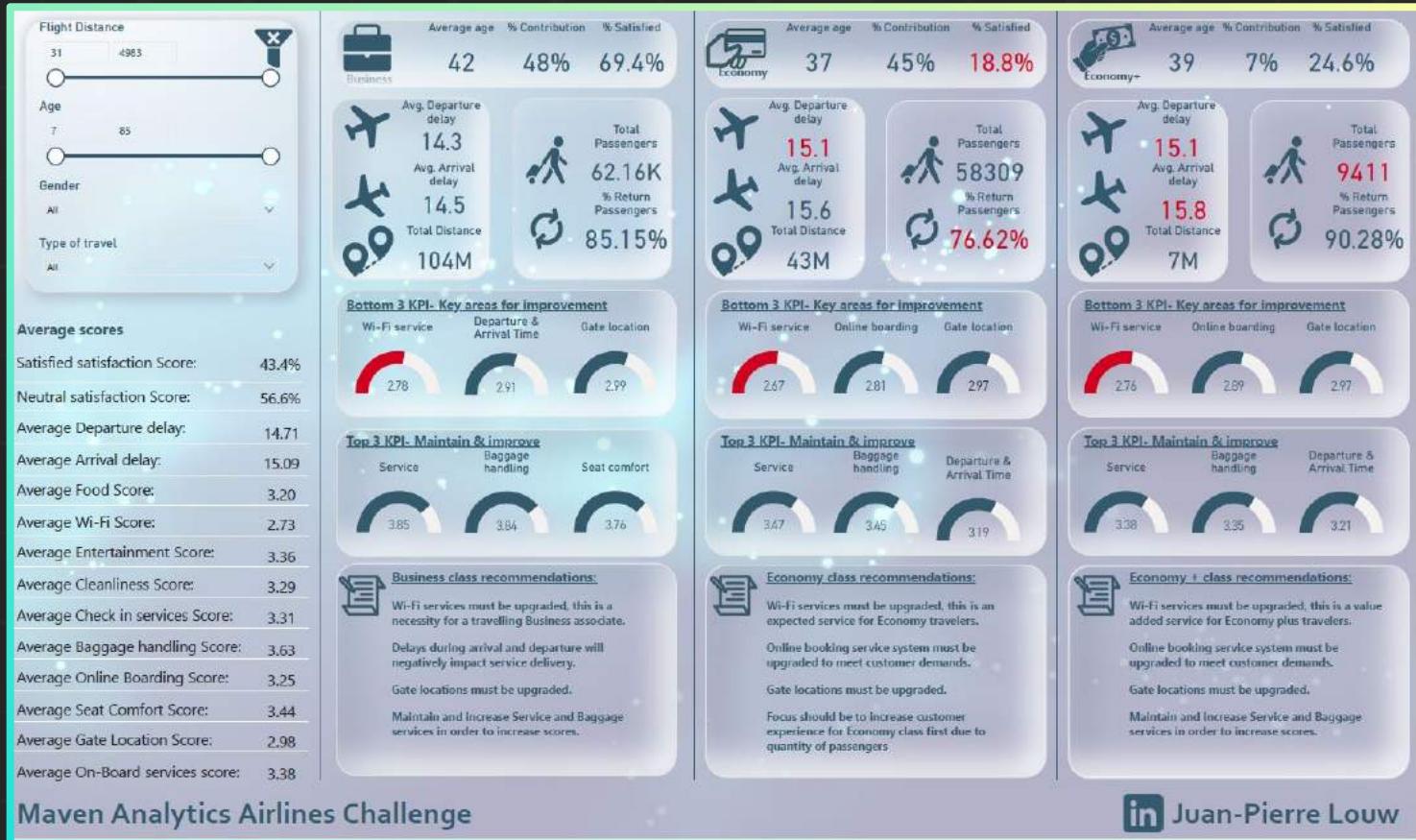


# AIRLINES CHALLENGE

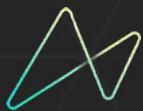




# AIRLINES CHALLENGE



# Juan-Pierre Louw



# AIRLINES CHALLENGE



## Maven Airlines



**AREAS OF SUCCESS**

All customers were satisfied with baggage handling, check-in service, on-boarding service, and in-flight service.

Business-class customers were satisfied with their leg room and the level of seat comfort.



## Customer Satisfaction Survey

Overall Satisfaction



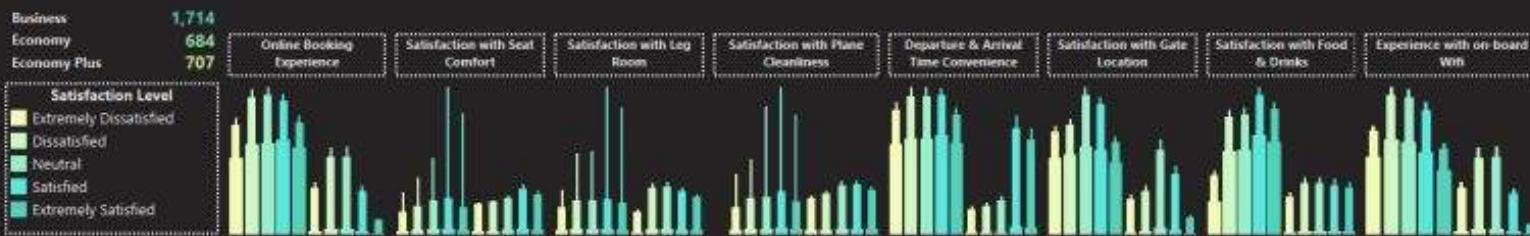
**AREAS FOR IMPROVEMENT**

Wi-Fi service, quality of food and drinks and online booking process.

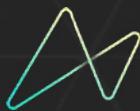
Gate location, and departure and arrival time convenience for those traveling for business reasons. Those in an economy class would appreciate an improved online boarding process, comfier seats with more leg room and better in-flight entertainment.

**AREA FOR MARKET EXPANSION**

First-time customers traveling for personal reasons.



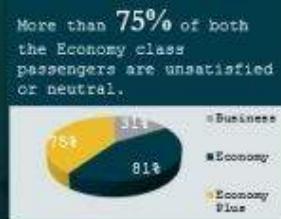
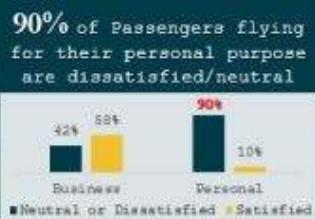
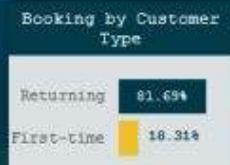
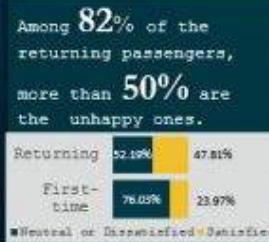
Tess Harper



# AIRLINES CHALLENGE

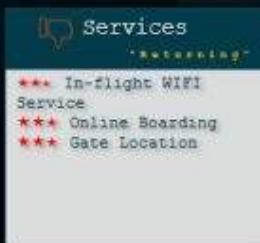
## Maven Airline

Approximately 130K customers preferred Maven Airline for their Personal and Business Trips. Since MA\* satisfaction rate dipped by 50%, below Customer Satisfaction analysis will uncover the areas which need attention.

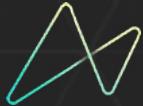


### Key Take-away

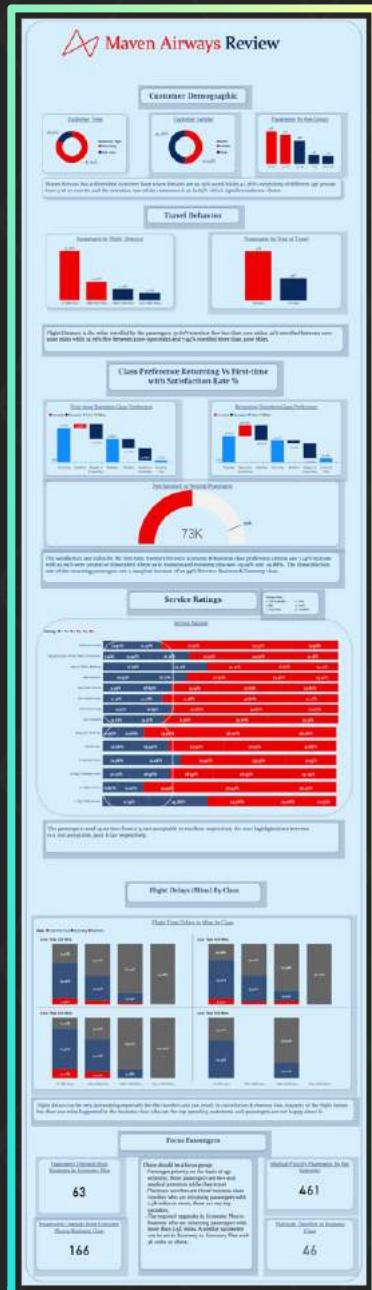
- Unsatisfied Group : Age group of 10-30 and above 60.
- Long distance flights: Need to promote this sector, pay attention on facilities, benefits and discounts.
- Neutral Rating: Focus on converting Neutral customers to Satisfied ones.
- Promote Economy(+): Review Students/Senior Citizen discounts, Milage services, promotional offers.
- Personal type : Since majority of passengers are travelling economy class for personal purpose, utmost attention is required to uplift all the low rated services.
- Food & Drink, Cleanliness, Seat comfort, legroom are some of the concerning areas too.
- Gate walking distance should be minimized , proper signage board would reduce the unnecessary walking. Enhance mobile assistance services
- Digital, low-touch experiences: Advance tools and impactful delivery models in place will help consumers navigate and engage with airline.



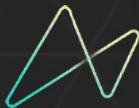
Deepti D'costa



# AIRLINES CHALLENGE



Vikram Aiyer



# AIRLINES CHALLENGE



## MavenAirlines

Distance is no barrier...

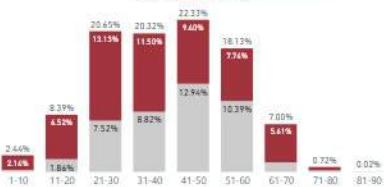
Total Number of Passengers

**129880**

Gender Distribution



Age Distribution



First-time 18.31%



Economy Plus 7.25%



### Complementary Rating

Class	Dept. & Arrival time conv.	Baggage Handling	Cleanliness	Seat comfort	Food & Drink
Business	<b>2.91</b>	3.84	3.48	3.76	3.33
Economy Plus	3.21	3.35	3.12	3.17	3.11
Economy	3.19	3.45	3.10	3.14	3.09
Total	<b>3.06</b>	<b>3.63</b>	<b>3.29</b>	<b>3.44</b>	<b>3.20</b>

### Pre Boarding Rating

Class	Ease of online booking	Online Boarding	Check in Services	Baggage Handling	Gate Location
Business	<b>2.92</b>	3.72	3.52	3.84	2.99
Economy	<b>2.60</b>	<b>2.81</b>	3.12	3.45	2.97
Economy Plus	2.66	<b>2.89</b>	3.01	3.35	2.97
Total	<b>2.76</b>	3.25	3.31	<b>3.63</b>	<b>2.98</b>

### In-Flight Rating

Class	Inflight wifi services	Inflight Ent	Inflight services	On Board Service
Business	<b>2.78</b>	3.64	3.85	3.68
Economy	<b>2.67</b>	3.10	3.47	3.12
Economy Plus	<b>2.76</b>	3.12	3.38	3.04
Total	<b>2.73</b>	3.36	3.64	3.38

### InSight

**Time Management:** The complementary services seems ok except for the inconvenience expressed majorly by the Business class in respect to Depature & Arrival Timing possible a resultant of the delays.

**IT Interface Upgarde:** There is the need to improve the online platform to a more user friendly platform to accomodate a more tech oriented age group (21-40) which represents 40.97% of the population sampled. Also an upgarde of the wifi provision

**Navigation:** Mavenairlines should consider relocating the gate entrance for all the class of passenger to ease navigation around & within the aport.

**New Passengers:** The rate of dissatisfaction is more among the First Timers, this may affect the going concern of the airline if immediate and adequate considerations are not given to the above mentioned issues.

CHIKA ONYEANWUSI - SENIOR ANALYST MARVEN AIRLINES

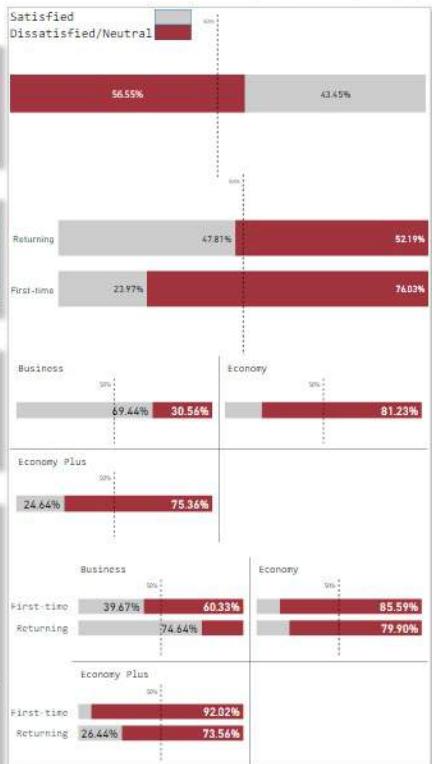
### Customers Satisfaction Evaluation Chart

15.09

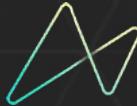
Average delay time on arrival (Min)

14.71

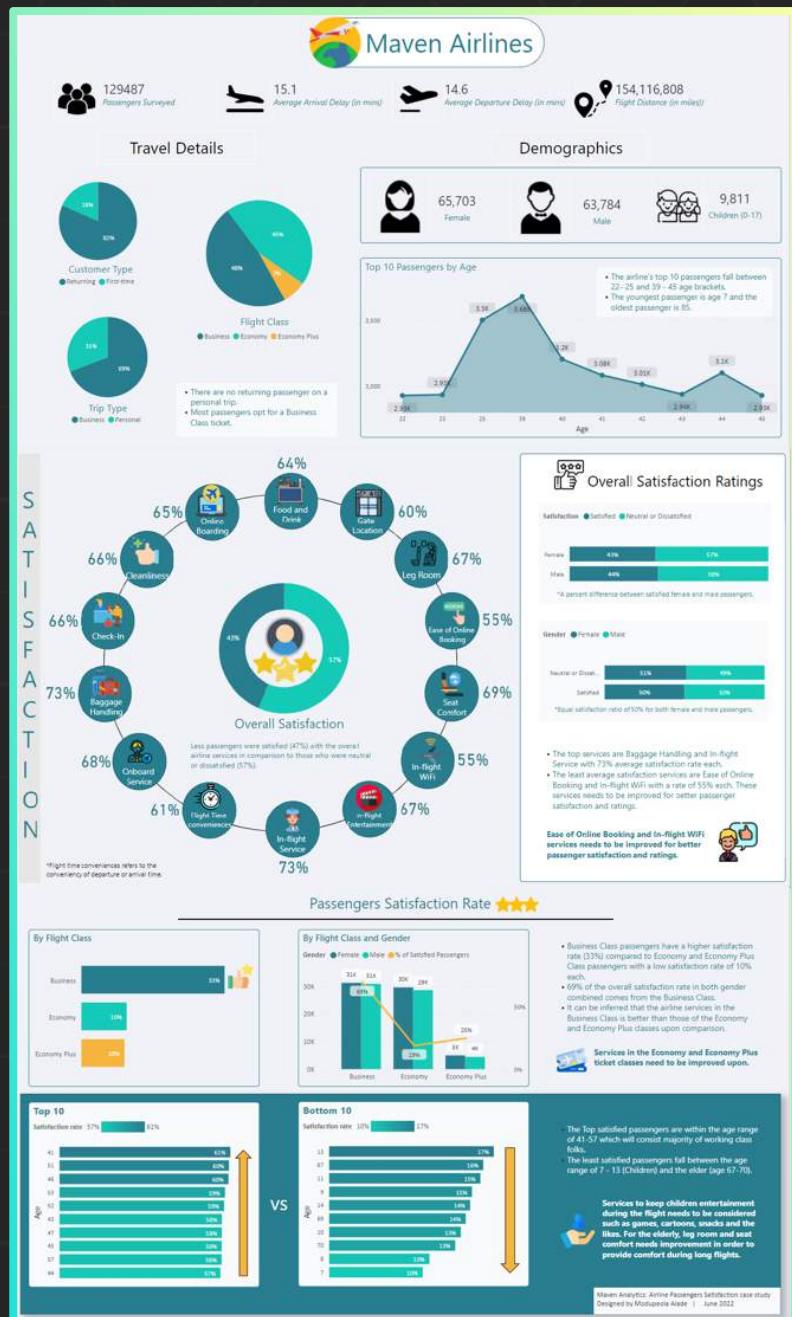
Average departure delay time (Min)



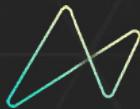
Chika Onyeawusi {DipIFR (ACCA)candidate}



# AIRLINES CHALLENGE



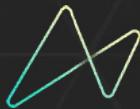
# Modupeola Alade



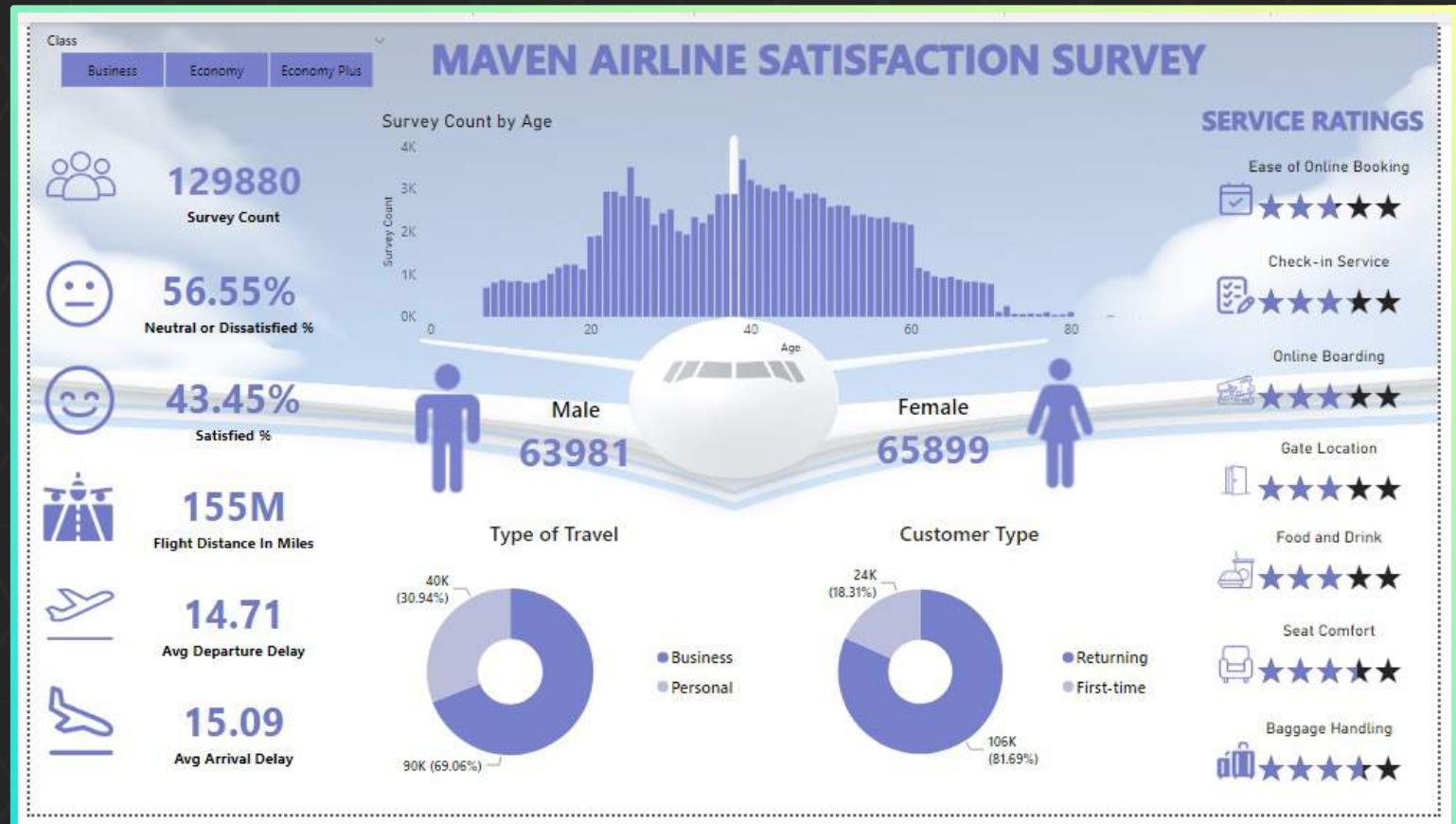
# AIRLINES CHALLENGE



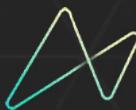
# Sandeep Singh



# AIRLINES CHALLENGE



# Chintamani Shisode

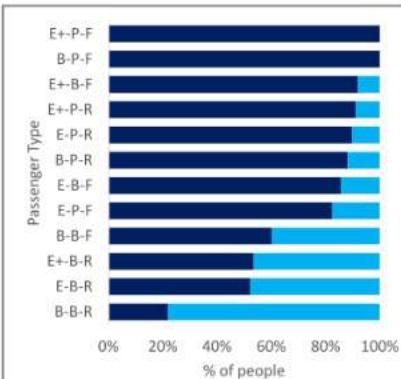


# AIRLINES CHALLENGE

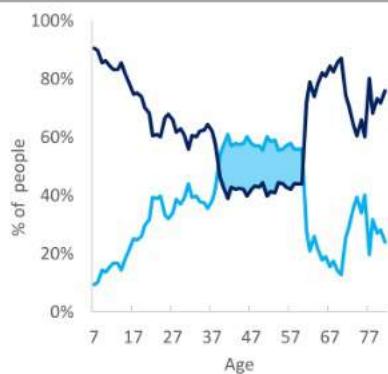
Class	Type of Travel	Customer Type
Business	Personal	First-time
Economy	Business	Returning
Economy +		

## Airline Passenger Satisfaction

■ Satisfied  
■ Unsatisfied



The satisfaction largely depended on the purpose and the type of flight, even more than the experience provided by the airline. A **satisfied** customer is very likely to be a returning **business traveler**, and the least likely to be first-time personal traveler.



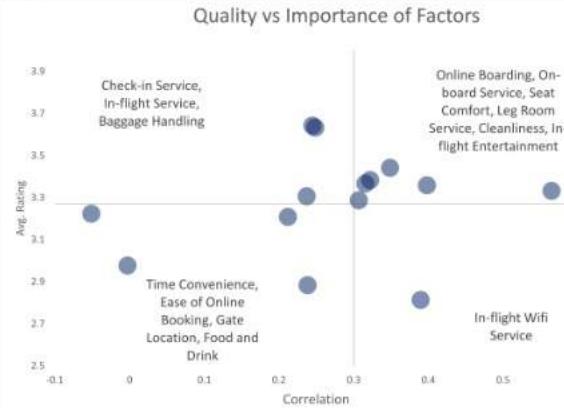
The people aged between 40 and 60 had higher satisfaction than the others. It means that the Airline is unable to cater to the **demands** of the **newer generation**, for example. wi-fi services.

### Difference of Rating Between Satisfied and Unsatisfied Customers



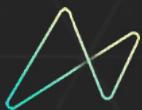
■ personal first   ■ personal returning  
■ business first   ■ business returning

The chart on the left highlights the rating of a feature compared to its necessity. The top-right quadrant includes features that are to be promoted as they are rated high as well as are more important to users. The bottom-right features must be worked on, as that includes feature that has below average rating but is very important to customers.



The business travelers have different preferences compared to personal ones. For personal travelling, the unsatisfied customers rated some features better than the satisfied ones as seen at the top. The preference of one type of traveler should not be used to satisfy customer of a different type.

# Istiyaque Ahmed Ridoy



# AIRLINES CHALLENGE



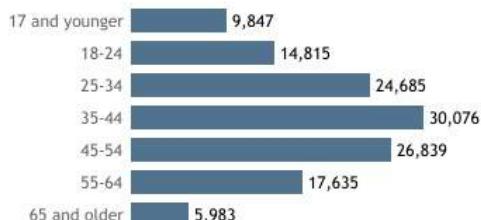
Passengers Surveyed  
129,880

## Passenger Characteristics

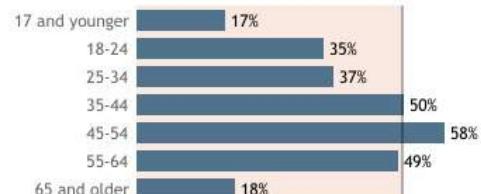
Customer Type	Type of Travel	
Returning	Business	50.9%
	Personal	30.8%
	Total	81.7%
First-time	Business	18.2%
	Personal	0.2%
	Total	18.3%

Returning customers make 82% of total and Business travelers make 69% of total. First-time Personal travelers only account for 0.2% of total.

## Age Distribution



## Satisfaction by Age Group



The only age group with more than half satisfied customers is 45 to 54 years old. Middle aged customers tend to be more satisfied than young and old passengers.

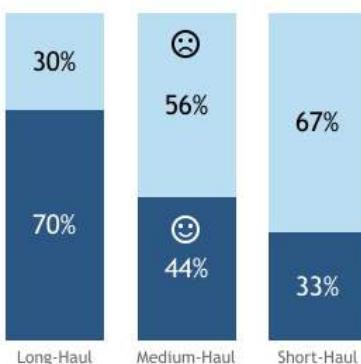
## Passenger Satisfaction Analysis

Business	Personal	Satisfied Customers	Delayed Departures	Avg. Flight Distance
69%	31%	43%	22%	1,190 mi

### Flight Distance

	# of Flights	% of Total
Short-Haul	62,518	48%
Medium-Haul	43,876	34%
Long-Haul	23,486	18%

### Satisfaction by Flight Distance



Short-haul flights account for almost half of the flights and they tend to be less satisfied with their flight experience.

### Returning Customers Satisfaction



### Average Ratings (from 1 to 5)

In-flight Service	3.64
Baggage Handling	3.63
Seat Comfort	3.44
On-board Service	3.38
In-flight Entertainment	3.36
Leg Room Service	3.35
Check-in Service	3.31
Cleanliness	3.29
Online Boarding	3.25
Food and Drink	3.20
Time Convenience	3.06
Gate Location	2.98
Ease of Online Booking	2.76
In-flight Wifi Service	2.73

Not a single category is rated positive or above 4 which means that all categories need improvement to increase overall satisfaction.

### Recommendations

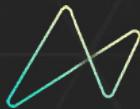
- ④ Create a rewards program since 82% are returning customers.
- ④ Focus more on business travelers and their needs, like Wi-Fi service.
- ④ Increase In-flight Wi-Fi bandwidth and connectivity.
- ④ Improve website booking by making it more user-friendly.

Download report as:



Created by Jose Velazquez <https://analystjose.com>

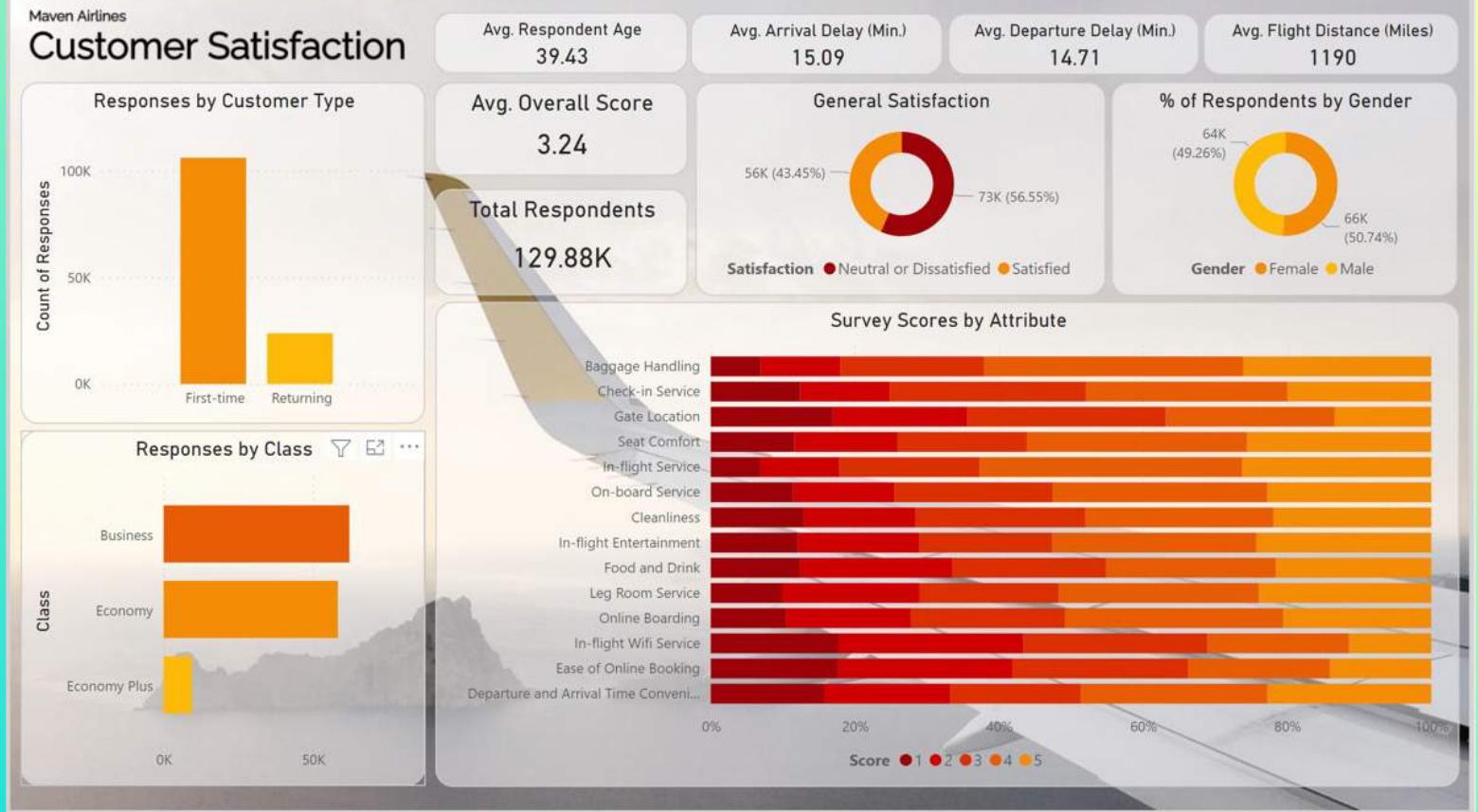
# Jose Velazquez



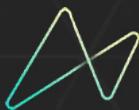
# AIRLINES CHALLENGE

Maven Airlines

## Customer Satisfaction



Allan Dalton



# AIRLINES CHALLENGE

## WHY ARE THE SERVICE RATINGS DOWN?

performance survey analysis based on passengers, satisfaction rate, age, travel class, etc...

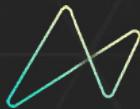
ALL PASSENGERS

FIRST-TIME PASSENGERS

RETURNING PASSENGERS



Idris Alugo



# AIRLINES CHALLENGE

**M**  
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**s**

**129.88K**  
Total passengers

**64K**  
Male Passengers

**66K**  
Female Passengers

**56K**  
Satisfied

**73K**  
Neutral or Dissatisfied

**15 min**  
Avg Arrival Delay

**15 min**  
Avg Departure Delay

**1190.3**  
Avg Flight Distance

**What Factors made the performance ratings are down**

**There is only one thing that matters Customer Satisfaction**

**% of Satisfied and Neutral or Dissatisfied | Class**

Class	High (%)	Low (%)
Business	69.44%	30.56%
Economy	18.77%	81.23%
Economy Plus	24.64%	75.36%

**In Business class most of the passengers(70%) are satisfied with the airlines, where as coming to Economy & Economy Plus(80%) most of them are showing Neutral or Dissatisfaction with the Airlines**

**% of Satisfied & Neutral or Dissatisfied | Customer**

Customer Type	High (%)	Low (%)
Returning	47.81%	52.19%
First-time	23.97%	76.03%

**We should have an eye on first-time passengers to meet there requirements because most of them are showing dissatisfaction on the performance of airlines.**

**Top 5 Areas with Low Ratings**

Area	High (%)	Low (%)	Neutral (%)
In-flight Wifi Service	30.13%	45.09%	24.78%
Gate Location	36.86%	35.64%	27.50%
Food and Drink	45.06%	33.54%	21.40%
Ease of Online Booki...	32.24%	44.36%	23.40%
Departure and Arriv...	46.10%	36.67%	17.23%

**Improve all the services with low ratios for better performance of airlines**

**Total passengers | Departure Delay Status**

Delay Status	Passenger Count	Percentage
No Delay	73.36K	56.48%
Ok (1-30)Min	38.43K	29.5...
High(>30 ...)	18.10K	13....

**Total passengers | Arrival Delay Status**

Delay Status	Passenger Count	Percentage
No Delay	73.15K	56.32%
Ok (1-30)Min	38.36K	29.53%
High(>30 ...)	18.38K	14.15%

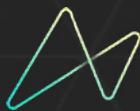
**Key Areas to update the Existing operations**

**Review all existing operations and update with tracking analysis to improve the passengers satisfaction levels.**

**It looks there was a shortage in service staff , increase the number to raise the efficiency in services like food & drink, cleanliness.**

**Elevate the technology to raise ease of online booking.**

## Naga Lakshmi Korukonda



# AIRLINES CHALLENGE

**MAVEN**

**Passengers Satisfaction Analysis**

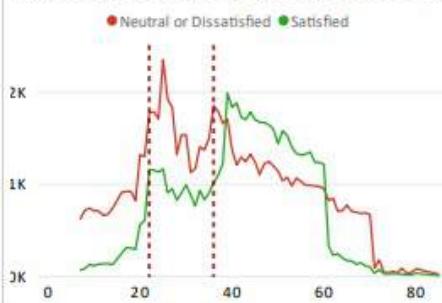
## Dissatisfaction Rate

**56.6%**

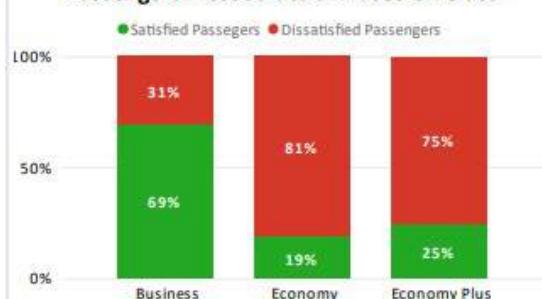
### Dissatisfaction Rate by Passenger Type



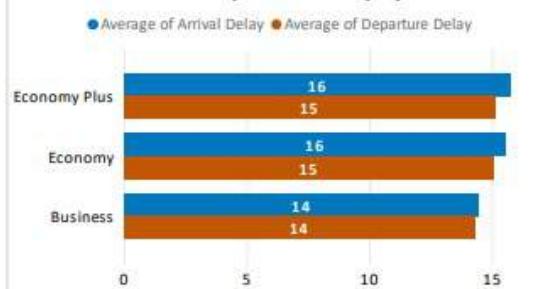
### Dissatisfaction Survey by Passengers Age



## Passengers Dissatisfaction Based on Class



## AVG Arrival and Departure Delay by Travel Class



### Findings:

- RED marked flight services need to be improved.
- Services need to improve in **economy** and **economy plus** class as most dissatisfied people travelled in these classes also travelling **first time**.
- Departure and arrival **delay** should be reduced.

## Overall Ratings

3.28/5

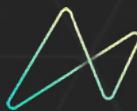
### Flight Services Need to Improve

In Flight Wifi Service	Ease of Booking
3.28/5	3.28/5
Gate Location	Food and Drink
3.21/5	3.21/5

### AVG or Satisfied Flight Services

Time Convenience	Cleanliness
3.22/5	3.29/5
Check in Service	Online Boarding
3.31/5	3.33/5
In Flight Entertainment	Leg Room Service
3.36/5	3.37/5
On Board Service	Seat Comfort
3.38/5	3.44/5
Baggage Handling	In Flight Service
3.63/5	3.64/5

**Shanjid Ahmed**



# AIRLINES CHALLENGE

## Airline Passenger Satisfaction



**129.880**

Passengers

**1.190.32**

Average Distance (Miles)

**50,74%**

% Female

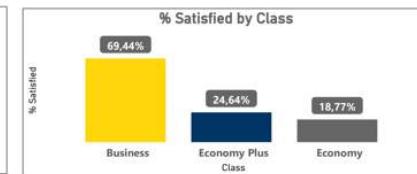
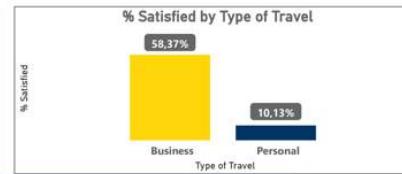
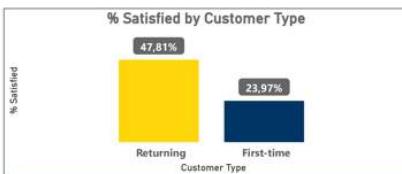
**49,26%**

% Male

**39,43**

Average Age

**56,55%** of passengers are either neutral or dissatisfied with the services offered



## Average Rating (1 to 5) by Category

Departure and Arrival Time Convenience



3.2

Leg Room Service



3.4

Easy of Online Booking



2.9

Cleanliness



3.3

Check-In Service



3.3

Food and Drink



3.2

Online Boarding



3.3

In-flight Service



3.6

Gate Location



3.0

In-flight Wifi Service



2.8

On-board Service



3.4

In-flight Entertainment



3.4

Seat Comfort



3.4

Baggage Handling



3.6

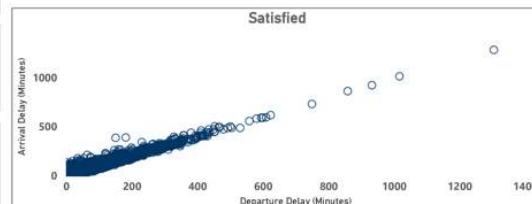
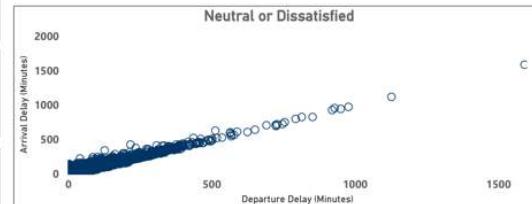
**45,81%**

of flights completely on-time  
(departure and arrival)

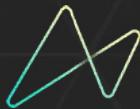
**33,01%**

of flights completely late  
(departure and arrival)

## Departure and Arrival Delay



Amanda Helena Resende de Souza



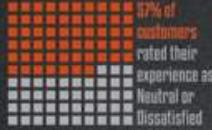
# AIRLINES CHALLENGE

## Maven Airlines Satisfaction Report

Analysis by Asa Howard



**Problem:**  
For the first time in history, the satisfaction report for Maven Airlines has dipped below 50%.



57% of customers rated their experience as Neutral or Dissatisfied

**Who is flying?**

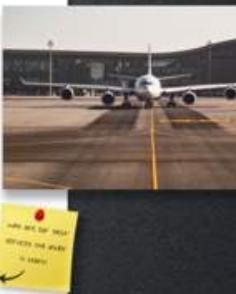


Returning Customers: 82%  
New Customer: 18%

New customers appear to have higher satisfaction than returning customers.

**How do they view our services?**  
Rated by 100,000 flyers

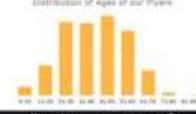
Service	Rating
In-Flight WiFi	2.73/5
Ease of Online Booking	2.76/5
Gate Location	2.98/5
Departure and Arrival Time	3.06/5
Food and Drink	3.2/5
Online Boarding	3.25/5
Cleanliness	3.29/5
Check-in Service	3.31/5
Layover	3.35/5
In-Flight Entertainment	3.36/5
On-board Service	3.38/5
Seat Comfort	3.44/5
Baggage Handling	3.63/5
In-Flight Service	3.64/5



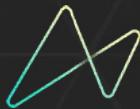
**Recommendations:**

- Our first priority should be to improve all the services rated less than 3 stars:
  - In-flight WiFi could be improved by partnering with Spark to provide flights with Starlink WiFi services.
  - The importance ease of online booking, I recommend forming a partnership with a third-party provider.
  - In order to improve gate location ratings, we need a high level of visibility with our customers. Customers may be able to see their gate faster if more signs were used out side the gate change board.
- Customers may be more likely to give a satisfactory rating if they are blown away by a few specific services, rather than being slightly happier with all of them.
  - Let's focus on the services that we have the most control over: I believe those consist of cleanliness, check-in service, on-board service, and in-flight service.
  - We can improve employee-customer interactions by implementing a stricter interview process, better training, and performance evaluations, and creating an internal rewards program. If we can reward the customer with positive staff interactions, I believe they will more likely rate their experience as satisfactory.

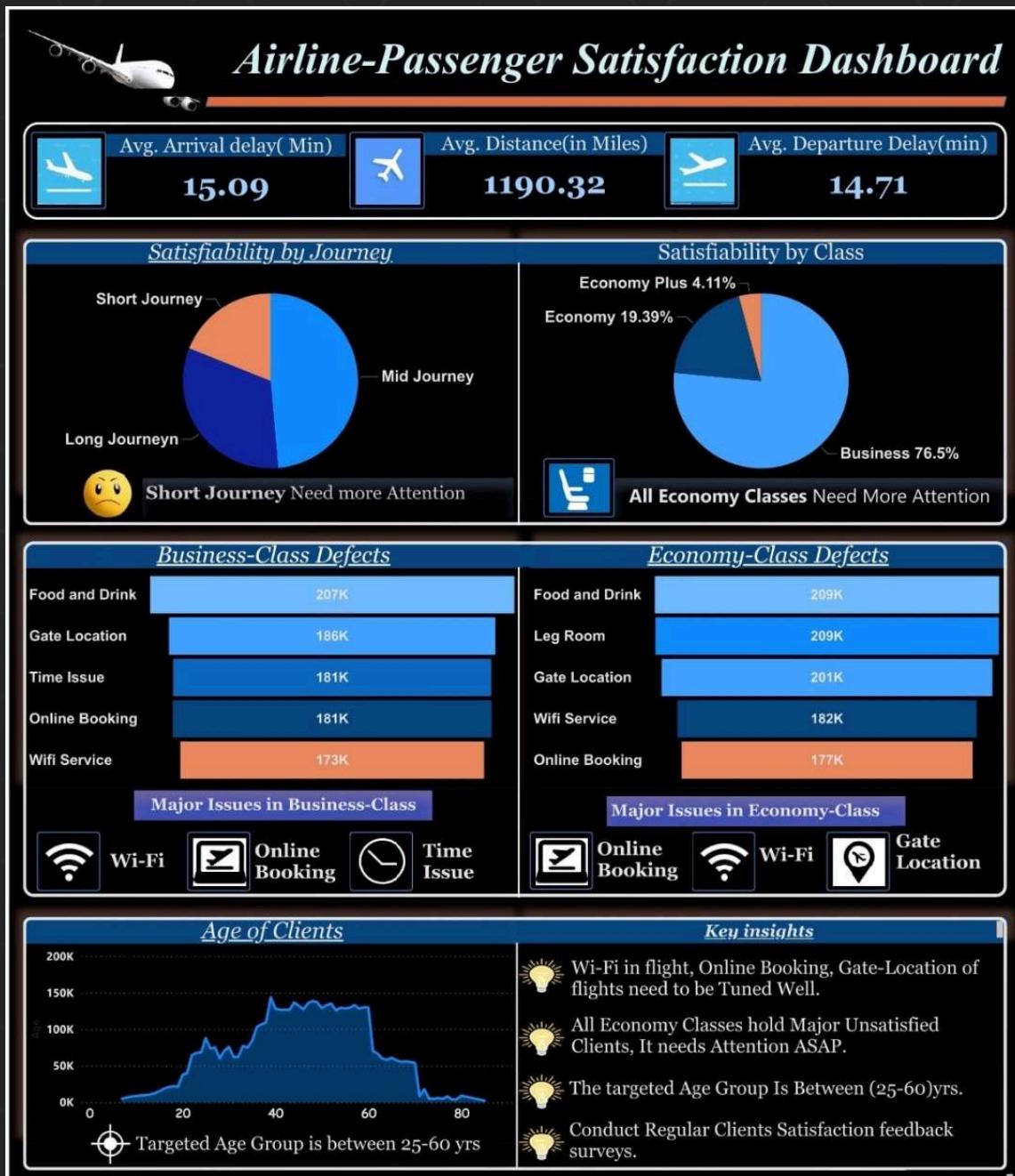
**How old are our customers?**



# Asa Howard

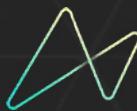


# AIRLINES CHALLENGE



By Sanskar Singh 29. may

# Sanskar Singh



# AIRLINES CHALLENGE

## Airline-Passengers' Dissatisfaction Summary

Dissatisfaction/Neutrality Rate from Type of Travel



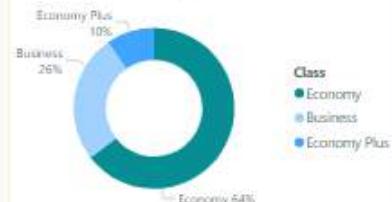
**130K**

Total Passengers

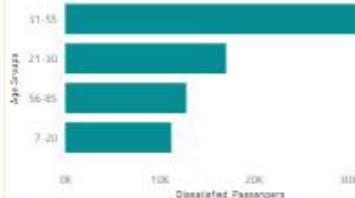
**57%**

Dissatisfied/Neutral Passengers

Dissatisfaction/Neutrality Rate from Class of Travel



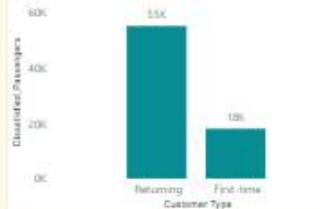
Dissatisfied/Neutral Passengers by Age Group



Satisfied VS Dissatisfied Avg Flight Distance



Dissatisfied/Neutral Passengers by Customer Type



## Key Reasons to Dissatisfaction/Neutrality

**3.6**

Avg ratings (satisfied\_Passenger)

**3.0**

Avg ratings (dissatisfied\_Passenger)

AVG Delay: 12.5 + minutes & AVG service ratings: (below 3.6)

are the main reasons of Dissatisfaction/Neutrality.

The company should resolve these 2 issues.

**12.5**

AvgDelay in Minutes (satisfied\_passenger)

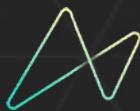
**16.7**

AvgDelay in Minutes (Dissatisfied Passengers)

## Ratings by Dissatisfied/Neutral Passengers

Services	Ratings
Baggage Handling	★★★★★
Check-in Service	★★★★★
Cleanliness	★★★★★
Departure and Arrival Time Convenience	★★★★★
Ease of Online Booking	★★★★★
Food and Drink	★★★★★
Gate Location	★★★★★
In-flight Entertainment	★★★★★
In-flight Service	★★★★★
Leg Room Service	★★★★★
On-board Service	★★★★★
Online Boarding	★★★★★
Seat Comfort	★★★★★
In-flight Wifi Service	★★★★★

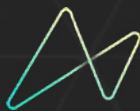
# Yeastir Abehayet



# AIRLINES CHALLENGE



## Sohanur Rahman Sohan



# AIRLINES CHALLENGE

First Time  
Customers  
**23780**

Returning  
Customers  
**106100**

Male  
**63981**

Female  
**65899**

## Customer satisfaction across different flight services

● Dissatisfied ● Satisfied



## Class Preferred

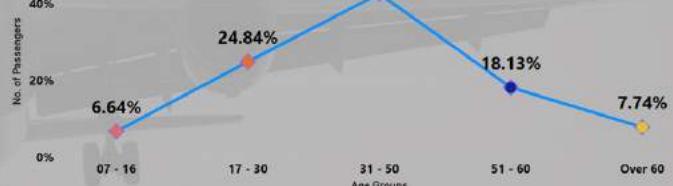
Business  
62160  
Economy  
58309  
Economy Plus  
9411

## Purpose of Travelling

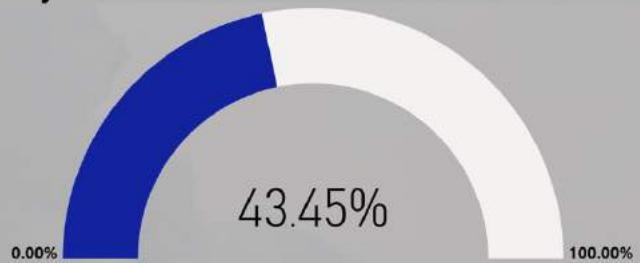
● Business ● Personal



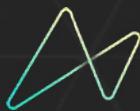
## Most customers are between 31-50 years age group



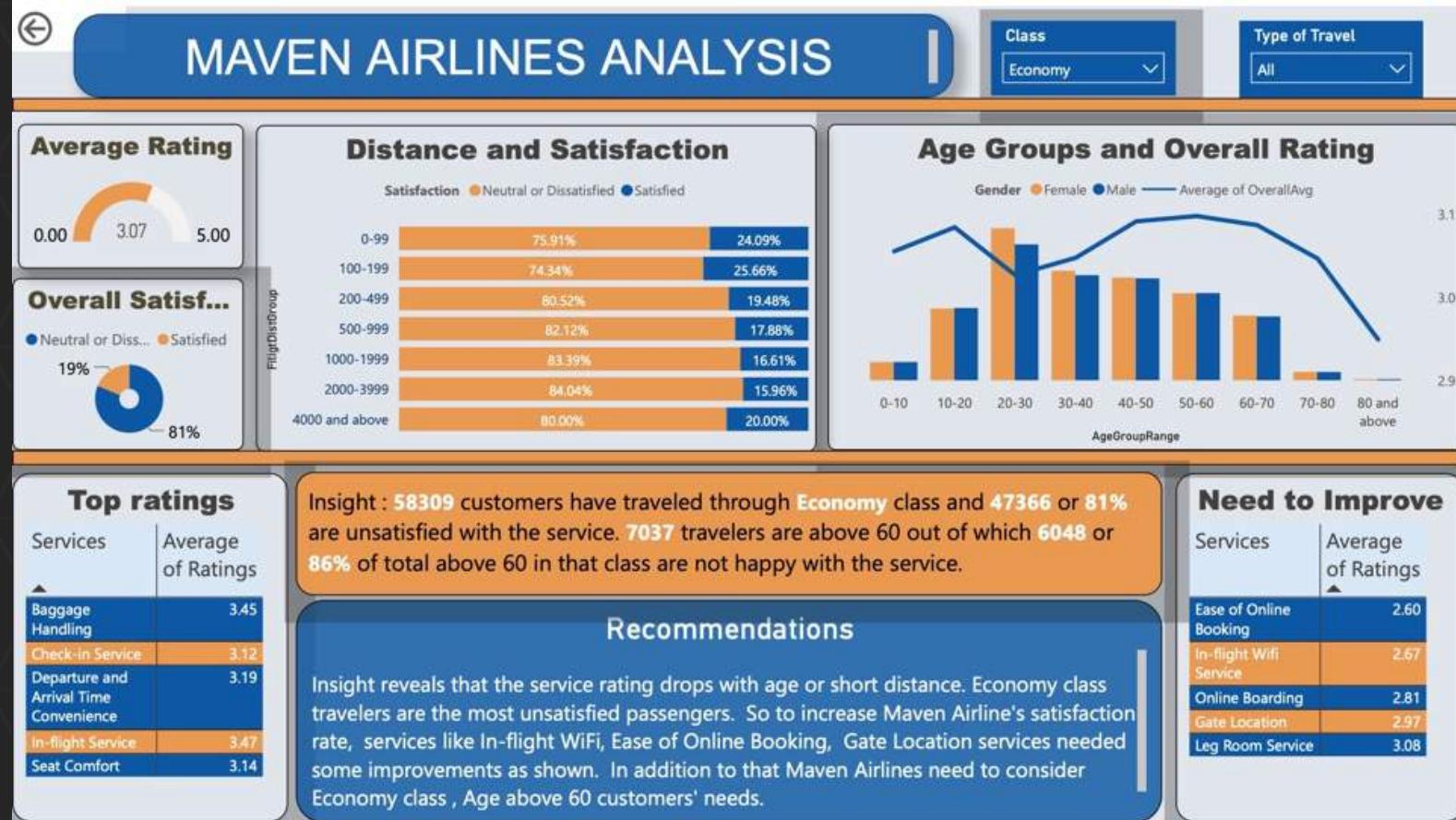
Only 43.45% customers are overall satisfied



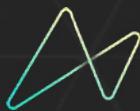
Debaraj Purohit



# AIRLINES CHALLENGE



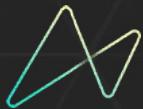
Madhura Dandekar



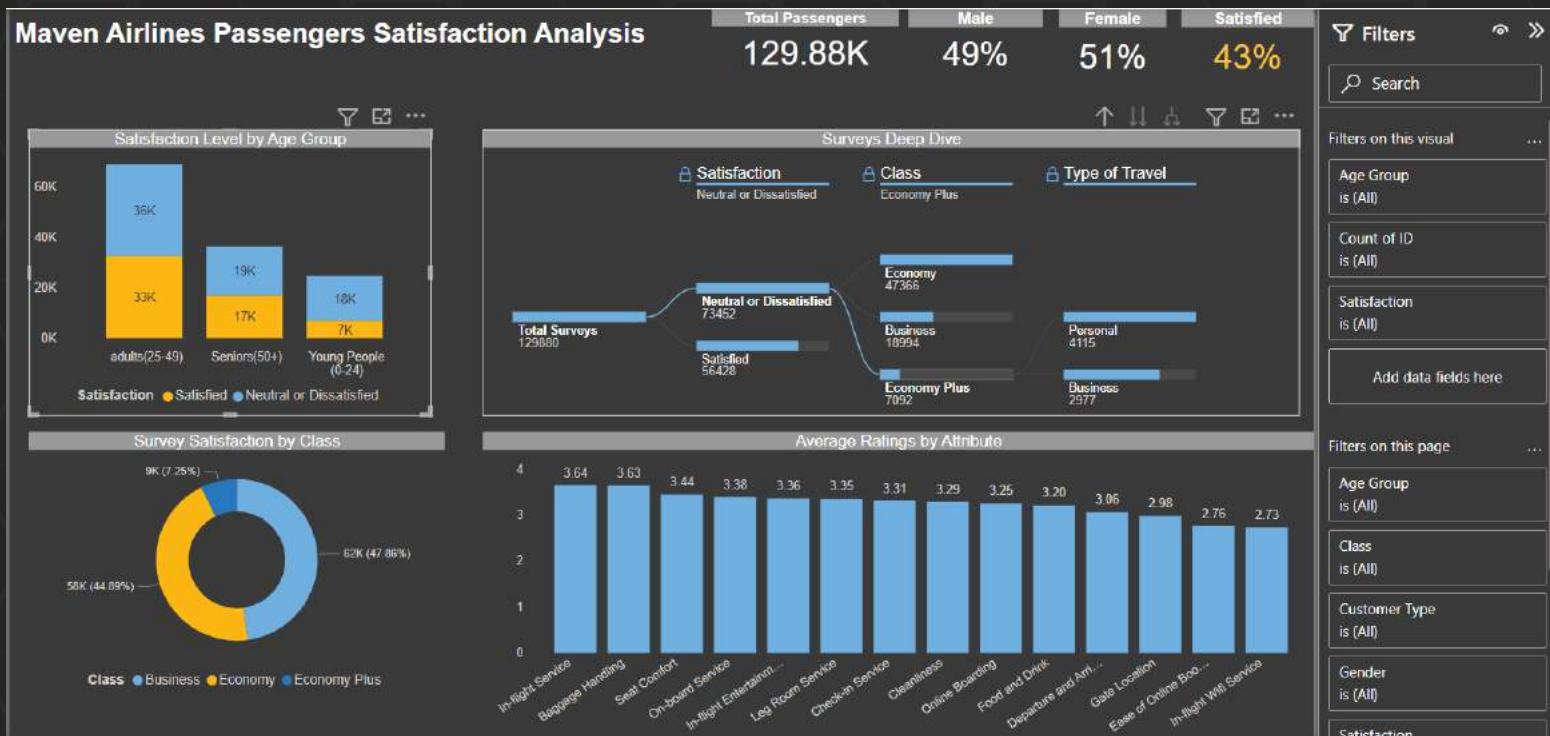
# AIRLINES CHALLENGE



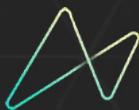
Sanoj Mohanan



# AIRLINES CHALLENGE



Aftab Alam



# AIRLINES CHALLENGE



## Passenger Survey Result Analysis

### Insights

1. Most **Frequent Flyers** are business purpose, they are returning customers and Economy class.

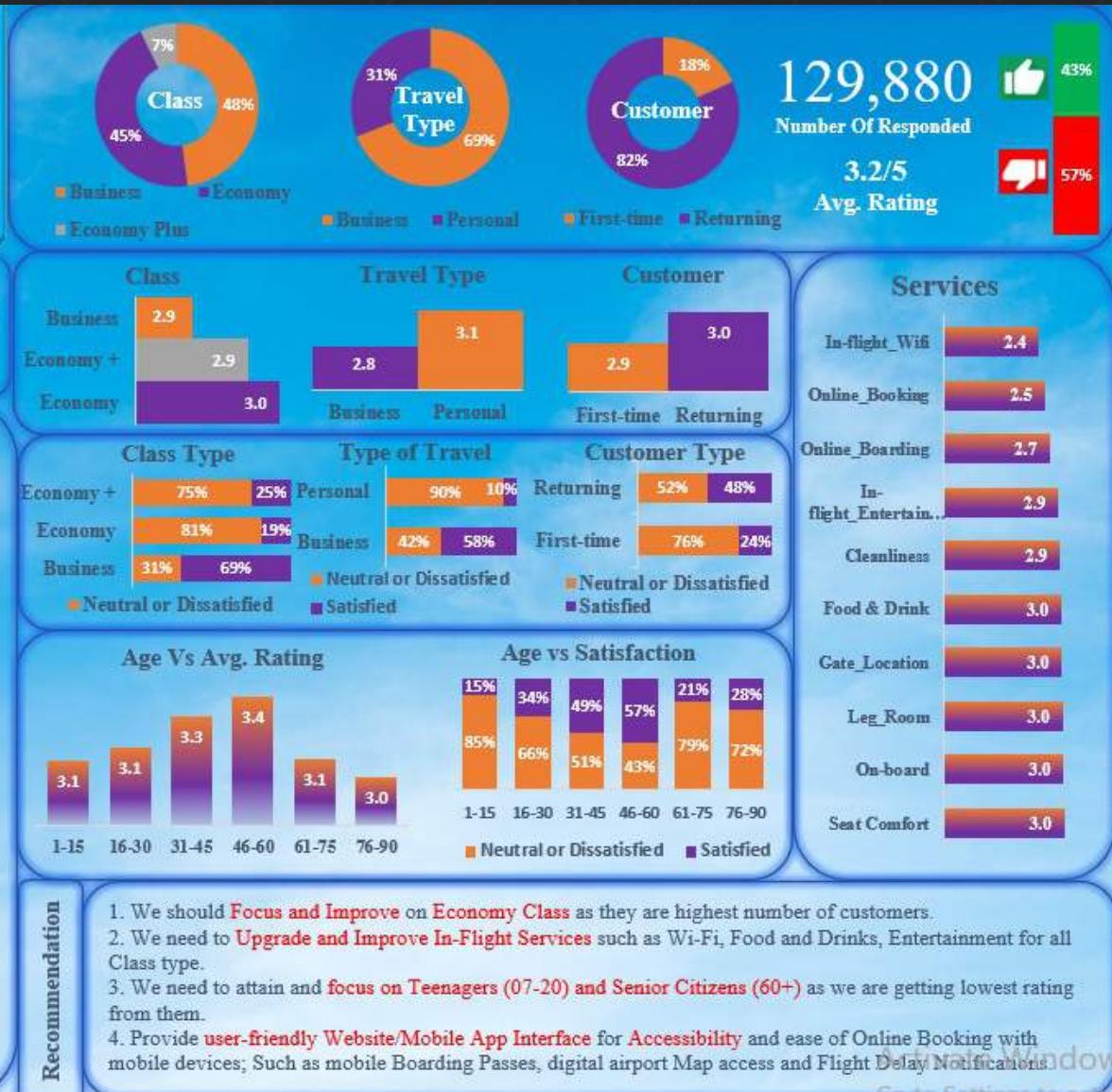
2. The **Most Dissatisfied** customers are from **Economy Class**, travel for **personal** purpose and they are **first time**.

3. Most number of customers are **Dissatisfied** with **Online Services** such as booking, boarding etc.

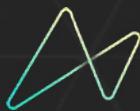
4. The most **Frequent Flyers** are **Adults** between age of 30 to 60.

5. The most **dissatisfied** customers are the **Youngest** and **Senior Citizens**.

6. Passengers are **Very Upset** with **In-Flight Services** like Wi-Fi, Entertainment, etc



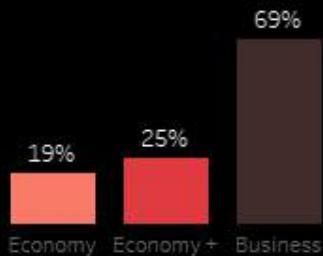
Suhas Chavan



# AIRLINES CHALLENGE

129.9K  
Analysed Customer Surveys

Satisfaction by Class

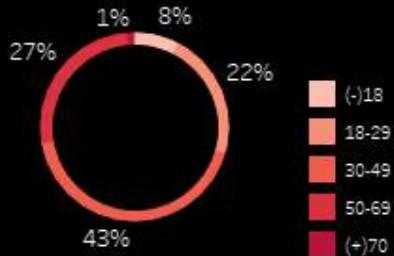


## Maven Airlines Passenger Satisfaction

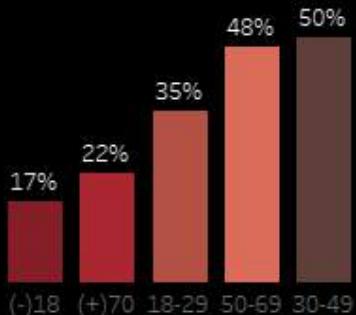


64,0K ♂ 65,9K ♀

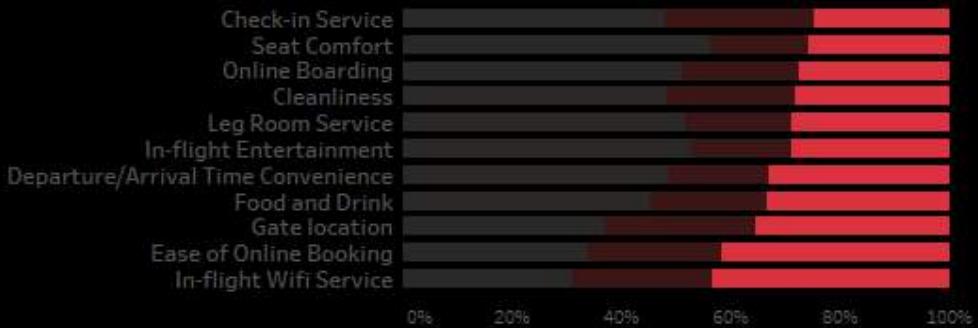
Age Range



Satisfaction by Age



Ratings by Service



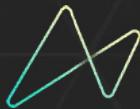
## Strategy

- Target passengers: economy class, younger and older age groups.
- Improve Wi-Fi services
- Update the online booking system considering users from all age groups
- Maximize gate management (long term lease)
- Leverage collaborate with gate management services (common use gates)

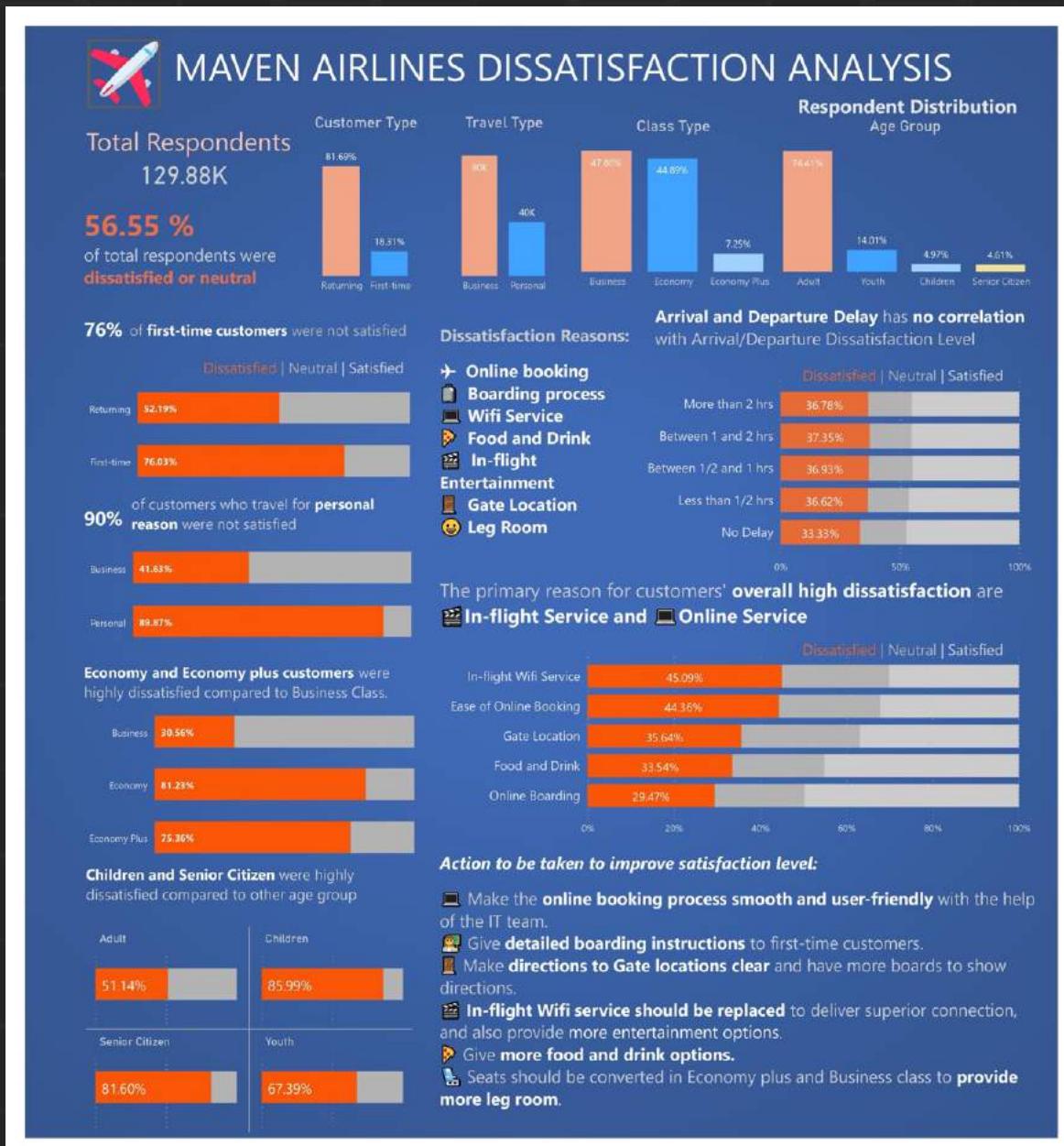
## Satisfaction level

- Low (1-2)
- Neutral (3)
- High (4-5)

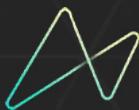
Aouataf (Djillani) Dudman



# AIRLINES CHALLENGE



Athi Srinivasan



# AIRLINES CHALLENGE



**Maven Airline**

**Class**

- Business
- Economy
- Economy Plus

**Type of Travel**

- Business
- Personal

**Customer Type**

- First-time
- Returning

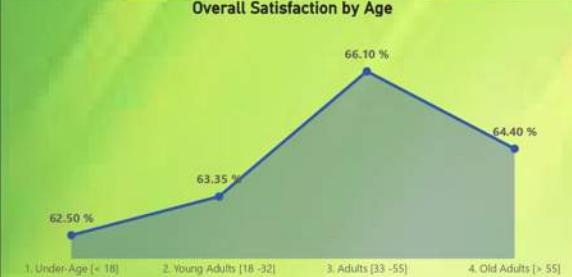
**Gender**

- Male
- Female

By: Wilmer Hernandez

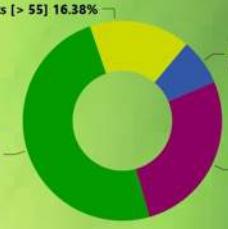
CUSTOMER SATISFACTION REPORT
Passengers  
129,880
Overall Rating  
64.81 %
Satisfied  
56,428 **43.45 %**
Not Satisfied  
73,452 **56.55 %**

**Overall Satisfaction by Age**



Age Group	Satisfaction (%)
Under-Age (< 18)	62.50 %
Young Adults [18 - 32]	63.35 %
Adults [33 - 55]	66.10 %
Old Adults [> 55]	64.40 %

**Frequent Flyers by Age**



Age Group	Percentage
Under-Age (< 18)	7.58%
Young Adults [18 - 32]	26.92%
Adults [33 - 55]	49.11%
Old Adults [> 55]	16.38%

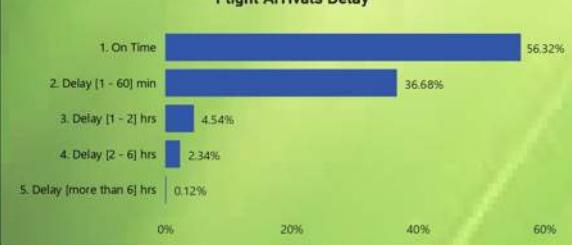
**Satisfaction Measure**

Class	Satisfied	Neutral or Dissatisfied
Business	76.50%	19.39%
Economy	25.86%	64.49%
Economy Plus		

**Findings**

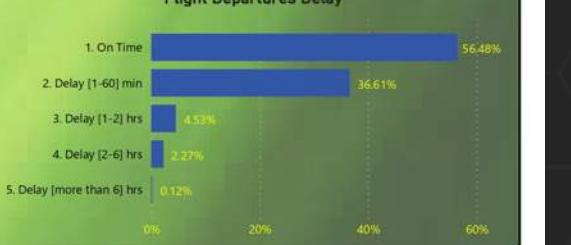
- Most frequent flyers** are adults between 33 and 55 years old.
- Most unsatisfied customer** are the youngest.
- The main attention to improve our services should be focus on: **(Gate Location, Ease of Online Booking and In-flight Wifi Service)**.
- Most satisfied people** are our most frequent flyers.
- While our **Business class** was taken by **62.2 thousands customers** of which **69.4% of them were satisfied**, the **Economy and Economy Plus class** were taken by **67.7 thousands** of which **only 19.6 % of them were satisfied**.
- Only about **7% of flights have delays** for longer than 1 hour.
- The techniques applied to improve the weakest services should be focus on the youngest in both Economy Classes.**

**Flight Arrivals Delay**



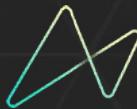
Delay Category	Percentage
On Time	56.32%
Delay [1 - 60] min	36.68%
Delay [1 - 2] hrs	4.54%
Delay [2 - 6] hrs	2.34%
Delay [more than 6] hrs	0.12%

**Flight Departures Delay**

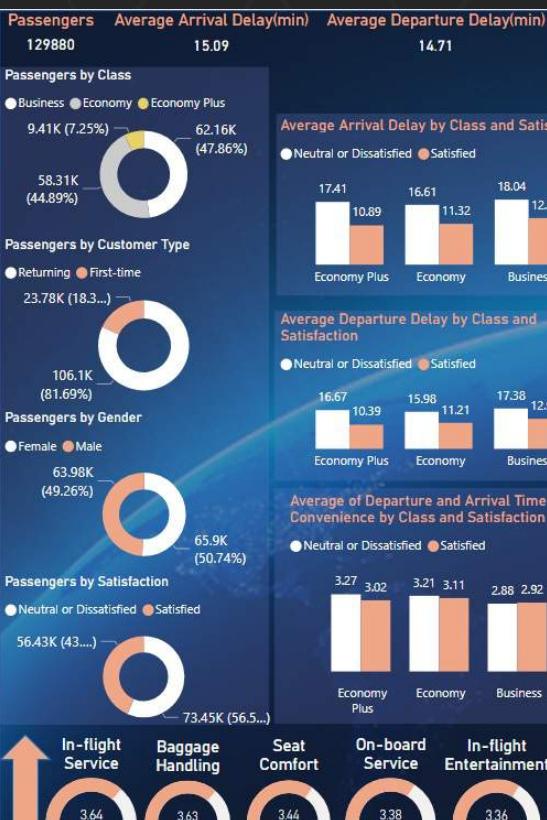


Delay Category	Percentage
On Time	56.48%
Delay [1-60] min	36.61%
Delay [1-2] hrs	4.53%
Delay [2-6] hrs	2.27%
Delay [more than 6] hrs	0.12%

# Wilmer Hernandez



# AIRLINES CHALLENGE



AIRLINES

Neutral/Dissatisfied    Satisfied    First Time    Returning

73452                      56428                      23780                      106100

## INSIGHTS

**UPDATE** In-flight wifi, user friendly online booking, gate location.

**MINIMIZE** gate walking distance.

**IMPROVE** seat comfort, cleanliness, legroom and food and drink.

**FOCUS** on neutral rating passengers to increase satisfaction rate.

**PROMOTE** economy plus and economy class.

**SERVE** better in age group of 25-36.

**ATTENTION** on short distance flights specially till 2500.

**ANALYZE** personal purpose passengers.

**REDUCE** delay in arrival and departure to less than 15 minutes.

**CONCENTRATE** on economy class the most as it is having the largest number of passengers.

## Flight Distance and Satisfaction

Neutral or Dissatisfied    Satisfied

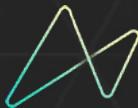


## Male Passengers by Class

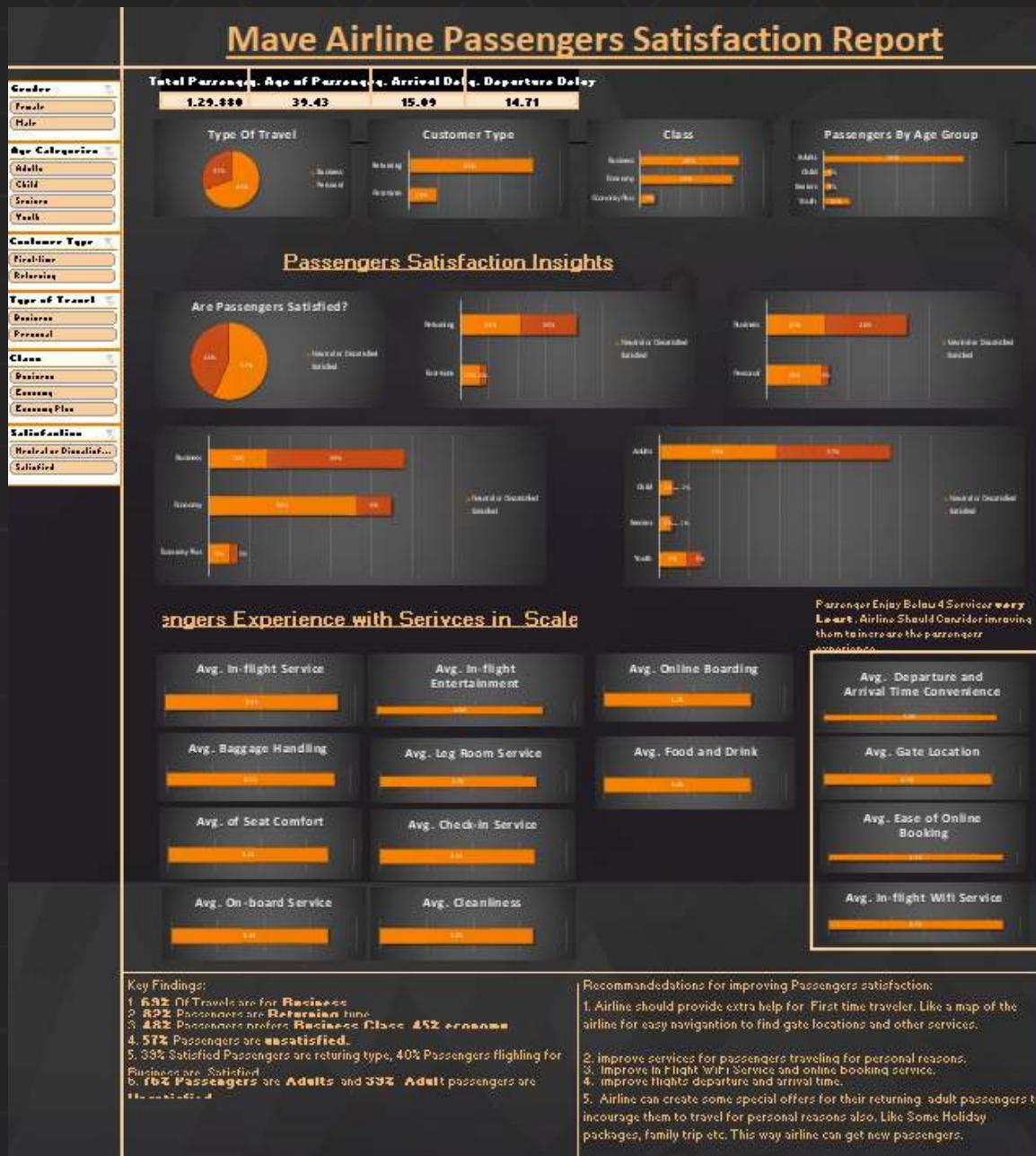
Neutral or Dissatisfied    Satisfied



Ashutosh Galbale



# AIRLINES CHALLENGE



## Passenger Satisfaction Insights

### Are Passengers Satisfied?

### Passenger Experience with Services in Scale

#### Avg. In-flight Service

#### Avg. In-flight Entertainment

#### Avg. Online Boarding

#### Avg. Baggage Handling

#### Avg. Lounge Service

#### Avg. of Seat Comfort

#### Avg. Check-in Service

#### Avg. On-board Service

#### Avg. Cleanliness

Passenger Enjoy Below 4 Services very  
Least. Airline Should Consider improving  
them to increase the passenger  
experience.

#### Avg. Departure and Arrival Time Convenience

#### Avg. Gate Location

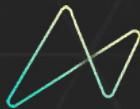
#### Avg. Ease of Online Booking

#### Avg. In-flight WiFi Service

#### Key Findings:

#### Recommendations for improving Passengers satisfaction:

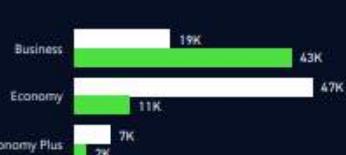
# Tushar Yadav



# AIRLINES CHALLENGE

## MAVEN AIRLINES CUSTOMER SATISFACTION DASHBOARD

### CLASS



### FLIGHT DISTANCE

**155M**

### TOTAL PASSENGERS

**129.88K**

### MALE PASSENGERS

**63.98K**

### FEMALE PASSENGERS

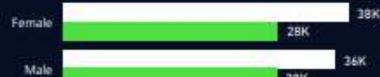
**65.90K**

### PASSENGER SATISFACTION

Satisfaction ● Neutral or Dissatisfied ● Satisfied



### GENDER



### FINDINGS

Business class people found the services as satisfied while the economy and economy plus, people are not satisfied with the services.

Both male and female passengers were not satisfied with the services.

On the whole the satisfaction rate is lesser than the dissatisfaction rate.

### RECOMMENDATION

It is recommended to improve the services in Gate location, people were dissatisfied with the services at gate location.

It is recommended to improve the online booking, the passengers were dissatisfied with the online booking system. It should be more feasible.

It is recommended to improve the In-flight wifi service, passengers found the In-flight wifi service was not as expected.

### TOP 3 SERVICES

In-Flight Service



Baggage Handling

3.64/5

### BOTTOM 3 SERVICES

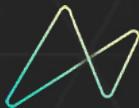
Gate Location

Ease of Online Booking

Seat Comfort

In-Flight Wifi Service

**Deep Nikil Raj**



# AIRLINES CHALLENGE



Data-driven strategy for increasing Maven Airlines' satisfaction rate



## OVERVIEW

Maven Airlines is a US-based airline headquartered in Boston. The latest passenger survey results indicated a satisfaction rate below 50% for the first time. This analysis aims to reverse this situation by exploring the data obtained and plotting strategies to increase the satisfaction rate.



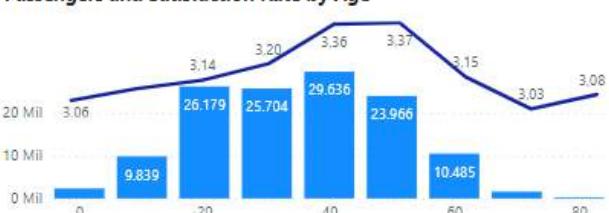
## ANALYSIS

### Ratings by Service

2.73	In-flight Wifi
2.76	Ease of Online Booking
2.98	Gate Location
3.06	Departure/Arrival Time
3.20	Food and Drink
3.25	Online Boarding
3.29	Cleanliness
3.31	Check-in Service
3.35	Leg Room Service
3.36	In-flight Entertainment
3.38	On boarding Service
3.44	Seat Comfort
3.63	Baggage Handling
3.64	In-flight Service

Flight Distance (Avg in miles)	Departure (Avg in minutes)	Arrival (Avg in minutes)
1,19 Mil	14.71	15.09
Returning	Customer Type	First-time
106.100		23.780

### Passengers and Satisfaction Rate by Age



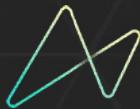
## STRATEGY

Type of Travel  
 Business  
 Personal

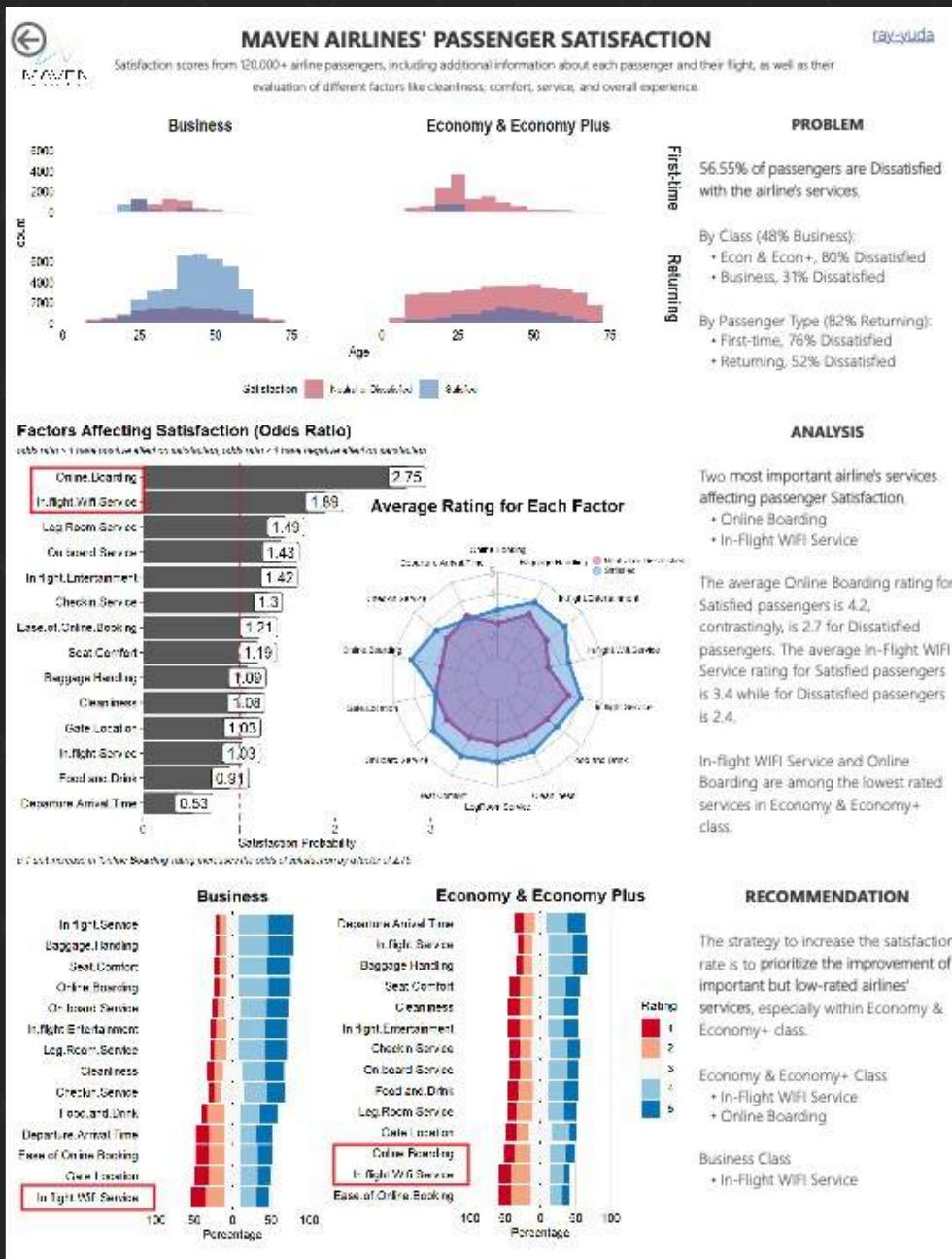
Analyzing the Maven Airlines database noticed that the satisfaction rate is very low for personal travel and Economic/Plus class. Thus, it is important to evaluate how each service was rated in order to get the insights to drive the improvement strategy.

- Special attention needs to be paid to the **Wifi** service since it has the lowest satisfaction rate. Improving this service will reflect in the **increase of the younger public's satisfaction and returning**.
- Non-business passengers usually prioritize comfort, so it is important to improve services such as **cleanliness, seat comfort, food and drinks** and **gate location**.
- A critical factor would be to improve the **online booking**. Make the user interaction more intuitive and easier to use. Enable discounts on ticket purchases in case of repeat use.
- Restructure procedures** in order to improve the 5 worst ranked services. **User experience** is the key to success.

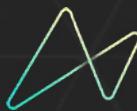
# Rafael Faramiglio Faiani



# AIRLINES CHALLENGE



# Made Ray Yuda Suyatna



# AIRLINES CHALLENGE



Demystifying **Dissatisfaction** with Maven Airlines



**43%**

Satisfaction Rate

**130K**

Total Passangers

**30**

Avg Delay in Mins

**56%**

Arrived on Time

**56%**

Departed on Time

Type of Travel

Business

Personal

Class

Business

Economy

Economy Plus

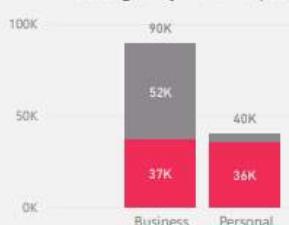
Haul

Long Haul

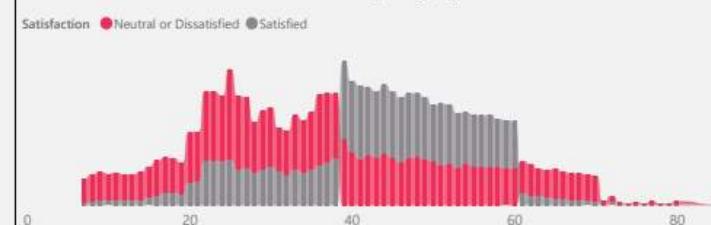
Medium Haul

Short Haul

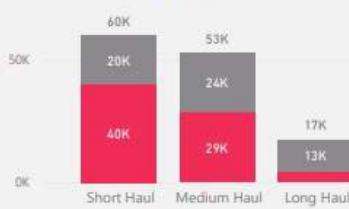
Passengers By Travel Purpose



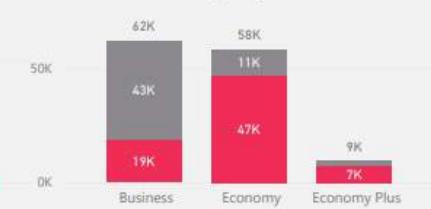
Passengers by Age



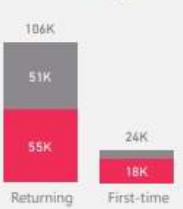
Travel Distance



Passangers by Class



Customer Type



Attribute

Business

Economy

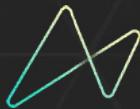
Economy Plus

- In-flight Wifi Service
- Ease of Online Booking
- Gate Location
- Food and Drink
- Delay Convenience
- Cleanliness
- Check-in Service
- Online Boarding
- In-flight Entertainment
- Leg Room Service
- On-board Service
- Seat Comfort
- Baggage Handling
- In-flight Service



- People who travel in **Economy Class** for **Personal reasons** are mostly dissatisfied.
- 67% of Passengers who take a **Short-Haul** ( 0-750 miles ) are not satisfied with the services.
- Focus on **20 - 40 aged passengers** as well as **40 - 60 aged** as most of the passengers are in these two groups. Also, facilities should be increased for children, teenagers, and older persons.
- In the Service Rating heatmap **Deeper Red** needed more attention.
- **In-flight Wi-fi service, Online Booking System, Gate Location, Food and Drink, and Delay Convenience** are the top 5 bad Rated Services.

## Ikramul Islam

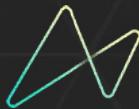


# AIRLINES CHALLENGE

## Maven Airline Project : Passenger Satisfaction Survey



LIM AN NI

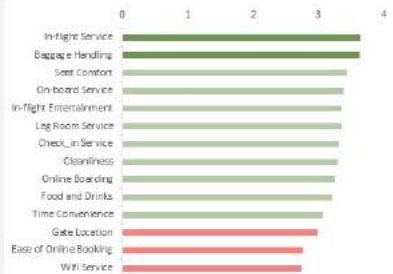


# AIRLINES CHALLENGE

## AIRLINE PASSENGERS SATISFACTION DASHBOARD

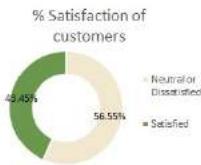


**TOTAL PASSENGERS**  
**129,880**



Average rating for each service rendered to our passengers. The last 3 services on the table had the lowest ratings.

**AVERAGE FLIGHT DISTANCE**  
**1190 Miles**



Generally, our service ratings are low and barely above average. Over 50% of our passengers were not satisfied.

**OVERALL RATING**  
**3.2**

**MAX. DEPARTURE DELAY TIME**  
**1592 Minutes**

**MAX. ARRIVAL DELAY TIME**  
**1584 Minutes**

### RECOMMENDATIONS

**1.** The management and staff should focus on customer satisfaction in all services we render. More attention should be paid to:

>>> **GATE LOCATION** – An explicit and straight forward guide to reaching the gate can be curated. A staff or security should be on duty to help passengers finding it difficult to locate the gate.

>>> **ONLINE BOOKING** – The tech team should implement a more user friendly website to make booking less complicated for passengers; this should include a guide describing the steps for flight booking. They should also improve website load time to speed up booking process.

>>> **WI-FI SERVICE** – We can upgrade aircraft fleets for Wi-Fi connectivity. There is a new technology that uses Ka-band with a satellite antenna that is capable of providing up to 100MHz of bandwidth.

**2.** More attention should be put into providing satisfactory services for passengers in the Economy class.

**3.** The maximum flight departure/arrival time delay was from a passenger travelling for business purpose. Travel delay contributes to passenger dissatisfaction.

**Happy passengers make profitable**

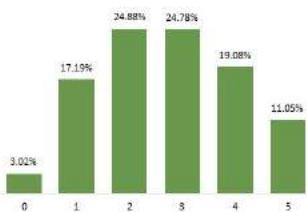
### % Satisfaction for Gate Location



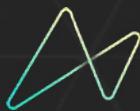
### % Satisfaction for Online Booking



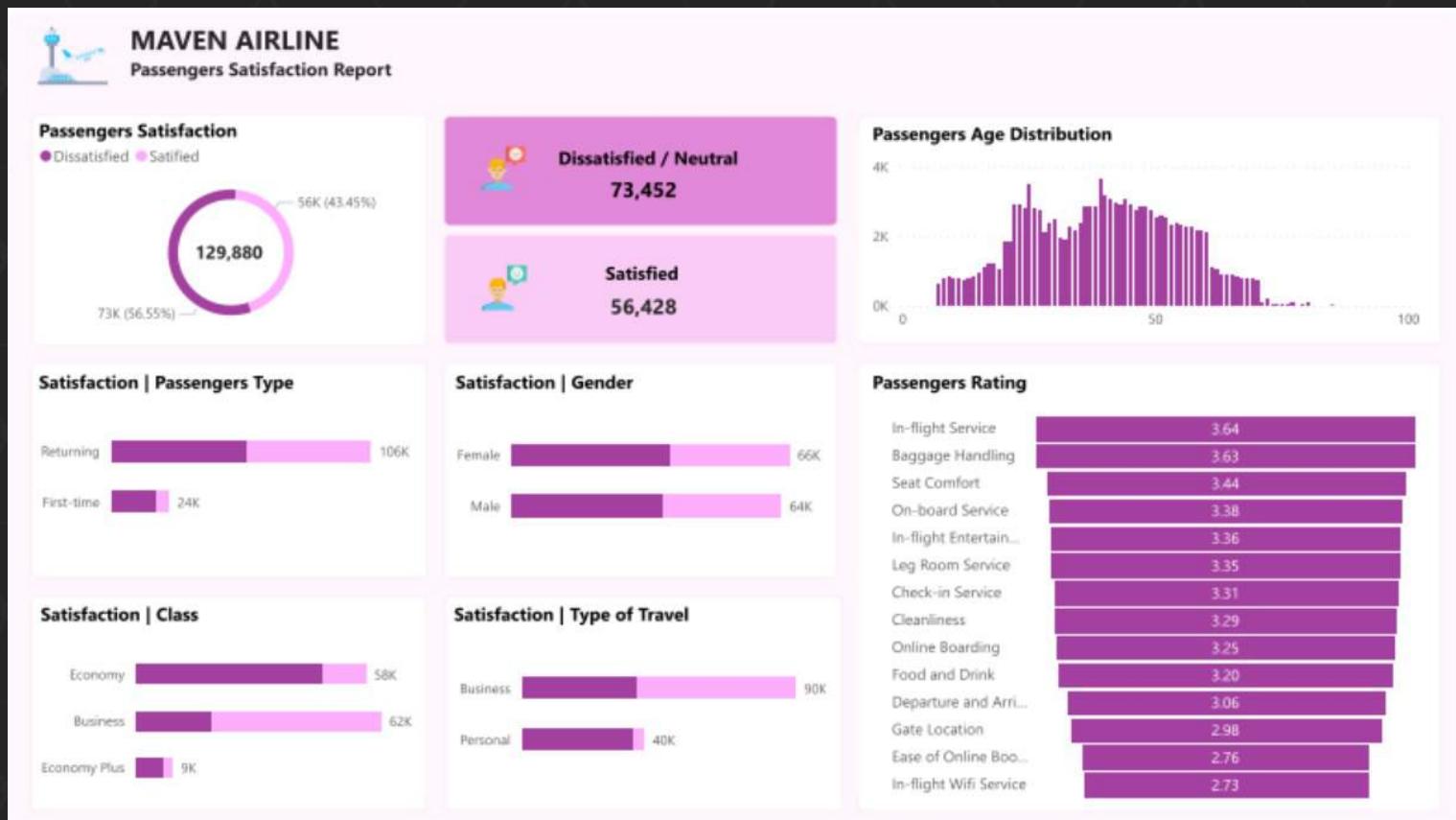
### % Satisfaction for WI-FI Service



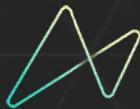
# Blessing Ewuola



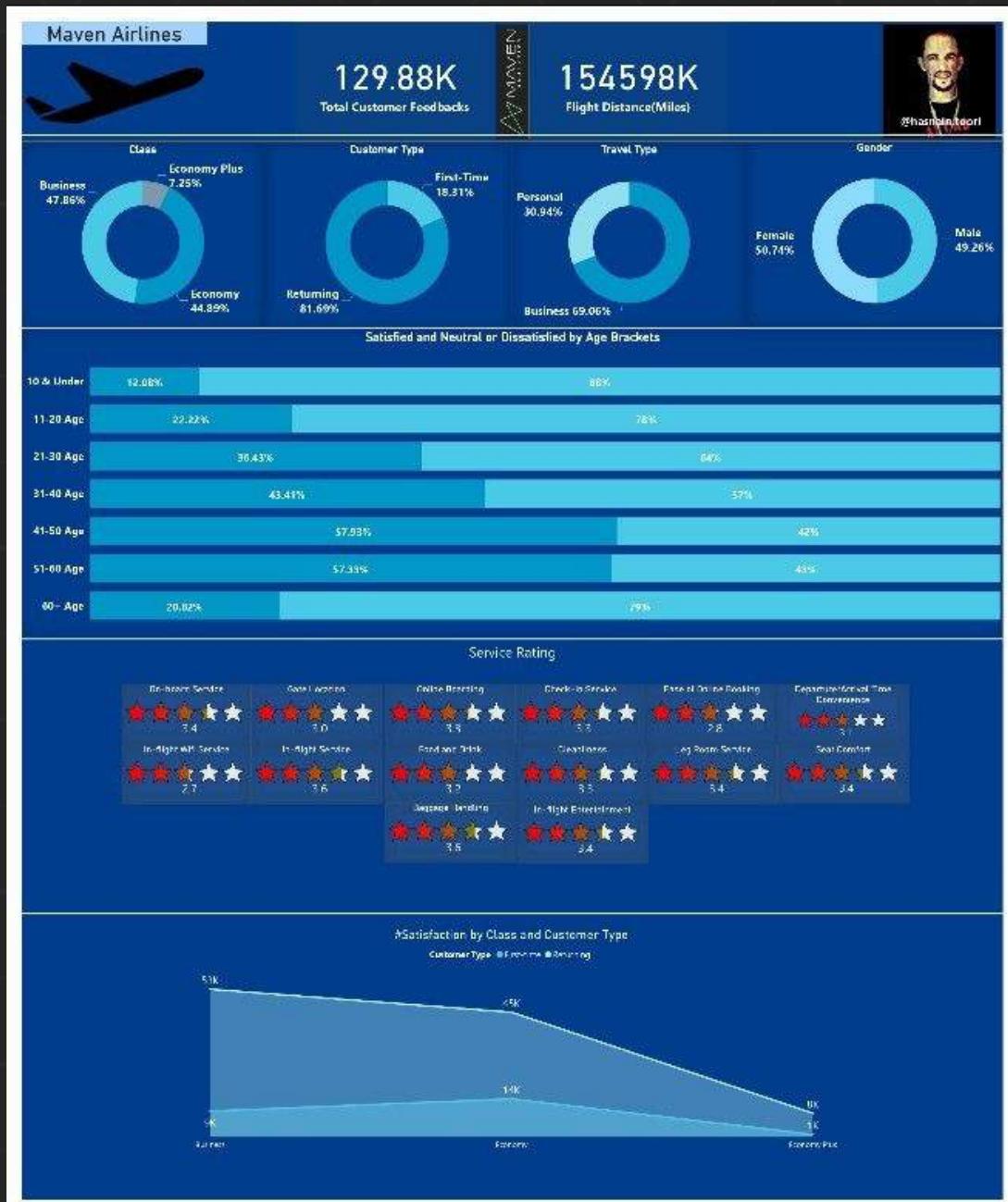
# AIRLINES CHALLENGE



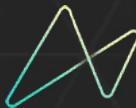
# Eleshin Muhdawwal Aremu



# AIRLINES CHALLENGE



Muhammad Hasnain



# AIRLINES CHALLENGE



## MAVEN AIRLINES

### Passenger Satisfaction

**Total Customers Feedback**  
**129880**

**Overall Customers Satisfied**  
**43.45%**

**Overall Customers Neutral/Unsatisfied**  
**56.55%**

**Overall Satisfaction by Customer Type**

Customer Type	Percentage
First-Time	23.97%
Returning	47.81%

Universe: First-Time customers (N=23780) and Returning customers (N=106100)

**Overall Satisfaction by Type of Travel**

Type of Travel	Percentage
Business	58.37%
Personal	10.13%

Universe: Business traveler customers (N=89083) and Personal traveler customers (N=40187)

**Overall Satisfaction by Class**

Class	Percentage
Business	69.44%
Economy	18.77%
Economy Plus	24.64%

Universe: Business class customers (N=62160), Economy class customers (N=58309) and Economy Plus customers (9411)

**Satisfaction (1-5 scale)**

Item	Unsat.	Neutral	Sat.	Avg.
In-flight Service	17.84%	19.49%	82.67%	3.64
Baggage Handling	18.01%	19.90%	62.08%	3.63
Seat Comfort	25.90%	17.96%	56.14%	3.44
On-board Service	25.52%	21.88%	52.61%	3.38
Leg Room Service	28.95%	19.38%	51.66%	3.37
In-flight Entertainment	28.99%	18.39%	52.62%	3.38
Online Boarding	27.76%	21.39%	50.86%	3.33
Check-in Service	24.80%	27.30%	47.90%	3.31
Cleanliness	28.37%	23.59%	48.04%	3.29
Departure & Arrival Time Convenience	33.23%	16.16%	48.80%	3.22
Food and Drink	33.40%	21.42%	45.10%	3.21
Gate Location	35.84%	27.50%	36.66%	2.98
Ease of Online Booking	41.82%	24.47%	33.71%	2.88
In-flight WiFi Service	43.38%	25.55%	31.07%	2.81

0%      50%      100%  
 Unsat. (1-2)      Neutral (3)      Sat. (4-5)

Universe: Total customers who voted 1-5 for each satisfaction items.  
Votes = 0 (not applicable) were excluded from each analysis for each satisfaction item.

**Overall Satisfaction by Generations**

Generation	Score	Description
Gen Z & Alpha	3	in 10 are satisfied
Gen Y	4	in 10 are satisfied
Gen X	6	in 10 are satisfied
Baby Boomers & previous	3	in 10 are satisfied

Universe: Gen Z & Alpha - 25 years old or younger (N=28173), Gen Y - 26-41 years old (N=42188), Gen X - 42-57 years old (N=42884) and Baby Boomers & previous generations - 58 years old or older (N=16635)

**What can we improve for First-Time, Personal Travel, Economy Class and Economy Class Plus customers?**

Customer Type	Average Satisfaction (1-5 scale)
First-Time customers	3.70
Personal Travel customers	3.60
Economy Class customers	3.47
Economy Class Plus customers	3.38

Item	Score
In-flight Service	3.70
Baggage Handling	3.69
Departure & Arrival Time Convenience	3.74
In-flight Service	3.60
Gate Location	2.99
Departure & Arrival Time Convenience	2.89
Online Boarding	2.84
Ease of Online Booking	2.84
In-flight WiFi Service	2.82
In-flight Entertainment	3.05
Online Boarding	2.92
Gate Location	2.92
Ease of Online Booking	2.62
In-flight WiFi Service	2.87
Food and Drink	3.09
Gate Location	2.97
Online Boarding	2.82
In-flight WiFi Service	2.73
Ease of Online Booking	2.72
Check-in Service	3.01
Online Boarding	3.00
Gate Location	2.97
In-flight WiFi Service	2.83
Ease of Online Booking	2.80

Universe: First-Time customers, Personal Travel customers, Economy Class customers and Economy Class Plus customers who voted 1-5 for each satisfaction items. Votes = 0 (not applicable) were excluded from each analysis for each satisfaction item.

**Key Drivers**

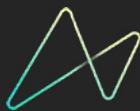
Overall satisfaction dropped below 50% (43.45%). Overall satisfaction was found to be much lower in customers traveling for the First-Time on Maven Airlines (23.97%); in customers traveling in the Personal type (10.13%) and in the lower classes, Economic (18.77%) and Economic Plus (26.64%).

The following are the key drivers that must be improved to increase overall customer satisfaction:

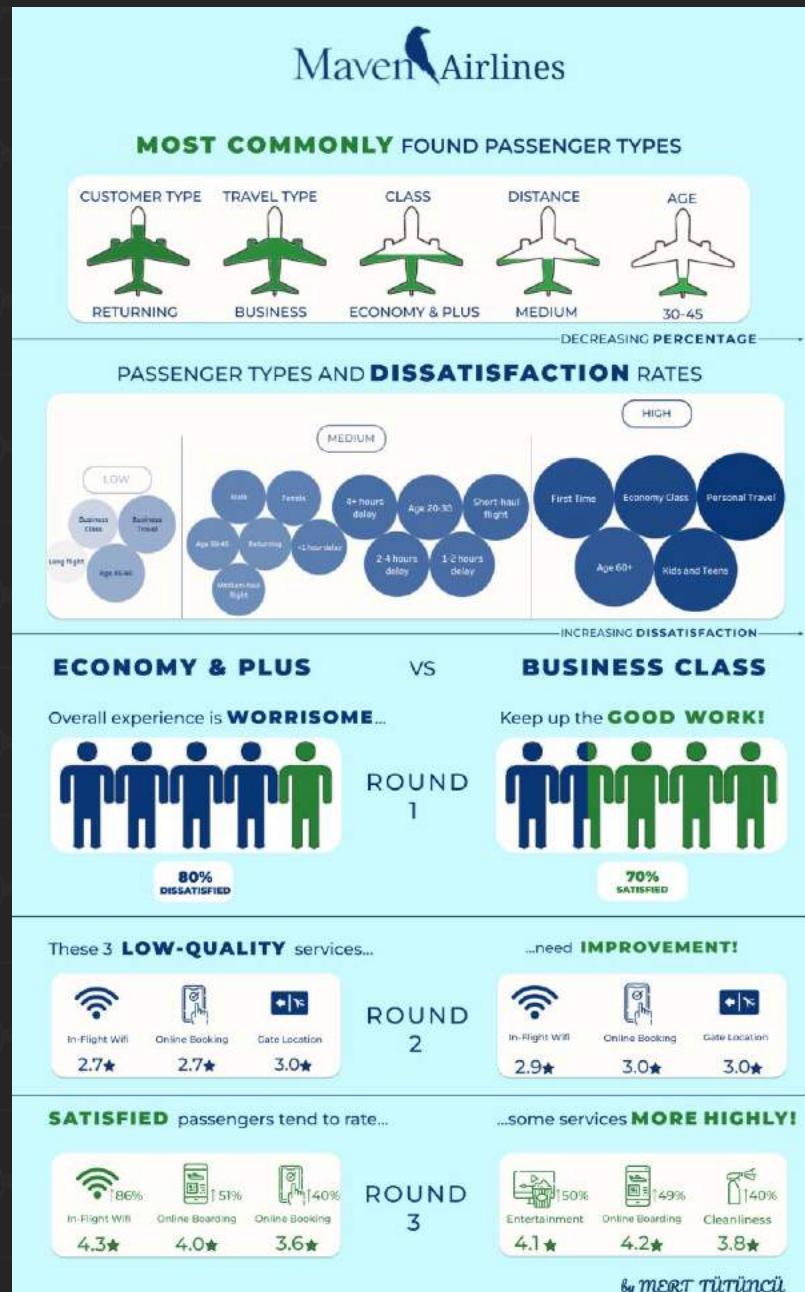
- A major source of dissatisfaction is the **In-Flight WiFi Service**. It is important to upgrade this service in order to improve its quality.
- Ease of Online Booking**: providing a user-friendly interface on the website, conducting A/B tests, delivering an intuitive and simple booking process, and optimizing the website's functionality.
- Gate Location**: offer customers an explanatory map of the gate's location and, at the airport, have the necessary and easy-to-understand signs for each gate.

Aside from these three upgrades, it's important to improve **Online Boarding** services, **Departure and Arrival Time Convenience**, particularly for first-time Maven customers; and **In-Flight Entertainment** for customers traveling by Personal type. For the lower-class customers, **Food and Drink**, as well as **Check-In Service**, must be improved.

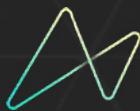
# Sandy Figueiredo



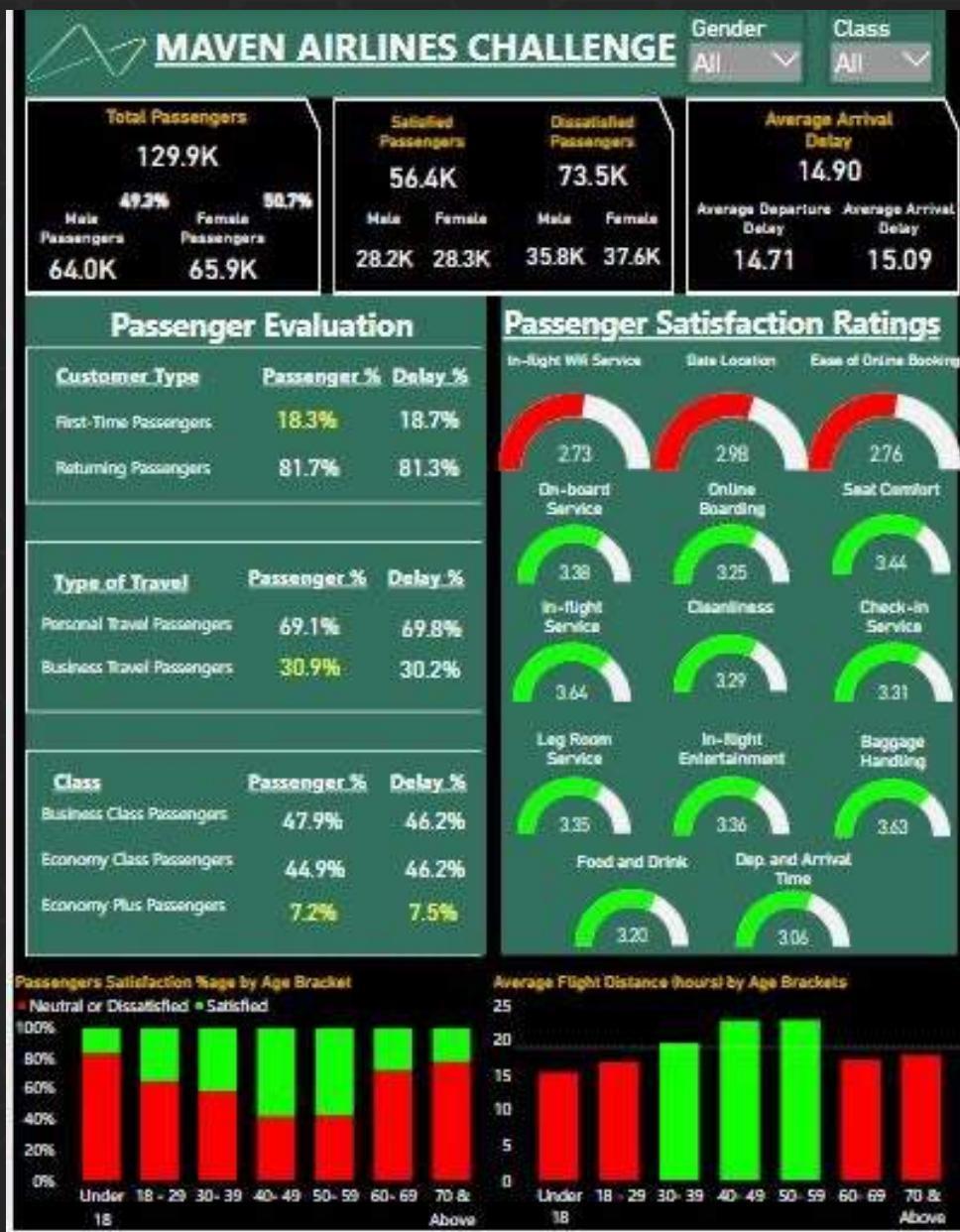
# AIRLINES CHALLENGE



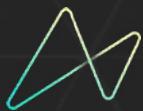
Mert Tütüncü



# AIRLINES CHALLENGE



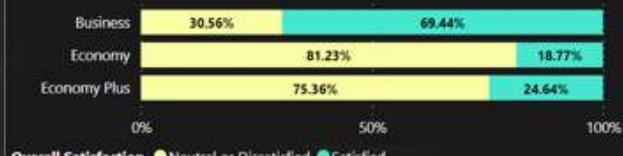
MOHAMMAD SAAD NAYYAR



# AIRLINES CHALLENGE

## Maven Airlines Passengers satisfaction rate

Overall Satisfaction ● Neutral or Dissatisfied ● Satisfied



Overall Satisfaction ● Neutral or Dissatisfied ● Satisfied



Overall Satisfaction ● Neutral or Dissatisfied ● Satisfied



Overall Satisfaction ● Neutral or Dissatisfied ● Satisfied



Age 7 85+

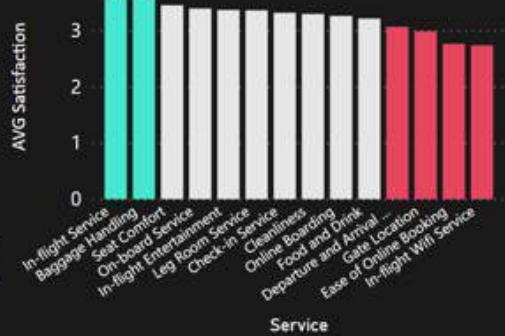
AVG Arrival Delay

15.09

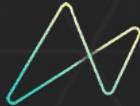
AVG Departure Delay

3.24

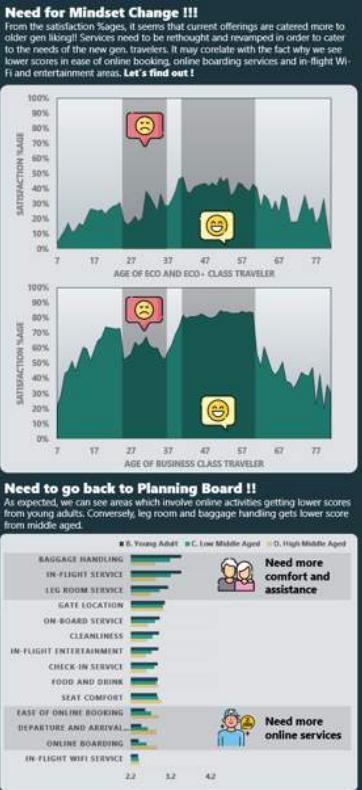
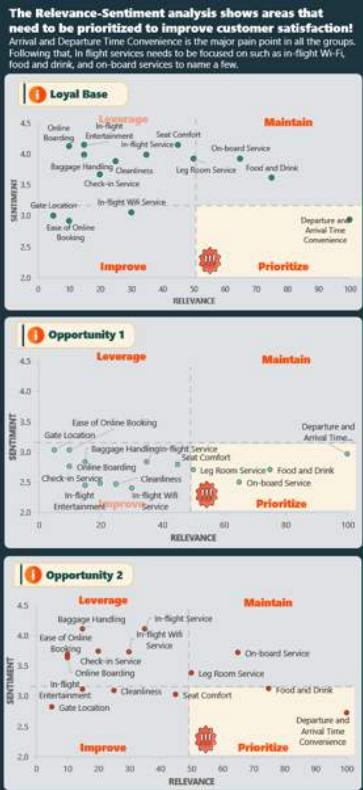
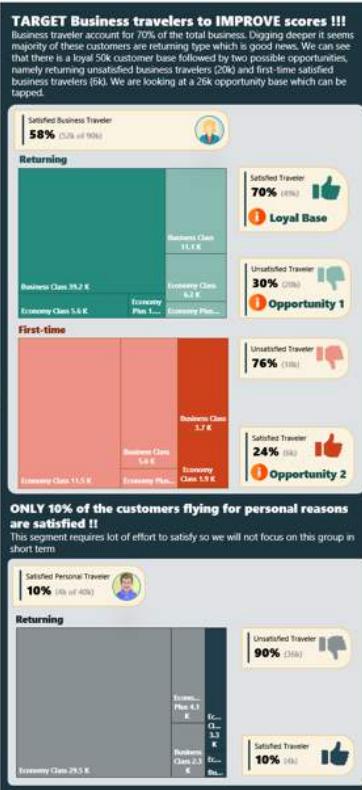
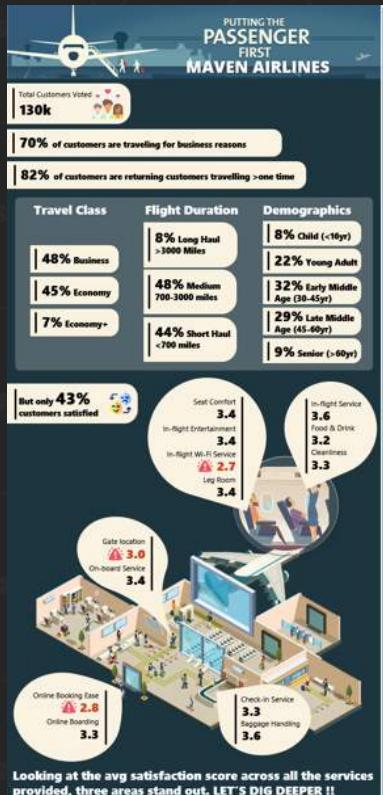
14.71



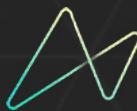
Thoraya Mahfouz Ahmed



# AIRLINES CHALLENGE



# Neil (Shantanil) Bagchi



# AIRLINES CHALLENGE

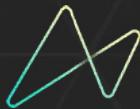


## Maven Airlines - Customer Satisfaction Report

### Customer Segmentation



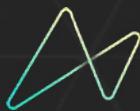
# Ajay Manshani



# AIRLINES CHALLENGE



Deanne (Li Jun) Poh



# AIRLINES CHALLENGE

## MAVEN AIRLINES - BUSINESS REPORT

1.Qty. Passengers  
129.880

2.Travelled Distance  
2.164 Mi

3.Travel Type Analysis

Returning	106.100
First-time	23.780

4.Trip Type by Class

Business	62.160
Economy	58.309
Economy Plus	9.411

5.Distribution by Age

< 18	9.847
18 - 25	18.326
26 - 33	18.976
34 - 41	23.212
42 - 49	23.338
50 - 57	19.546
58 - 65	11.590
> 65	5.045

6.Analysis by Gender

65.899 (51%)

7.Classification Rate

3.24

0.00

6.48

8.On Line Service

Ease of Online Booking	2.8
Online Boarding	3.3

9.On Boarding

Seat Comfort	3.4
Cleanliness	3.3
Leg Room Service	3.4

9.Before Onboarding

Check-in Service	3.3
Gate Location	3.0
Baggage Handling	3.6
Departure and Arrival Time Convenience	3.1

11.In Flight

On-board Service	3.4
Food and Drink	3.2
In-flight Service	3.6
In-flight Wifi Service	2.7
In-flight Entertainment	3.4

12.First Time Satisfaction  
24%

13.Returning Satisfaction  
48%

14.Trip Type Satisfaction

Business	69%
Economy Plus	25%
Economy	19%

15.Satisfaction by Gender

44%

43%

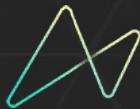
**Recommendations**

Improve according to type service (On Line service, On boarding, before on boarding and In flight)

Analyze causes and improve first-time customer satisfaction (nowadays, just 24% are satisfied)

understand the causes and improve the experience of class customer of economy and economy plus, 19% and 25% satisfaction respectively

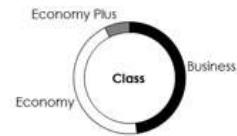
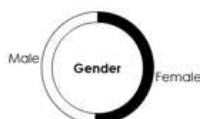
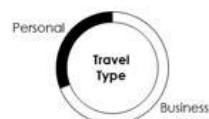
José Amado



# AIRLINES CHALLENGE

## Maven Airlines Customer Satisfaction

### About the Data:



### Business Class

Satisfied	Neutral or Dissatisfied
3.845	50.69%
3.521	7.89%
3.482	7.92%
2.908	7.55%
2.915	5.70% ➤
3.330	6.25%
2.985	4.87%
3.639	0.31%
3.846	10.86%
2.776	7.58%
3.646	2.04%
3.683	11.25%
3.719	11.25%
3.764	18.09%

### Economy Class

Satisfied	Neutral or Dissatisfied
3.450	50.69%
3.125	7.89%
3.105	7.92%
3.193	7.55%
2.603	5.70% ➤
3.086	6.25%
2.970	4.87%
3.096	0.31%
3.467	10.86%
2.674	7.58%
3.084	2.04%
3.120	11.25%
2.814	11.25%
3.142	18.09%

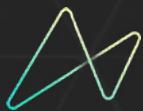
#### Summary:

- Business class members have higher overall satisfaction with the following:
- Online Boarding
  - Seat Comfort
  - On-Board Service
  - Leg Room
  - In-Flight Entertainment

#### Recommendations:

- Improve Economy class experience in the following areas:
- Online Boarding
  - Leg Room
  - In-Flight Entertainment
  - Seat Comfort
  - On-Board Service

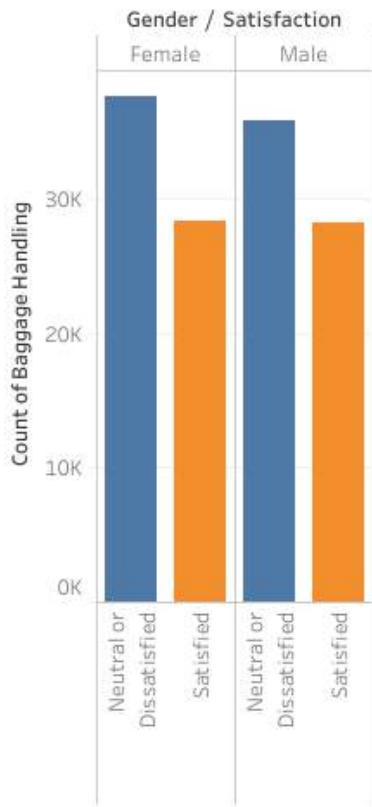
**Seth Carter**



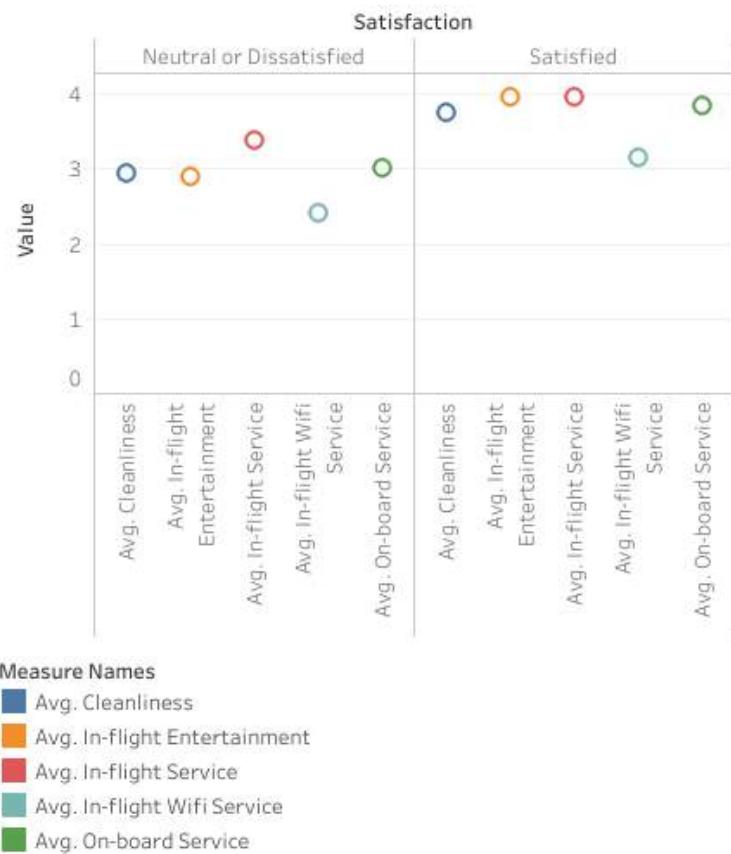
# AIRLINES CHALLENGE

Satisfaction  
■ Neutral or Dissatisfied  
■ Satisfied

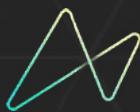
Gender/Bag handling satisfaction



Inflight services satisfaction



EZRA MAGETO BITANGE



# AIRLINES CHALLENGE

## Maven Airlines Passengers Satisfaction Report



Total Passengers

129,880

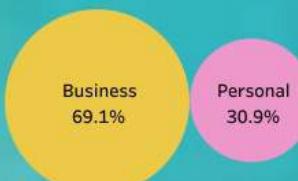
Average Departure delay(Min)

14.7

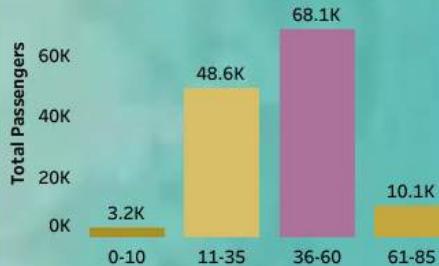
Average Arrival delay(Min)

15.1

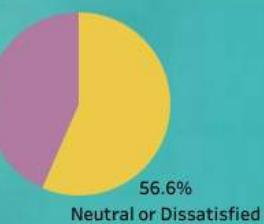
Type of Travel



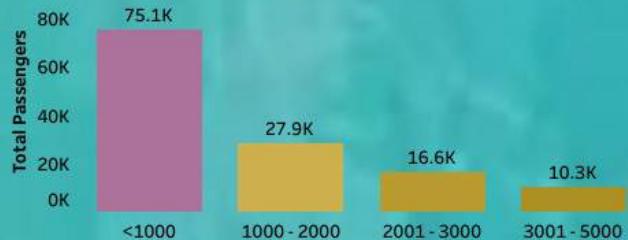
### Passengers by Age



### Overall Satisfaction



### Passengers by Travel Distance



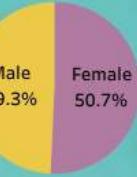
### Average Rating for all Services



### Customer Type



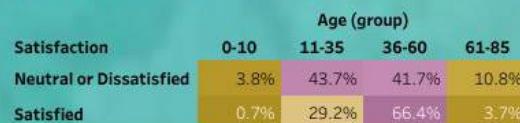
### Gender



### Satisfaction rate by class of Travel



### Satisfaction rate by Age Groups



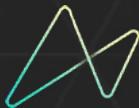
### Key Insights:

- Most of the passengers travel for business purpose
- More travels are below 1000km
- More passengers are of age between 36 - 60 years.
- Ease of online booking and inflight Wifi services are most underrated services
- More dissatisfied customers are from Economy class passengers
- In-flight service and Baggage handling are the only services which have above 3.5 star rating

### Business Recommendations:

- Improve the online booking platform to make it customer friendly
- Boost In-flight Wifi services for customer satisfaction since more travels are of business purpose
- Focus more on Economy class passengers with better service in all areas
- Attract First-time travellers with catching offers
- Ease of Check-in, Cleanliness, Food and Drink services can impact on passengers satisfaction

# Raja Krishnaharish Adigarla



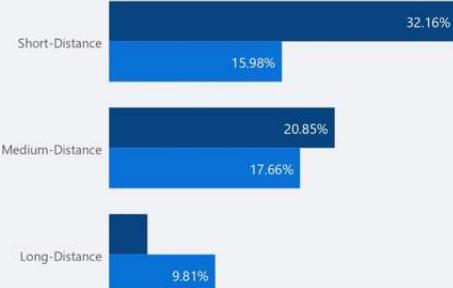
# AIRLINES CHALLENGE



## MAVEN AIRLINES



● Neutral or Dissatisfied ● Satisfied



Average rating of In-flight WiFi Service



Average rating of Ease of Online Booking

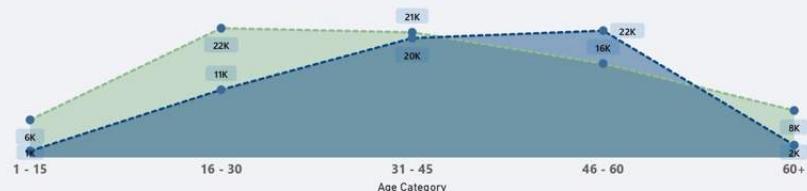


● Business ● Economy ● Economy Plus



Age wise satisfaction

● Neutral or Dissatisfied ● Satisfied



On approx. 86% of People tend to be overall satisfied if they stay happy with the 3 major services: *Online Boarding, Seat Comfort, and In-flight Entertainment*

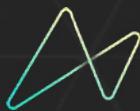
. **Economy Plus** class hardly generates revenue for Maven Airlines.

. The least rated services of Maven Airlines are **In-Flight WIFI Service** and **Ease of Online Booking**

Out of a sample of 129k passengers, 32.16% of passengers are dissatisfied with their **Short Distance** trip.

The passengers usually prefer **Economy** class while travelling **Short Distance** and **Business** class while travelling **Long Distance**.

# Ankit Banerjee



# AIRLINES CHALLENGE

## Airline Passengers Satisfaction

Satisfied: 56,428 | Neutral or Dissatisfied: 73,452 | Total Passengers: 129,880 | % Satisfaction Rating: 56.6% Satisfied, 43.4% Neutral or Dissatisfied

**Average Rating by Satisfaction Survey**

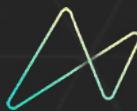
Satisfaction Survey	Avg Rating
In-flight Service	3.64
Baggage Handling	3.63
Seat Comfort	3.44
On-board Service	3.38
Leg Room Service	3.37
In-flight Entertainment	3.36
Online Boarding	3.33
Check-in Service	3.31
Cleanliness	3.29
Departure and Arrival Time Convenience	3.22
Food and Drink	3.21
Gate Location	2.98
Ease of Online Booking	2.88
In-flight Wifi Service	2.81

**Other Factors That Affect Passenger Satisfaction**

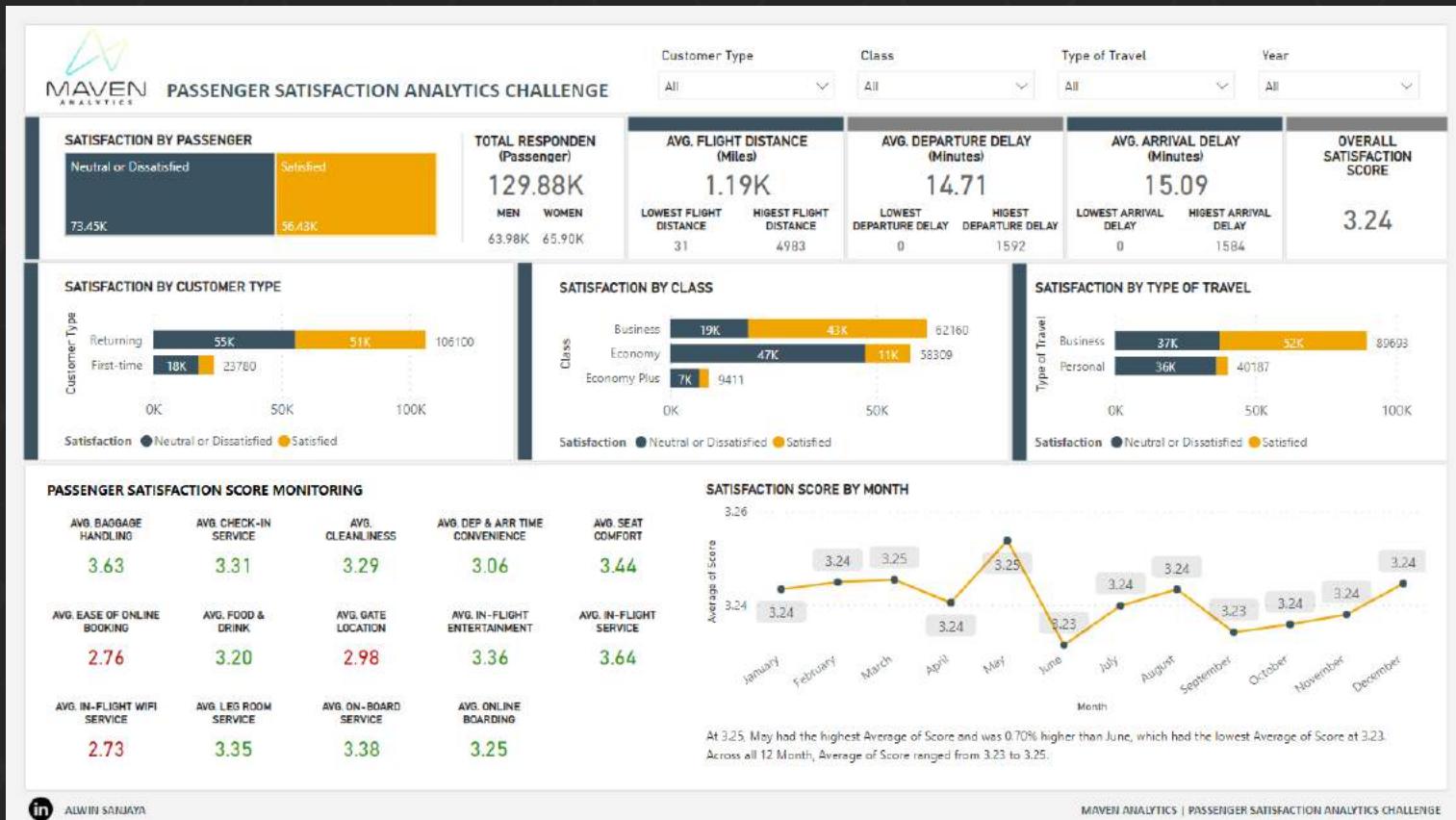
Key influencers: Class is Economy, Type of Travel is Personal, Age is 15 or less. Top segments: Neutral or Dissatisfied.

When... the likelihood of Satisfaction being Neutral or Dissatisfied increases by 2.20x for Class is Economy, 2.15x for Type of Travel is Personal, and 1.55x for Age is 15 or less.

Rico Balibalita

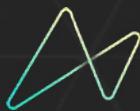


# AIRLINES CHALLENGE



ALWIN SANJAYA

# Alwin Sanjaya



# AIRLINES CHALLENGE

Clipboard Data Queries Insert Calculations Sensitivity

## MAVEN AIRLINE PASSENGER SATISFACTION REPORT

Total Passengers	Male Passengers	Female Passengers	Arrival Delay[Mins]	Departure Delay[Mins]
129880	49.26%	50.74%	15.09	14.71

**Top 3 Worst Service Ratings**

- In flight Wi-Fi Service: ★★★★☆ 2.7
- Ease of Online Booking: ★★★☆☆ 2.8
- Gate Location: ★★★☆☆ 3.0

**Key Insights**

To improve Customer Satisfaction following points need to be improved:

- In flight Wi-Fi service, Online Booking and Gate Location.
- The ratio of Dissatisfied passengers is high who are travelling first time which needs to be improved.
- The ratio of Dissatisfied passengers travelling for personal reason and by economy class is high which needs to be improved.

**Satisfied vs Neutral or Dissatisfied Passengers**

Passenger Type	Count	Percentage
Satisfied Passengers	73K	56.55%
Dissatisfied Passengers	56K	43.45%

**Satisfied Vs Dissatisfied Passengers by Customer Type**

Customer Type	Satisfied Passengers	Dissatisfied Passengers
Returning	~50K	~60K
First-time	~10K	~15K

**Satisfied VS Dissatisfied Passengers by Travel Type**

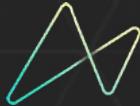
Type of Travel	Satisfied Passengers	Dissatisfied Passengers
Business	~50K	~35K
Personal	~25K	~35K

**Satisfied Vs Dissatisfied Passengers by Class**

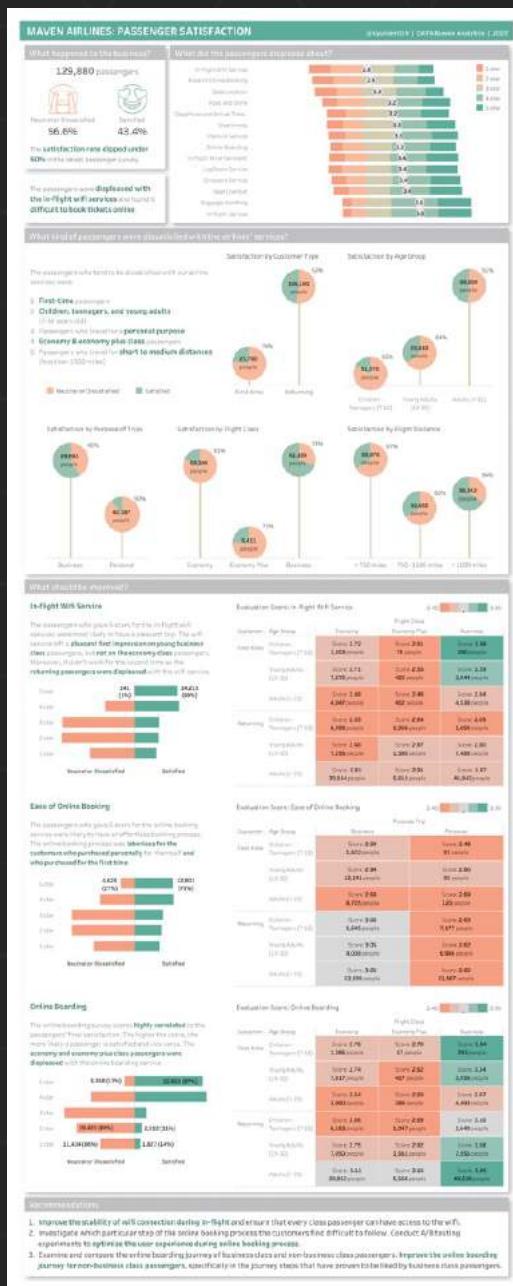
Class	Satisfied Passengers	Dissatisfied Passengers
Business	~40K	~20K
Economy Class	~10K	~50K
Economy Plus	~5K	~10K

Top Line Report +

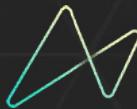
Darpan Sahai



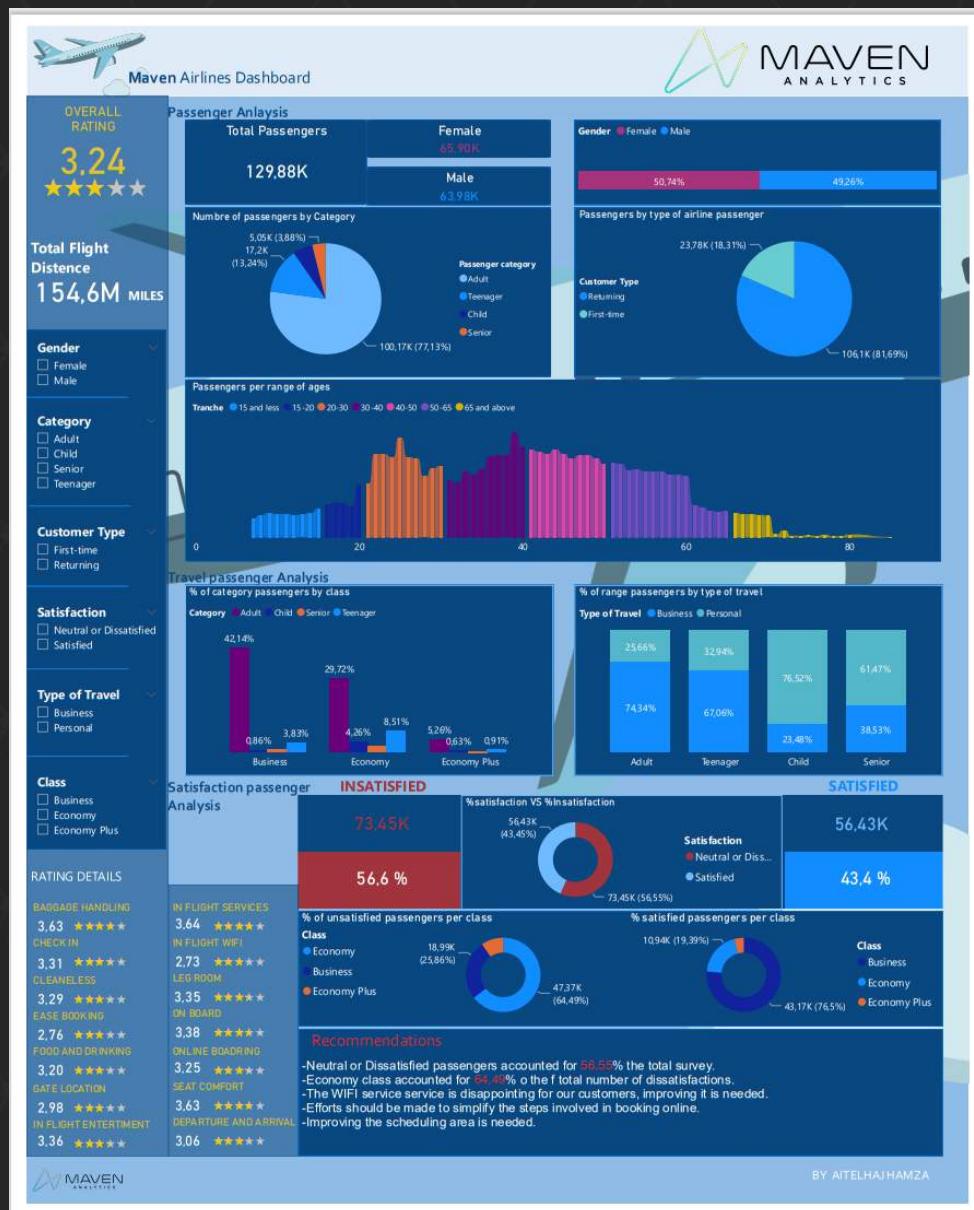
# AIRLINES CHALLENGE



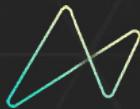
## Yunianti Khotimah



# AIRLINES CHALLENGE



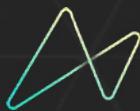
# Hamza Aitelhaj



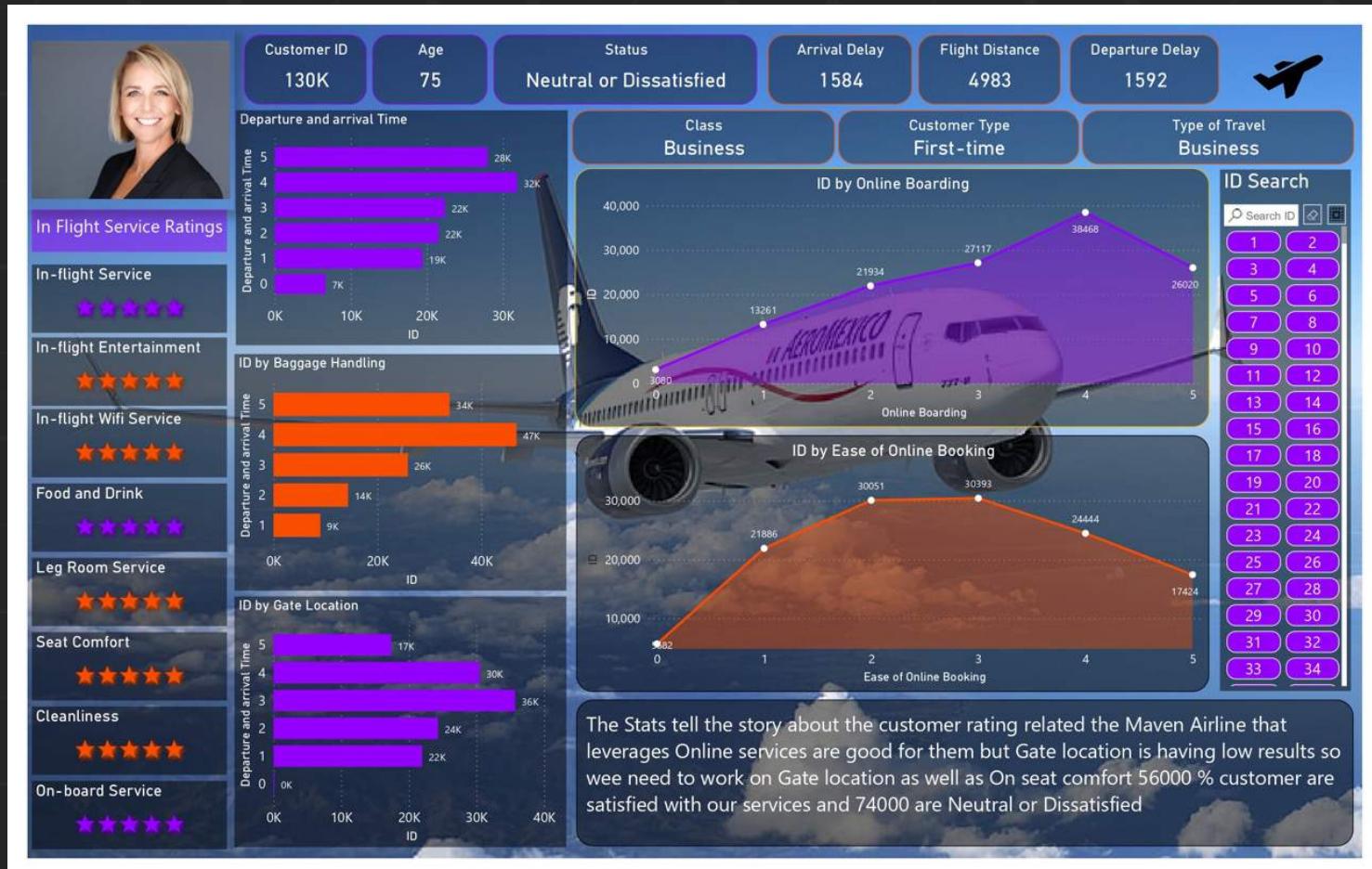
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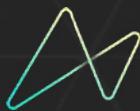


# Septiana Vera Kurniasari

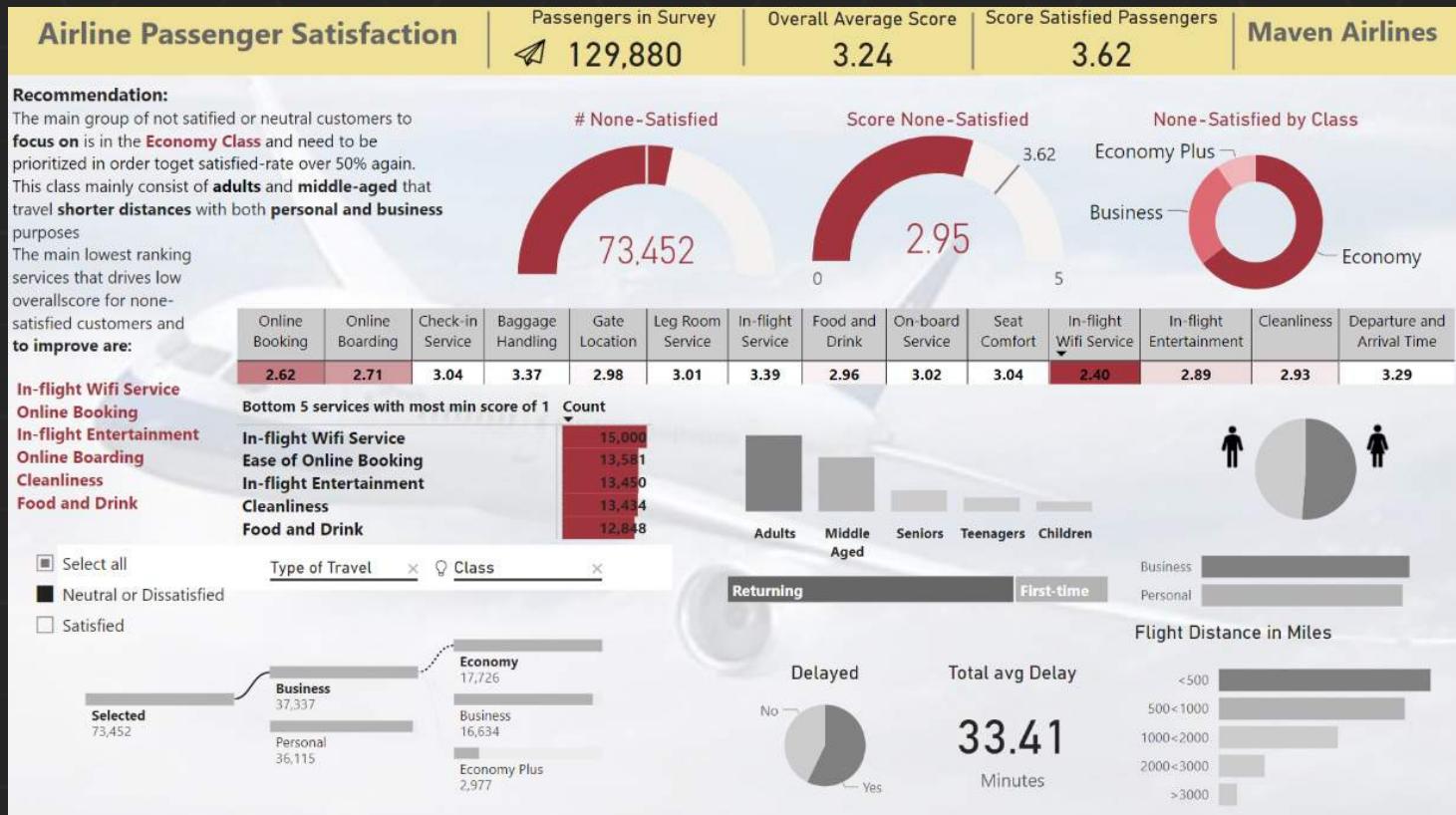


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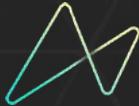




# AIRLINES CHALLENGE



## Frank Ellingsen



# AIRLINES CHALLENGE

## FLY THE FRIENDLY SKIES - MARVIN AIRLINES

Analysis on Marvin Airlines Passenger Satisfaction Scores to recommend a data-driven strategy for increasing Marvin Airlines' satisfaction rate

None of the services had an average score above 4.0, so generally improvements are needed across all services. This analysis will target a gradual solution approach where focus will be on services that could be easily improved among the worst services then gradually to services that might require significant effort.

*Strategies for increasing Marvin Airlines Customer Satisfaction will be in two folds:*

**Short-term Service Improvement Strategy :**  
Initial focus will be channelled to services that won't require a long time to change. The reasoning here is to improve customer experience as soon as possible so channeling efforts to services that might require huge structural changes is not reasonable

**Long-term service improvement strategy:**  
Marvin Airlines can gradually gather the necessary investments to make improvements to services that might require bigger investments and structural changes.

### Customer Reviews



A lot of customers are either neutral or are not the biggest fans of Marvin Airlines Services

### Customer Satisfaction (Class)

		Class		
Satisfaction	Business	Economy	Economy Plus	
Neutral or Dissatisfied	30.56%	81.23%	75.36%	7.092
Satisfied	69.44%	18.77%	24.64%	43.166

Quality of service for Economy Class and Economy Plus Class customers is lower than that of Business Class

### Customer Satisfaction (Age Group)

Satisfaction	Young Adult	Adult	Old	Young
Neutral or Dissatisfied	64.20%	49.74%	52.93%	81.61%
Satisfied	35.70%	50.26%	47.07%	18.39%

Young customers are the most dissatisfied but their won't make that much impact due to their low numbers.

The score of Adults and Old Customers are going have the biggest impacts

### Customer Satisfaction (Type of Travel)

Satisfaction	Business	Type of Travel	Personal
Neutral or Dissatisfied	41.63%	37.33%	89.87%
Satisfied	58.37%	62.67%	10.13%

### TOP 5 worst average customer score for each service per customer profile

Average Customer Scores		Business Class	
In-flight WiFi Service	2.7287	In-flight WiFi Service	2.7759
Ease of Online Booking	2.7569	Departure and Arrival Tim..	2.9079
Gate Location	2.9769	Ease of Online Booking	2.9157
Departure and Arrival Tim..	3.0576	Gate Location	2.9851
Food and Drink	3.2048	Food and Drink	3.3300

*In-flight WiFi Service, Ease of Online Booking and Gate Location are available in each customer profile's top 5 worst scores.*

*Further analysis will be done to see which of them fits into the short or long term strategy.*

*Every Service in the Business Class profile is represented in the Overall Average Customer Score.*  
*Indicates a high probability of Adults and Old age customers in the Business Class since they have the biggest impact on overall customer scores*

Economy Plus		Economy	
Ease of Online Booking	2.6620	Ease of Online Booking	2.6029
In-flight WiFi Service	2.7560	In-flight WiFi Service	2.6739
Online Boarding	2.8856	Online Boarding	2.8147
Gate Location	2.9684	Gate Location	2.9696
Check-in Service	3.0146	Leg Room Service	3.0838

*Check-in Service is missing from the overall average. Economy plus profile scores do not have a big impact on scores as discussed earlier*

Young		Young Adult	
In-flight WiFi Service	2.6017	In-flight WiFi Service	2.7103
Ease of Online Booking	2.6068	Ease of Online Booking	2.7410
Online Boarding	2.6439	Departure and Arrival Tim..	2.8199
Gate Location	2.9732	Online Boarding	2.9005
Seat Comfort	3.0141	Gate Location	2.9673

*Online Boarding and Seat Comfort is missing from the overall average. Young aged customer scores do not have a big impact on scores as discussed earlier*

Adult		Old	
In-flight WiFi Service	2.7701	In-flight WiFi Service	2.7213
Ease of Online Booking	2.7928	Ease of Online Booking	2.7639
Gate Location	2.9884	Gate Location	2.9676
Departure and Arrival Tim..	3.0379	Departure and Arrival Tim..	3.1688
Food and Drink	3.2403	Food and Drink	3.2172

*Every Service in the Adult profile is represented in the Overall Average Customer Score.*  
*It has the biggest impact on overall customer scores*

### Short-Term Strategy

In-flight WiFi Service, Check-in Service, Food & Drink are the easiest to improve among the worst services.

1. Improving In-flight WiFi should be the first priority since all customer profiles rank it very low.

2. Navigation aids should be improved to make it easier for customers to find Gate Location

3. Check-in Service and Food & Drinks should be improved alongside

4. Even though the don't feature in any of the worst 5 services, improvements can be made on Cleanliness, Baggage Handling, In-flight Service and On Board Service as they won't require extreme capital outlay.

*Every Service in the Old profile is represented in the Overall Average Customer Score.*  
*It has a big impact on overall customer scores*

### Long-Term Strategy

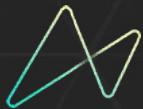
1. After short term improvements, the focus must on improving the Ease of Online Booking since it has the second largest dissatisfaction among customers.

2. Online Boarding should be improved alongside since they all require significant software changes.

3. Next is to make the necessary servicing to airplanes to improve seat comfort and leg room service.

4. Departure and Arrival time convenience will depend on a lot of operational and structural changes of Marvin Airlines. Number of planes, size of airport runways, plane sizes, quality of staff are all factors. Marvin Airlines could gradually improve the factors they have control on to help customers have access to favorable times.

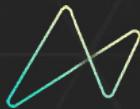
# Raphael Frimpong Marfo



# AIRLINES CHALLENGE



# Shaun Evans



# AIRLINES CHALLENGE

Customer Type

All

### Mavens Airline

Total Passengers	Average Departure Delay	Average Arrival Delay	Females	Males
130K	14.71	15.09	66K	64K

**Satisfaction**

Over 56% of passengers are said to be dissatisfied or neutral. The average delay faced by customers in this group lies between 16 and 17 minutes.

● Neutral or Dissatisfied ● Satisfied

**Type of Travel**

90% of passengers who go on personal travels are neutral or dissatisfied with flight services 25% of which fly economy class

● Business ● Personal

**Age**

Age 20-40 represent 49% of passengers. 30% of this age group find flight services neutral or are dissatisfied with it.

**Class**

75% first timers are between 20-30 and mostly fly economy while 47% of returning passengers are between age 31-40 with business class being the majority.

● Business ● Economy ● Economy Plus

**Suggestions**

- Improve wifi services
- Make online boarding and booking seamless
- Pay more attention to services rendered before flight
- Cleanliness as well as food and drinks served in flight needs to be improved
- Having a good first impression matters

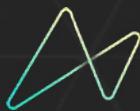
**Key influencers**

What influences Satisfaction to be

When... ...the likelihood of Satisfaction being Neutral or Dissatisfied increases by

- Online Boarding goes down 1.35 → 2.40x
- Type of Travel is Personal → 2.16x
- In-flight Wifi Service is 1 - 3 → 1.99x
- On-board Service goes down 1.29 → 1.63x

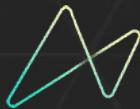
Firdaws EleOjo Yahya



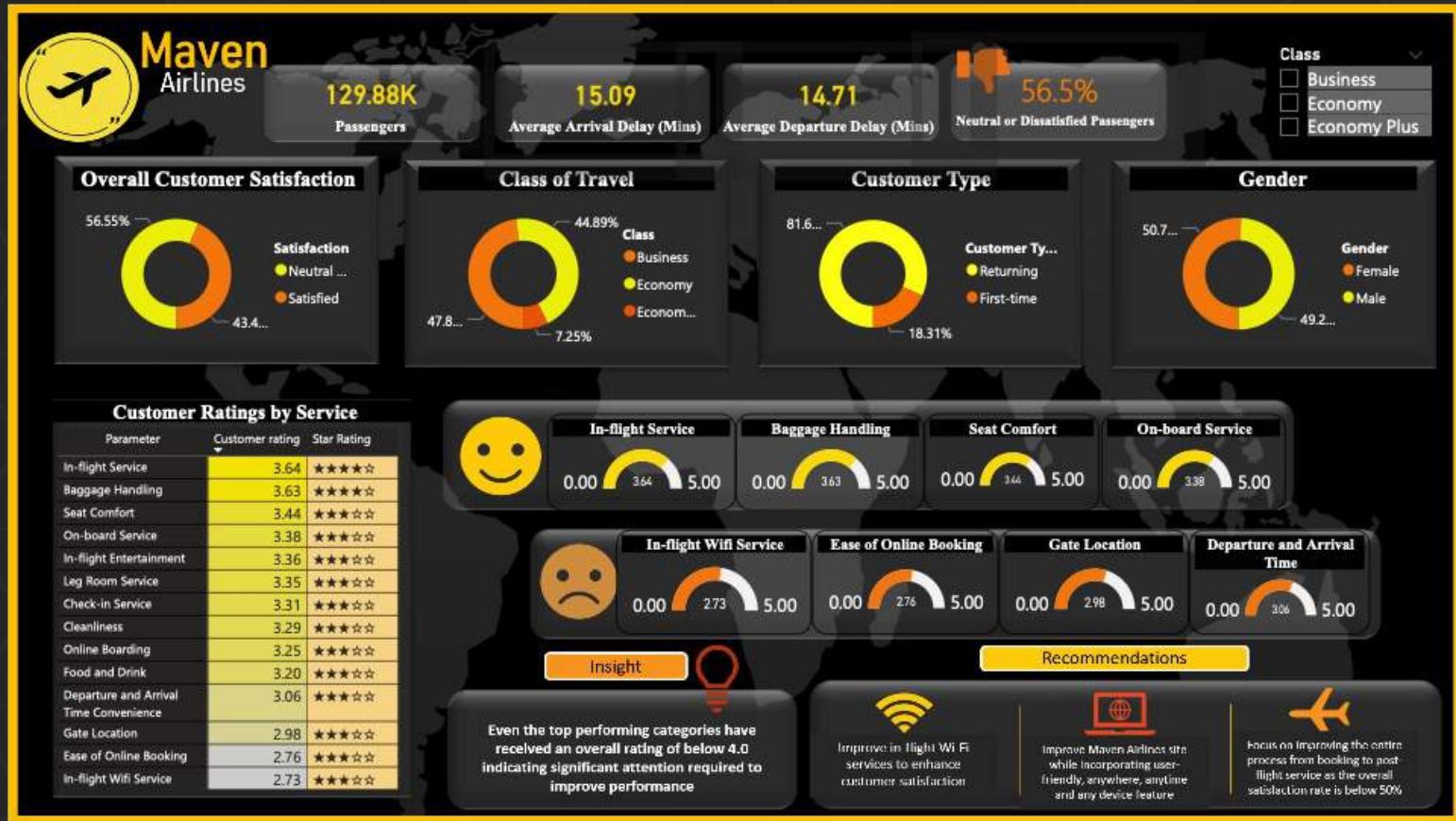
# AIRLINES CHALLENGE



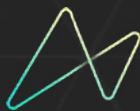
**Gayathri Swaminathan**



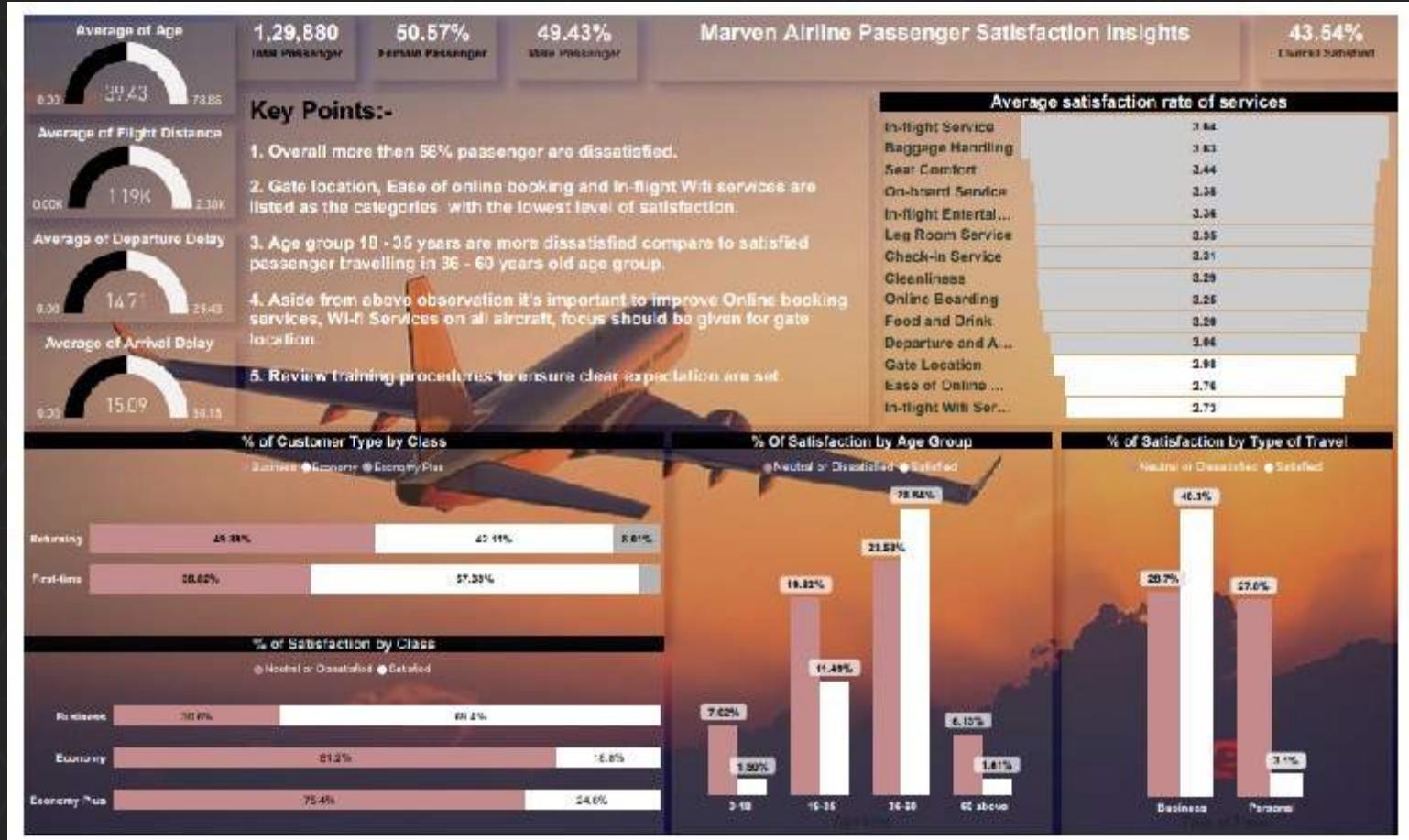
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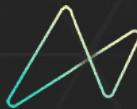


Shameeha Sabreen

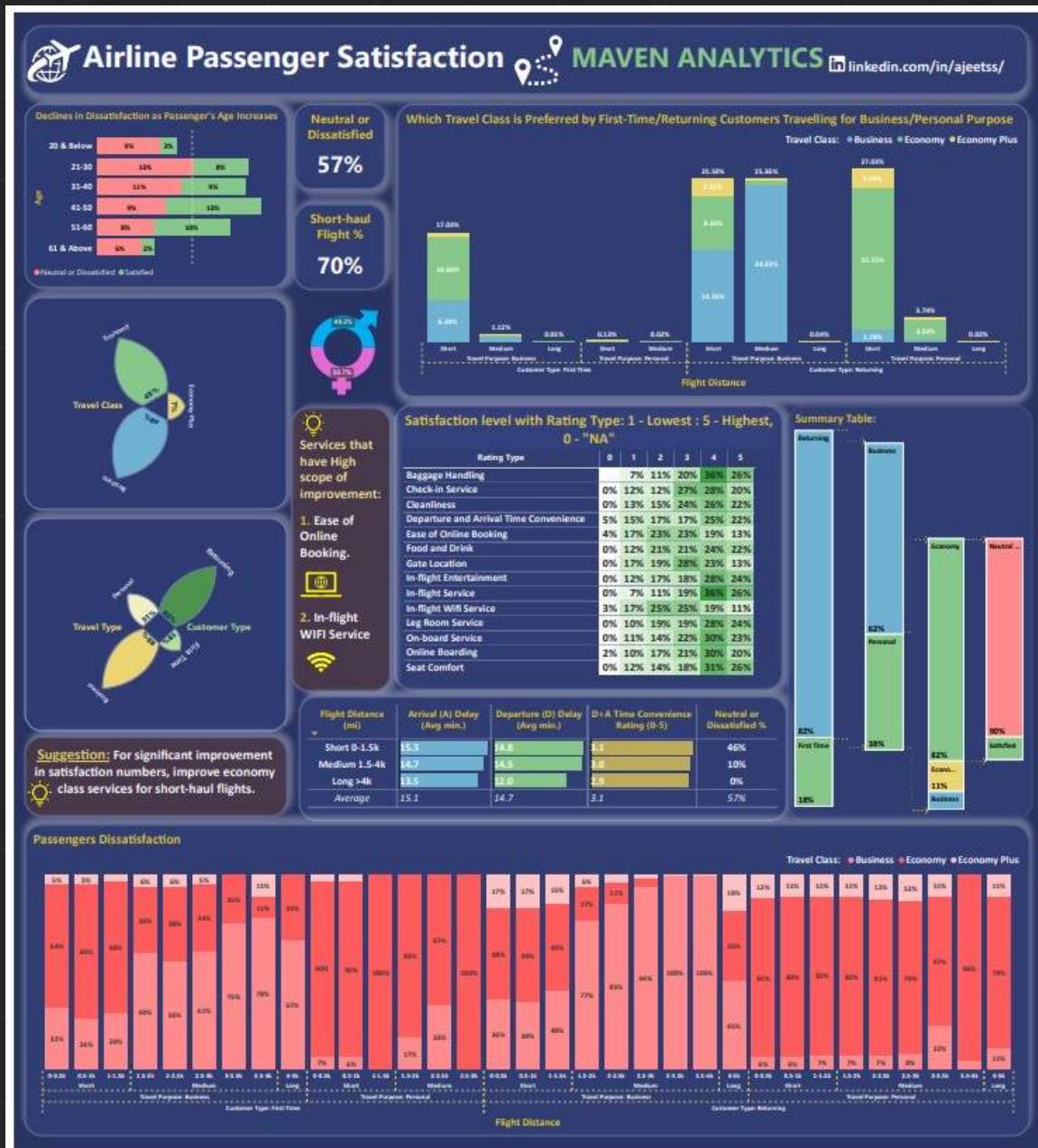


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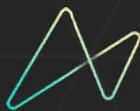




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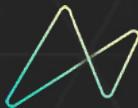
# Ajeet Singh Shekhawat



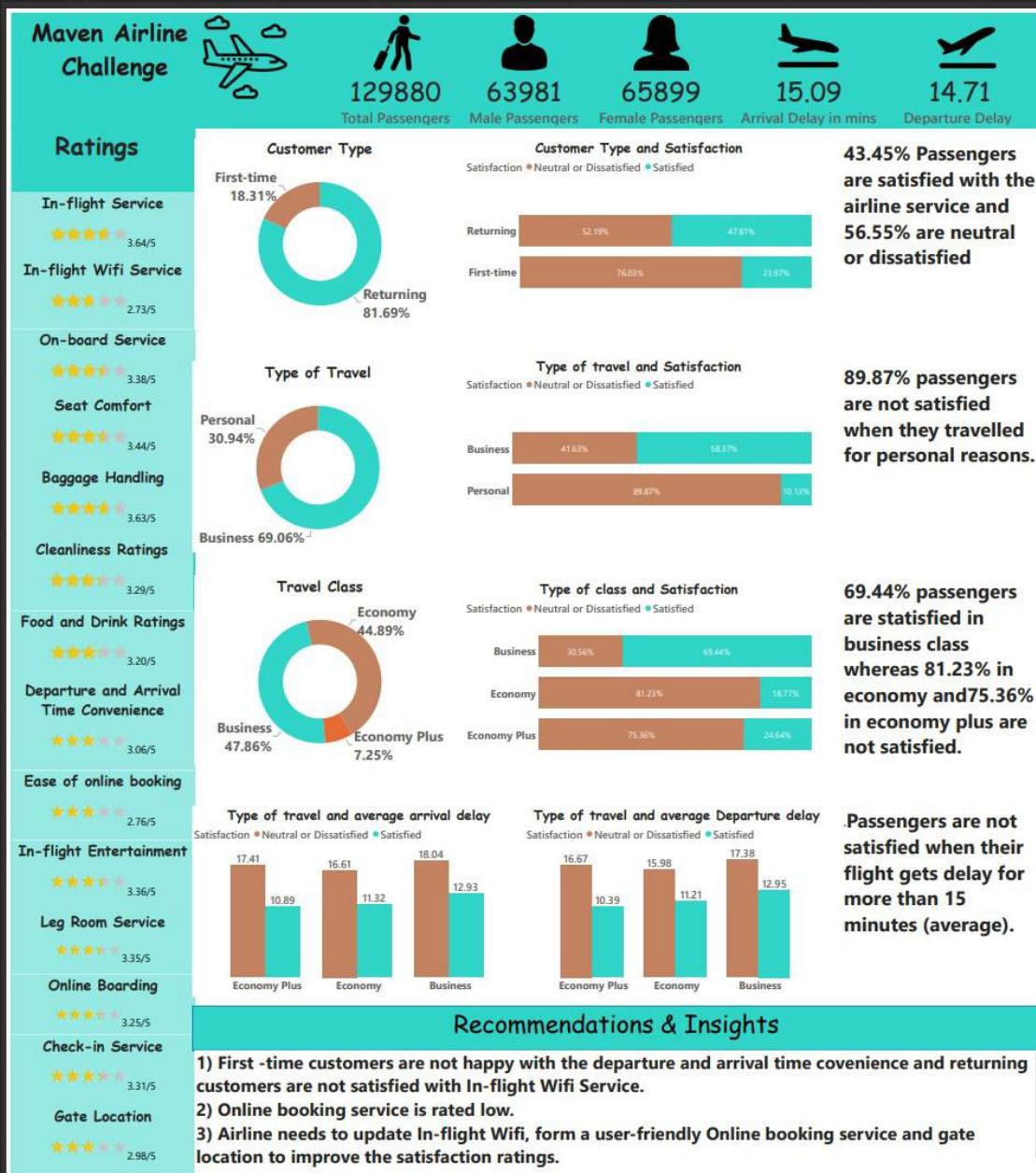
# AIRLINES CHALLENGE

TOTAL PASSENGERS SURVEYED		MAVEN AIRLINES			
PASSENGER SATISFACTION		DISSATISFIED / NEUTRAL			57%
CLASS	BUSINESS	ECONOMY	ECONOMY PLUS		
	AGE GROUP	15%	36%	5%	TOTAL
SATISFIED <b>43%</b>	7 to 26	3%	12%	2%	17%
DISSATISFIED/ NEUTRAL <b>57%</b>	27 to 46	7%	12%	2%	21%
	47 to 66	4%	10%	1%	15%
	67 to 86	1%	2%	1%	4%
% DISSATISFACTION	FIRST TIME PASSENGERS	5%	9%	1%	15%
	RETURNING PASSENGERS	10%	27%	5%	42%
INSIGHTS AND RECOMMENDATIONS					
In-flight Wifi Service	70%	1	Almost all the passengers are dissatisfied or neutral travelling in the Economy class. A deeper investigation needs to be carried out to understand the reason of dissatisfaction. (Other than the in flight wifi, ease of online booking or even online boarding.)		
Ease of Online Booking	64%		For Economy class, the ticket cost could be outweighing some of the disliked services since more than 75% of the passengers are returning back even with the dissatisfaction.		
Online Boarding	60%		More than 50% of the Business Class passengers are young to mid age and they seem to be not satisfied. This too needs more investigation.		
In-Flight Entertainment	54%				
Cleanliness	52%				
On-board Service	51%				
Leg Room Service	51%				
Food and Drink	51%				
Gate Location	49%				
Seat Comfort	48%				
Check-in Service	46%				
In-flight Service	35%				
Baggage Handling	35%				

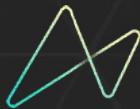
TEJ BHASIN



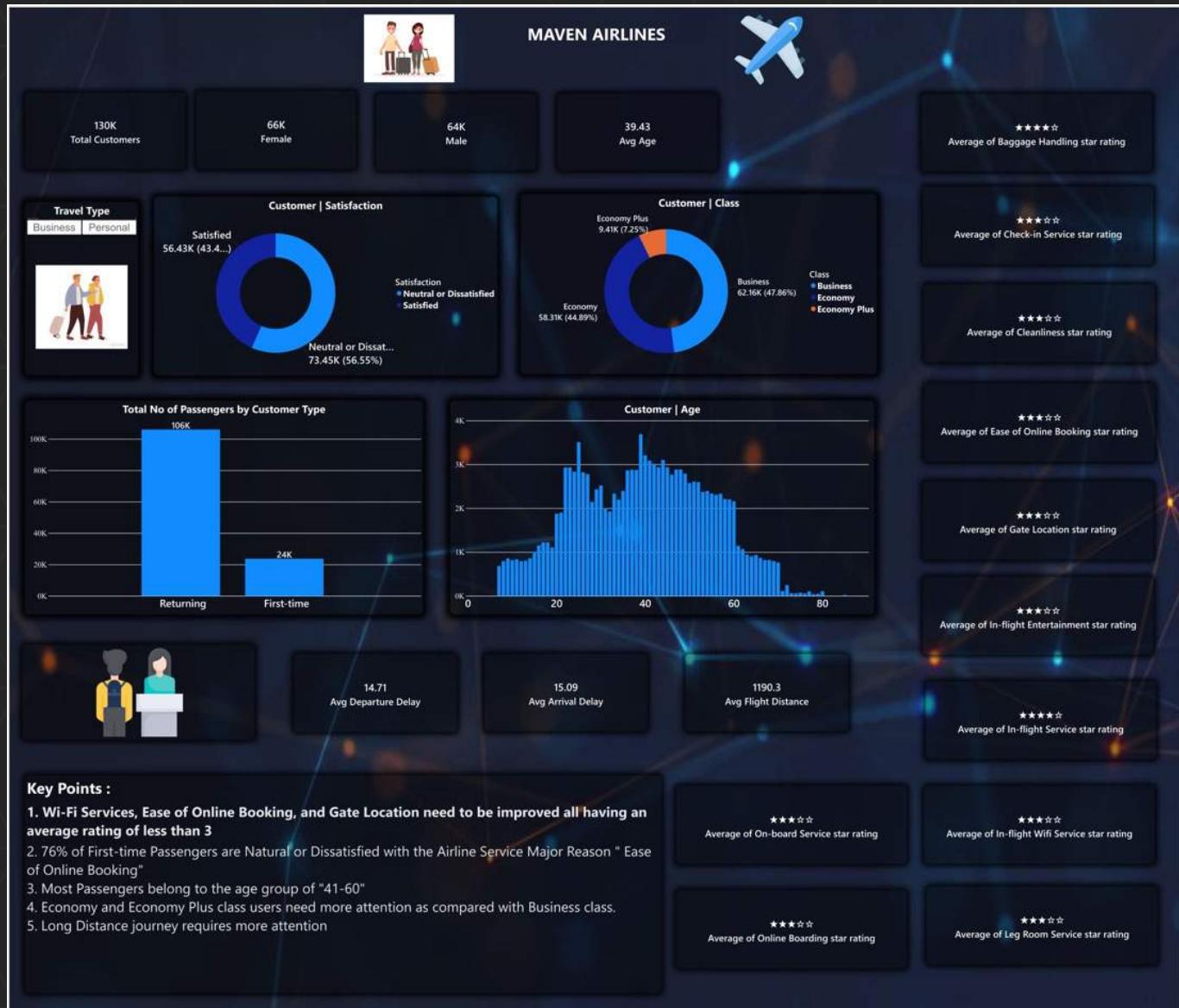
# AIRLINES CHALLENGE



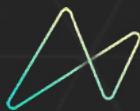
# Mudit Uniyal



# AIRLINES CHALLENGE



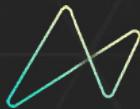
# Nenavath Nagaraj



# AIRLINES CHALLENGE



# Fartun Ahmed Mohamud



# AIRLINES CHALLENGE

## MAVEN AIRLINE PASSENGER SATISFACTION

GENDER	% SAMPLE
Female	50.74%
Male	49.26%

% of Customers who were delayed >1hr		
	Neutral or Dissatisfied	Satisfied
Departure Delay	7.84%	5.70%
Arrival Delay	8.28%	6.02%

**Worst Ratings**

- In-flight WIFI Service      Average Score: 2.72
- Ease of online booking      Average Score: 2.75
- Gate location      Average Score: 2.97

**Best Ratings**

- In-flight Service      Average Score: 3.64
- Baggage Handling      Average score: 3.63
- Seat Comfort      Average Score: 3.44

**Satisfaction %**

Satisfied	43%
Neutral or Dissatisfied	57%

**Satisfaction% by Class**

Business	~43k
Economy	~47k
Economy Plus	~5k

**Travel Type %**

Business	69%
Personal	31%

**INSIGHTS AND RECOMMENDATIONS**

For the first time our annual survey showed that the satisfaction rate of customers dropped below half of total survey participants, falling as low as 43%, this is a very worrying development and as the senior data analyst I decided to look into the data and ascertain what might be the problem. After going through and doing my analysis on the survey of over 129000 entries these are what I found;

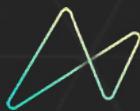
There was a difference of around 2% more dissatisfied customers when the departure or arrival time exceeded 1 hour.

Among the qualitative survey taken, the criteria with best rating was In-flight service (average of 3.64) while the worst was In-flight WiFi service, it would be beneficial to look for problems and try and improve on this area and the two lower scores.

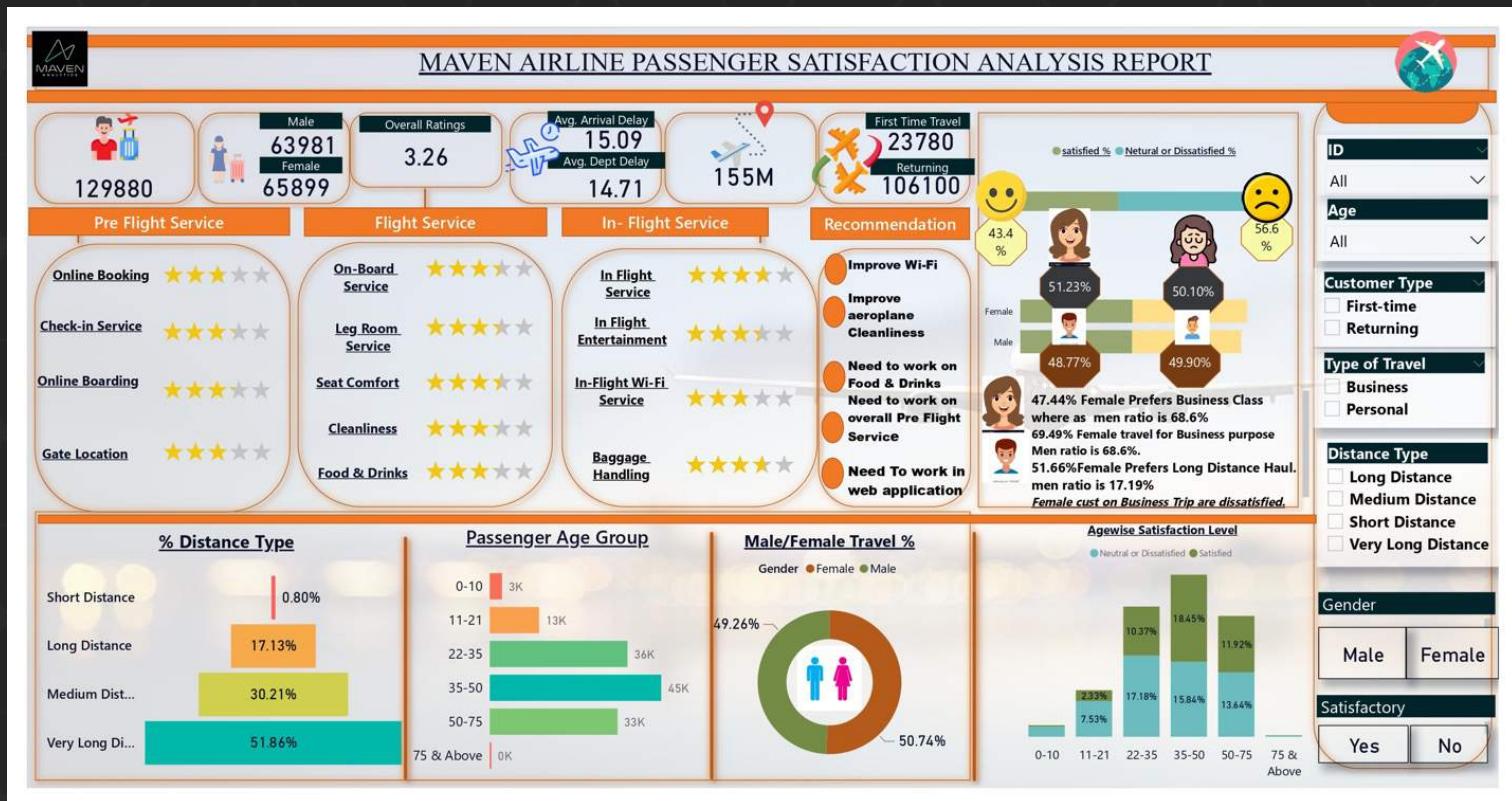
Looking at the satisfaction distribution among the travelling classes, 43166(33%) of total customers who are among the business class were the most satisfied. On the other hand the overwhelmingly most unsatisfied class were the economy class which were 47366(36%) of the 129880 customers. I will advise that special attention be given to this travelling class of customers.

I also noticed that there was a higher difference between dissatisfied and satisfied among the first time customers, a difference of 9.53% compared to 3.57% among returning customers with dissatisfaction being higher for both sets of customers. It will be helpful to see how first time customers experience can be improved.

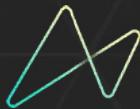
# Kpesemi Akeredolu



# AIRLINES CHALLENGE



Devranjani Roy



# AIRLINES CHALLENGE

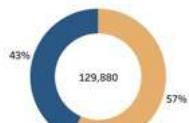
## MAVEN AIRLINES PASSENGER SATISFACTION SURVEY REPORT



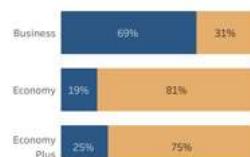
■ Neutral or Dissatisfied

■ Satisfied

43% Satisfaction Rate



Lowest satisfaction by Economy passengers



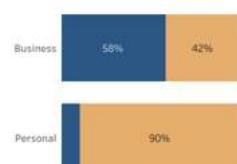
Highest satisfaction is between 40-60 years



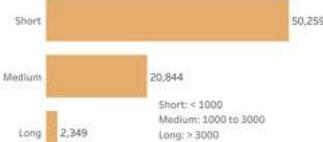
First-time travellers show higher dissatisfaction



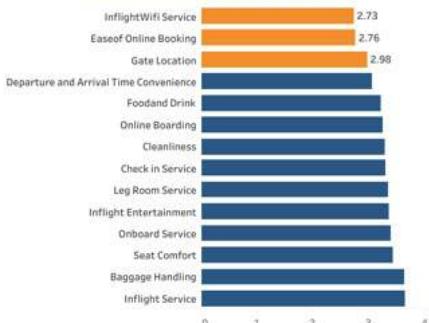
Personal trip travellers show higher dissatisfaction



Longer distances show higher satisfaction



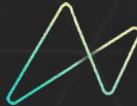
Average Satisfactory Rate for each Service



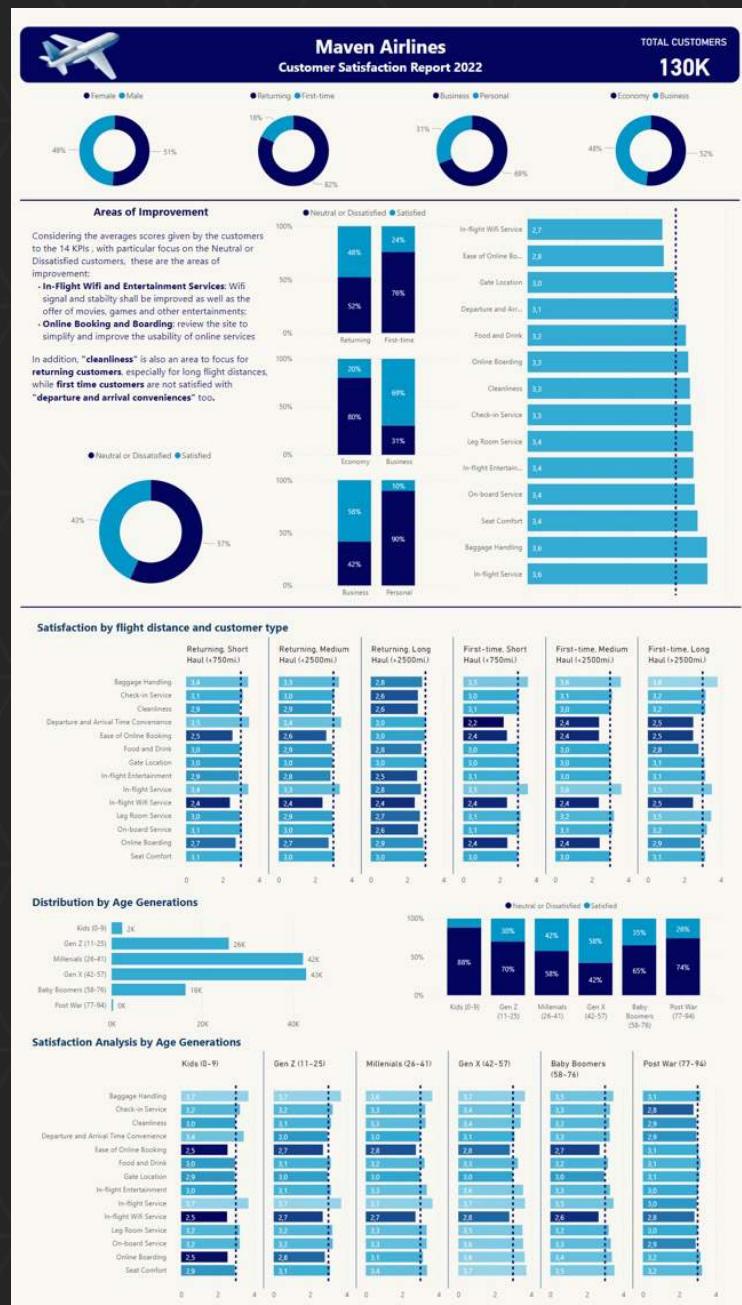
### Key Recommendations:

1. Services that should be improved the most are:
  - Inflight wifi-service
  - Ease of online booking
  - Gate location
2. Economy and Economy plus passengers should be given immediate attention since the satisfaction level of these passengers are very low.
3. Provide extra help to First-time travellers. Since, they are not familiarized with the airlines, equip them with more instructions.
4. Focus on short-distance travellers as majority of the dissatisfied passengers are short-distance travellers.
5. 10% satisfaction rate from people who travel on personal trips is an extremely low number. While, business travel passengers tend to have less bothered by the general inconveniences.

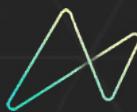
# Kurada Meghana



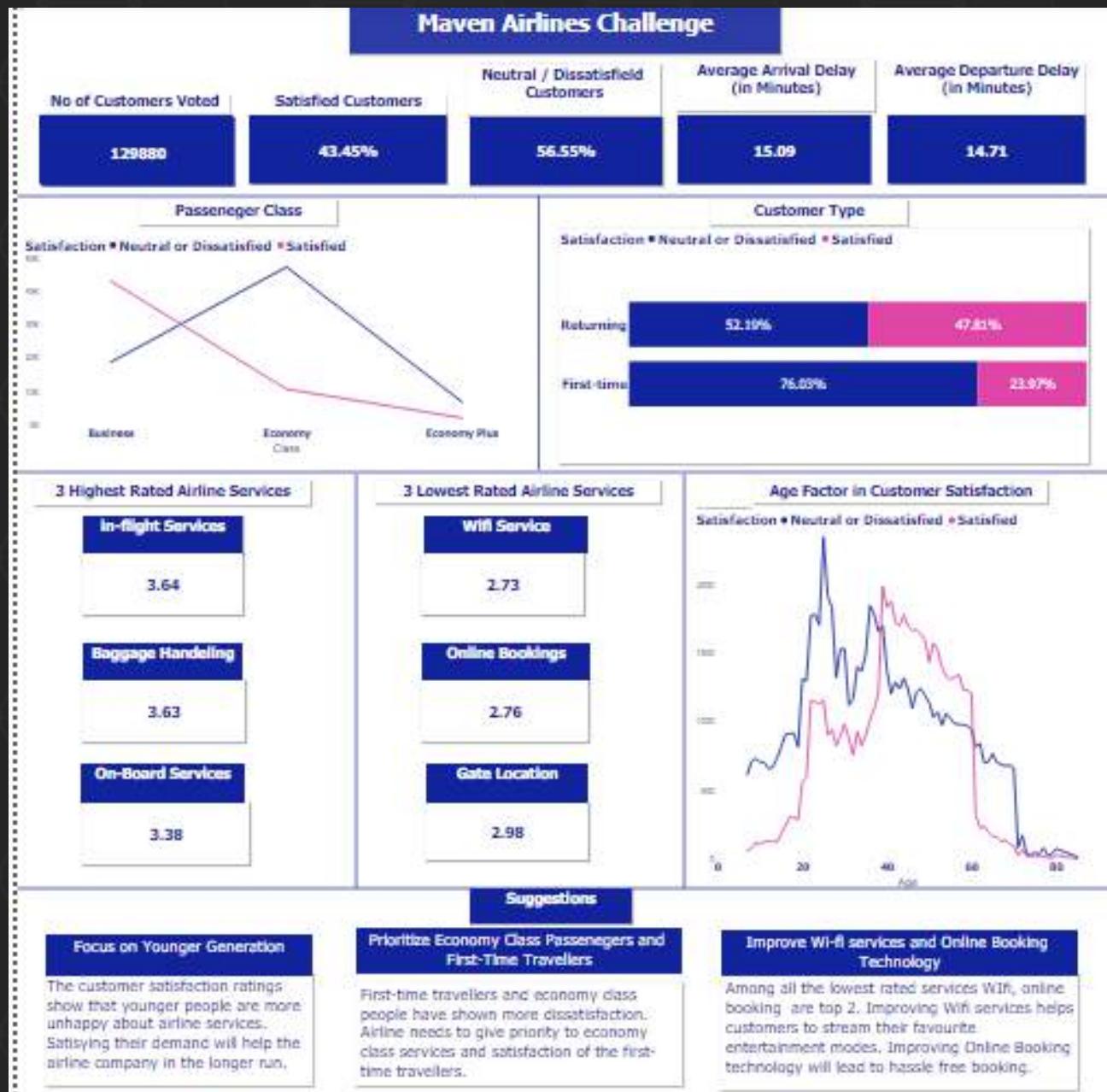
# AIRLINES CHALLENGE



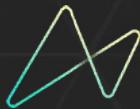
**Clizia**



# AIRLINES CHALLENGE



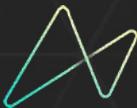
**Akshay Dani**



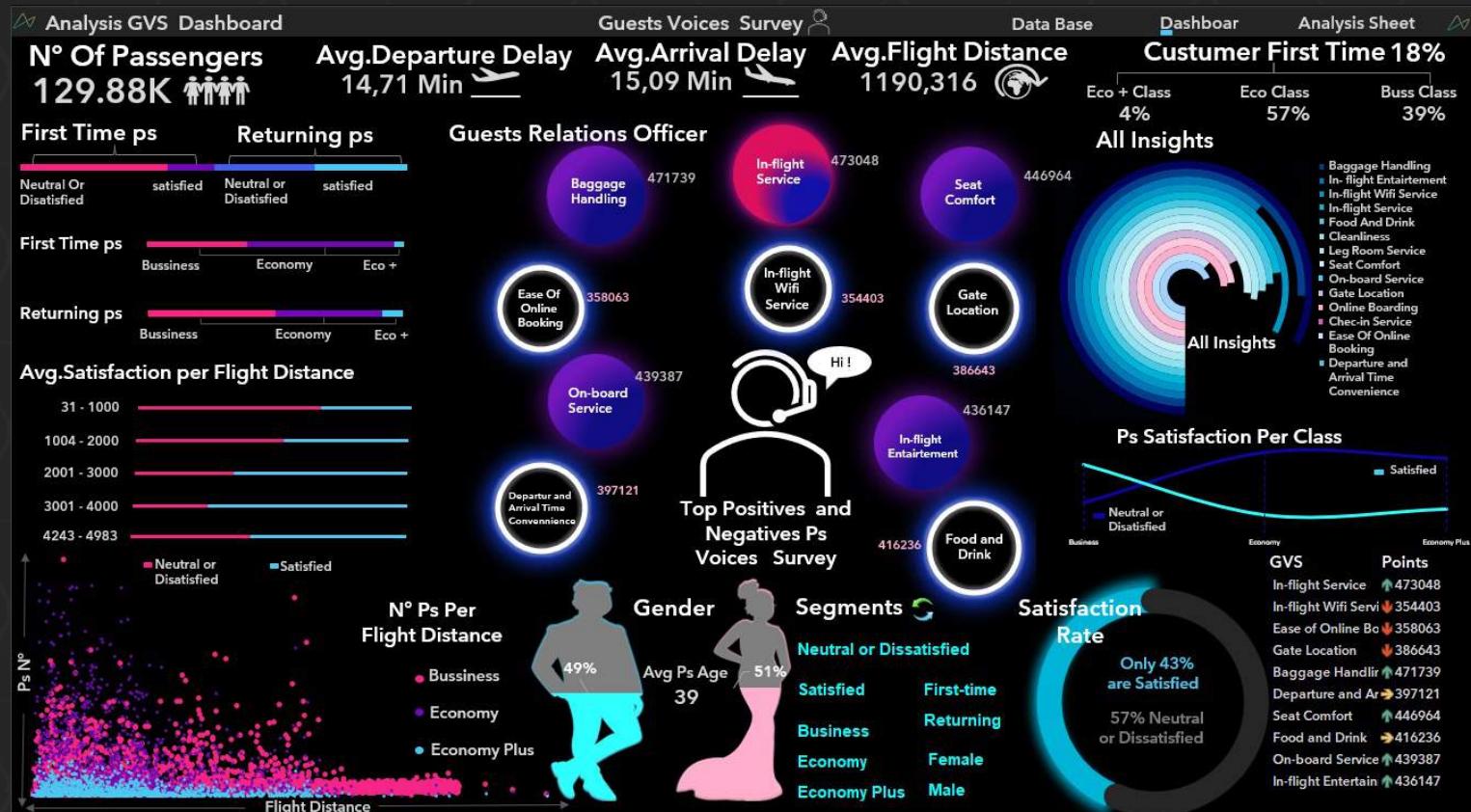
# AIRLINES CHALLENGE



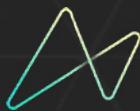
Martina Arsova



# AIRLINES CHALLENGE



# Hazam Chawki



# AIRLINES CHALLENGE

**Passenger Demographics**

**Total Respondents**

1,29,880

43.45%

56.55%

Female	57.10%	42.90%
Male	55.99%	44.01%

**Age under 14 and above 60 are dissatisfied with the services**

0-14 (Children)	14.01%	85.99%
15-24 (Youth)	32.61%	67.39%
25-60 (Adults)	49.91%	50.09%
60+ (Seniors)	20.82%	79.18%

Class	Satisfaction %	Dissatisfaction %
Business	69.44%	30.56%
First-time	39.67%	60.33%
Returning	74.64%	25.36%
Economy	18.77%	81.23%
First-time	14.41%	85.59%
Returning	20.10%	79.90%
Economy Plus	24.64%	75.36%
First-time	7.98%	92.02%
Returning	26.44%	73.56%
Total	43.45%	56.55%

**Maven's Airline Passenger Satisfaction Survey Analysis**

More than 85% for first time Economy & Economy+ passengers are highly dissatisfied with the services.

On the other hand, more than 70% of returning Business class passengers are Satisfied with the service.

**Pre-Flight Services**

Ease of Online Booking	Check-in Service	Online Boarding	Gate Location
2.76/5	3.31/5	3.25/5	2.98/5

**Flight Services**

On-board Service	Seat Comfort	Leg Room Service	Cleanliness	Food and Drink
3.38/5	3.44/5	3.35/5	3.29/5	3.20/5

**In-Flight Services**

In-flight Service	In-flight Wifi Service	In-flight Entertainment	Baggage Handling
3.64/5	2.73/5	3.36/5	3.63/5

**Key Areas of Improvement:**

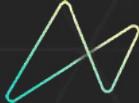
- Ease of Online Booking
- In-Flight Wi-fi Service

**Avg Departure Delay** 14.71

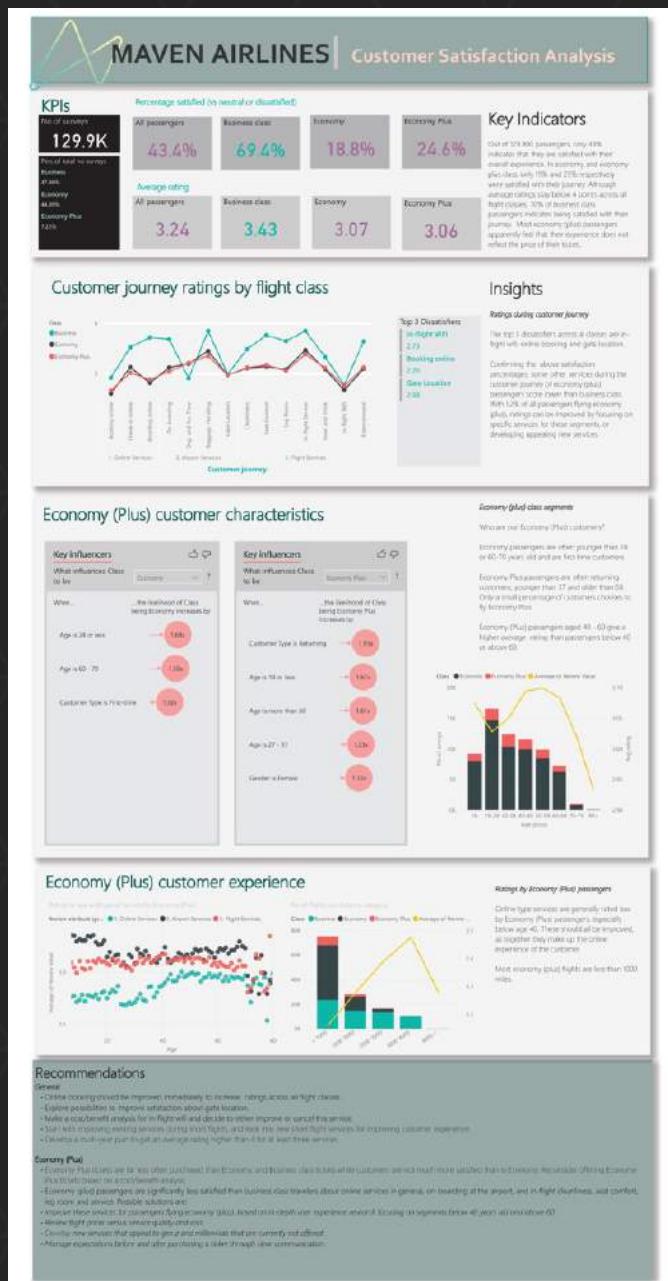
**Avg Arrival Delay** 15.09

Delay Category	Avg Departure Delay (%)	Avg Arrival Delay (%)
No Delay	54.06%	45.94%
1-30 mints Delay	57.87%	42.13%
31+ mints Delay	63.86%	36.14%

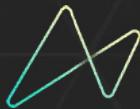
Kriti Arora



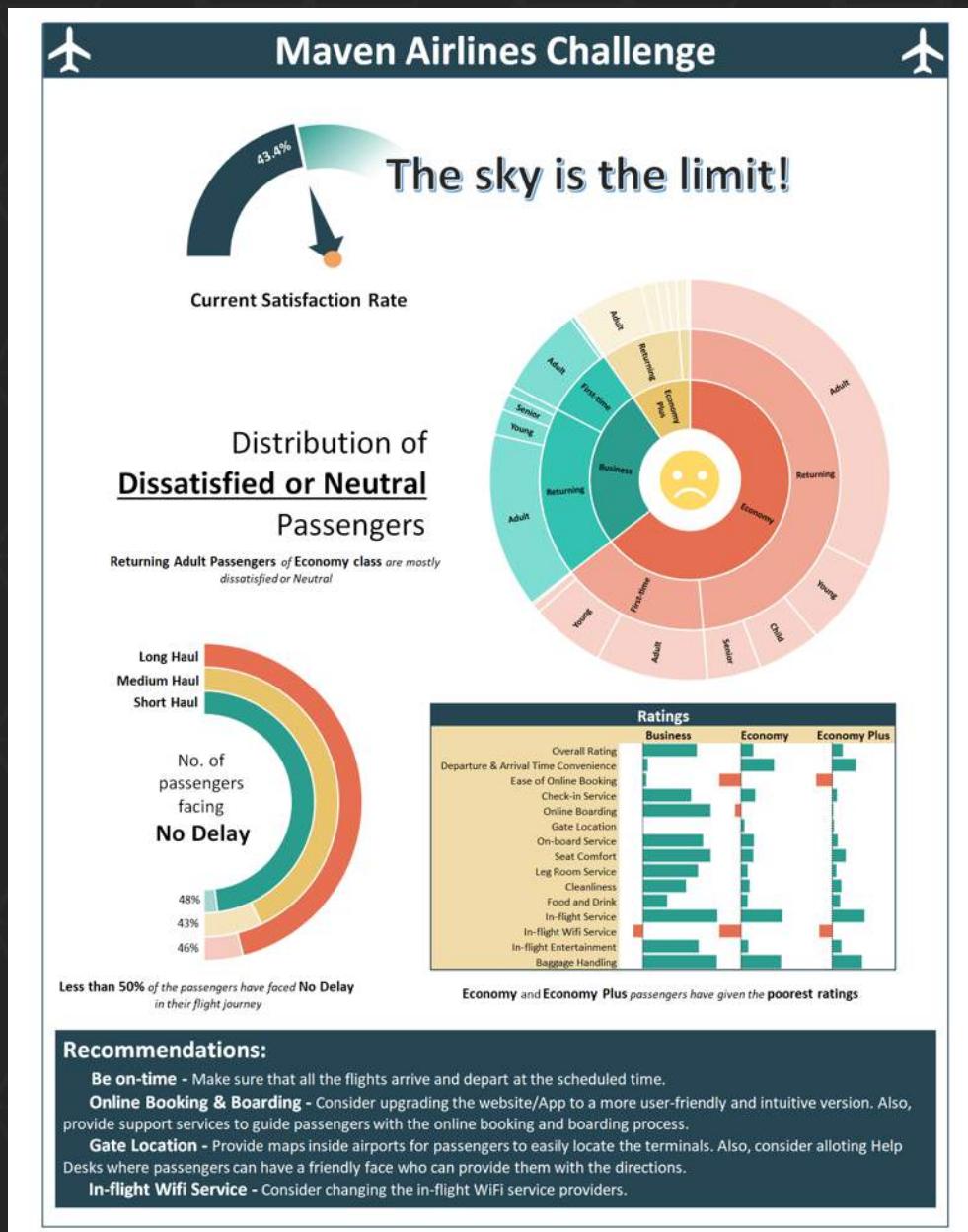
# AIRLINES CHALLENGE



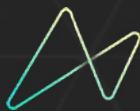
# Marleen Hofstede



# AIRLINES CHALLENGE



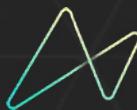
# Amrita Karmakar



# AIRLINES CHALLENGE



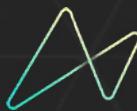
Maha Koutb



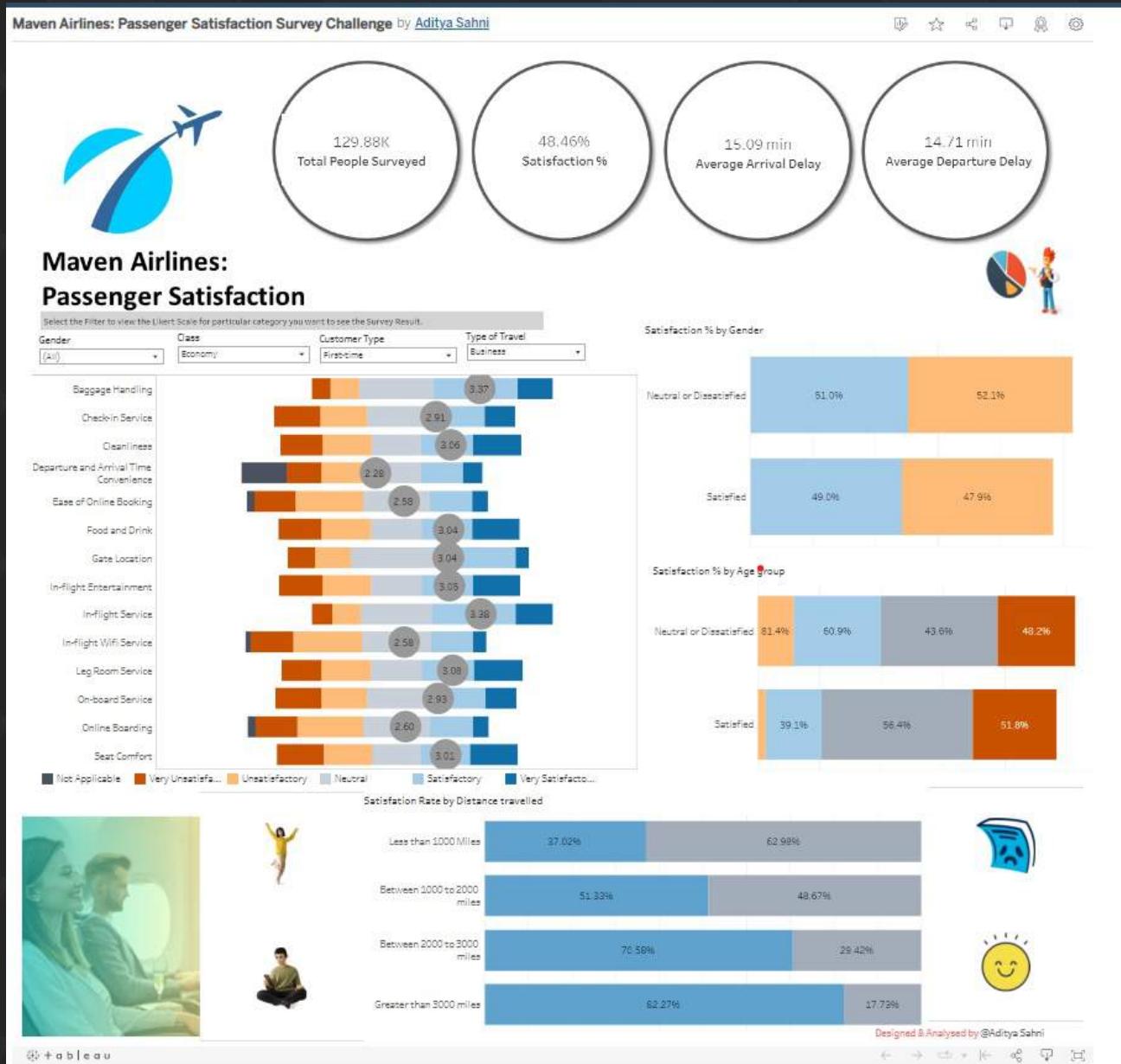
# AIRLINES CHALLENGE



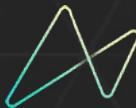
Mst. Rubayat Yasmin



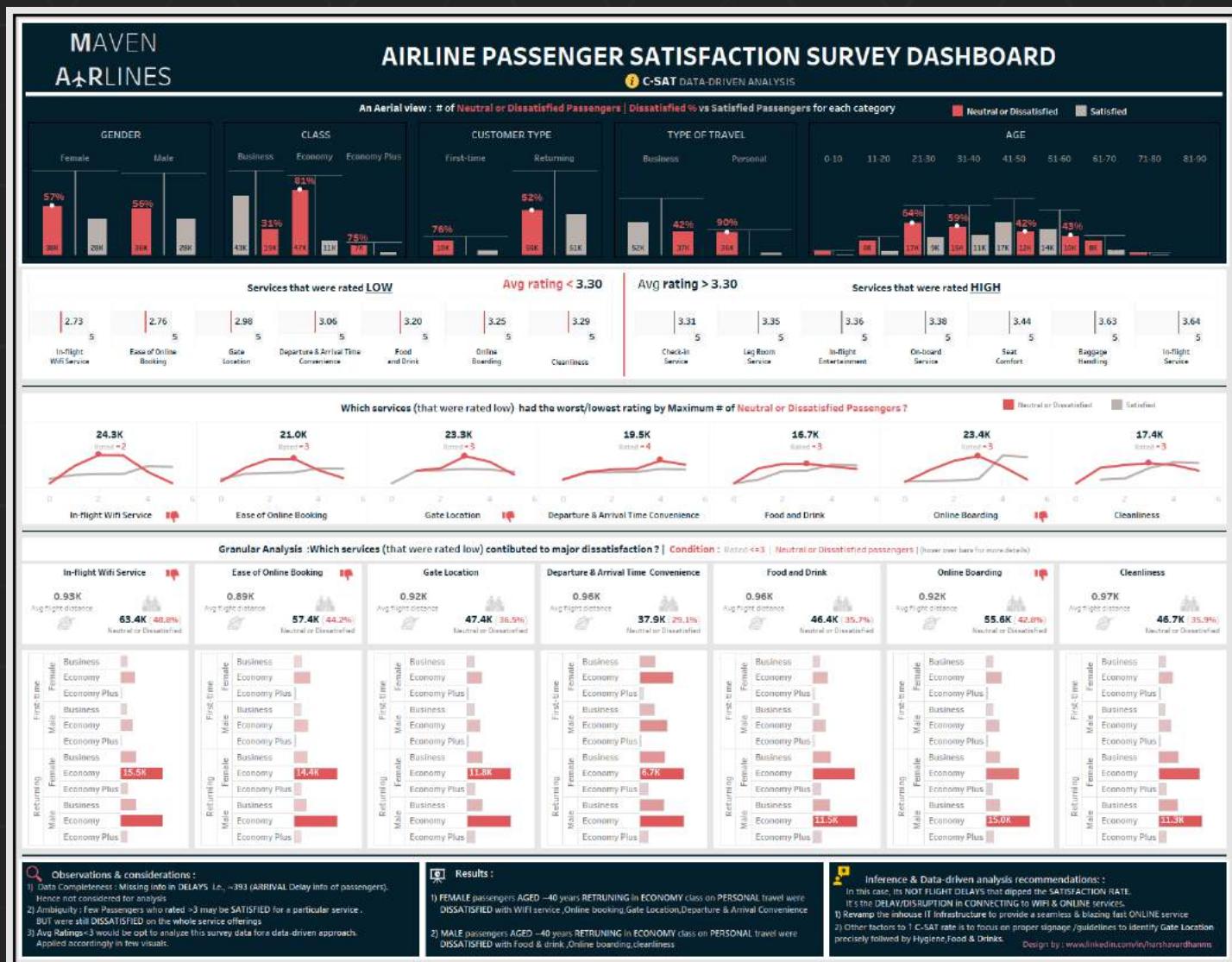
# AIRLINES CHALLENGE



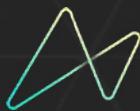
# Aditya Sahni



# AIRLINES CHALLENGE



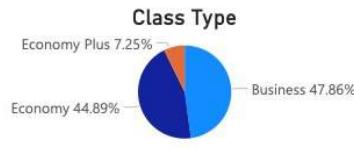
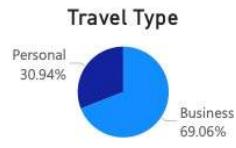
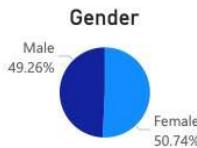
# Harshavardhan MS



# AIRLINES CHALLENGE



## Maven Airlines Satisfaction Survey



14.71

Average Departure Delay (mins)

15.09

Average Arrival Delay (mins)

39

Average Age

1190

Average Flight Distance

### Overall Satisfaction



Departure and Arrival Time



Online Boarding



Seat Comfort



Food and Drink



Ease of Online Booking



Gate Location



Leg Room Service



In-flight Service



### Insights

- About 80% of those surveyed were returning customers, 70% were in Business, & the average delay was 15 minutes.
- Customers were most satisfied with the in flight service & baggage handling (3.64 & 3.63), & least satisfied with the gate location & ease of online booking (2.98 & 2.76). Overall, less than half were satisfied.

Baggage Handling



Check in Service



On-board Service



Cleanliness



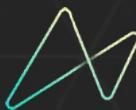
In-flight Wifi Service



In-flight Entertainment



Andy Ly



# AIRLINES CHALLENGE

## MAVEN AIRLINES CHALLENGE

The overall satisfaction rate for Maven Airlines has fallen to **43%**. More than 80% passengers are Repeat Customers highlighting strong Trust built by the Airlines. Focussing on the **pain points** for Business and Economy Class passengers from **Returning category** will help the Airlines address the challenge of low satisfaction rate.

### Distribution by Customer Type

Returning	81.69%
First-time	18.31%

### Class Distribution

Business	47.86%
Economy	44.89%
Economy Plus	7.25%

### Returning Customers

Business	49.89%
Economy	42.11%
Economy Plus	8.01%

### In-flight Wifi Dissatisfaction



### Ease of Booking Dissatisfaction



### Avg. Arrival Delay (Min)

**15.09**

### Avg. Dep. Delay (Min)

**14.71**

### Gate Location Dissatisfaction



### Dep/Arr Time Dissatisfaction



### Food and Drinks Dissatisfaction



**NO INTERNET!** The Air to Ground (ATG) system might have failed due to antennae malfunction in the base of aircraft fuselage. Maven needs to check whether its the Low Speed of the Wifi or that stubborn login page which is creating the issue. **67.4%** Business class passengers are unhappy with Inflight Wifi facilities.

**IT'S STILL LOADING!** **61.18%** Business class passengers face issues while booking the flight. The app might be crashing mid way and needs to be updated. There might be server issues in the web version. Maven needs to check for this.

**IT FEELS LIKE A MARATHON!** It looks like that boarding GATE for the airlines is quite far and passengers feel exhausted by the time they reach the Gate. An appropriate Gate location can help solve this issue. Around **60.4%** Business class passengers have complained regarding inappropriate Gate location.

**BOSS I MIGHT BE LATE AGAIN!** Whether its due to bad weather or a last minute technical malfunction Maven has to reduce the delays and should be informing passengers prior to arrival/departure. **59%** Business class passengers are unhappy with airline punctuality.

**THE HUNGER GAMES!** B-class passengers generally book with corporate meal plans. Introducing variety of cuisines and Continental options with drinks ranging from Zero kcal to energy drinks and alcoholic drinks must be made available. **50.3%** Business class passengers are looking for better food and drinks services.

### Returning Customers

Business	49.89%
Economy	42.11%
Economy Plus	8.01%

### Ease of Booking Dissatisfaction



### In-flight Wifi Dissatisfaction



### Gate Location Dissatisfaction



### Online boarding Dissatisfaction



### Food and Drinks Dissatisfaction



**ITS AN ETERNITY!** This shows Maven is facing some serious issues with the app as **73.2%** Eco. and Eco+ class passengers are facing an issue while booking their flight tickets. This can be a major issue as it can easily divert the passengers to other airlines offering ease of booking.

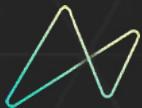
**ITS BORING!** The In flight Wifi system needs to be revamped. Internet services are a basic amenity that are needed for Eco. and Eco+ class passengers. **71.9%** Economy class passengers are unhappy with it.

**I FEEL CLAUSTROPHOBIC!** Maven should consider an option of providing increased leg room to its Eco/Eco+ class passengers. Its worth to give an upgrade at a slightly higher price to curb the leg room dissatisfaction score. **65.15%** Eco. and Eco+ passengers are unhappy with less leg room.

**AM I STILL CHECKING IN!** **64%** of Passengers travelling in Eco. and Eco+ class are facing an issue in online boarding. It can be a server issue due to which passengers are unable to generate their boarding pass and cannot perform web check in. The airlines app might need an update for the hassle free user experience.

**NOTHING TO CRUNCH ON!** There are **57.6%** Eco and Eco+ passengers who are dissatisfied with food and drinks services of the airlines. It is advisable for airlines to start In flight food and drinks with more choices to offer for passengers. It will also add to the airlines revenue.

**Saras K.**



# AIRLINES CHALLENGE

## MAVEN AIRLINES

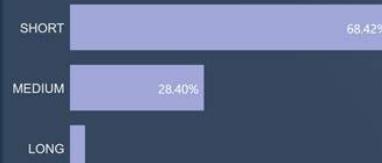
This report examines the underlying forces of service quality influences on passengers satisfaction during travel. The findings of this study are based on analysis of ratings of **129880** customers. Here **18%** customers are travelling for the first time and **82%** customers are type of returning. Around **70%** are business travelers and **30%** are personal travelers



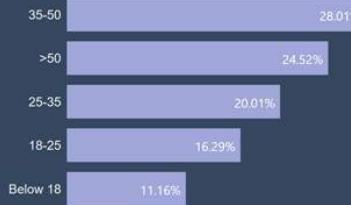
All services needs to be improved as no rating is above 4

3.2	3.6
Departure & Arri...	Baggage Handl...
3.3	3.3
Chech in_Service	Cleanliness Ser...
3.3	3.4
Online boarding...	Entertainment
3.4	3.2
Onboard Service	Food & Drink
3.4	3.6
Seat_Comfort	In-flight_service
3.4	Leg Room satisf...

short distance travelers are most dissatisfied

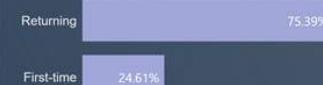


Age above 35 yrs are more dissatisfied than others



Returning customers are more dissatisfied

• Neutral | Dissatisfied



Average arrival delay(min)

**15.09**

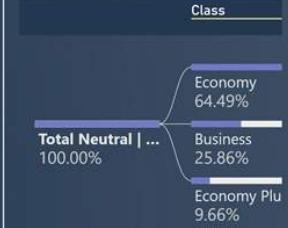
Average departure delay(min)

**14.71**

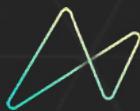
Bussiness class travelers are most satisfied



Economy class travelers are most neutral or dissatisfied

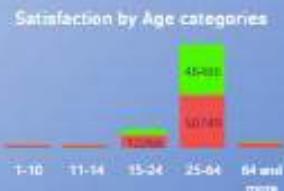
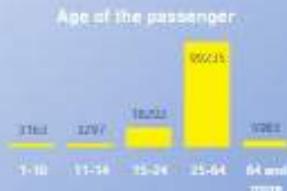


**Vineeta Khatri**



# AIRLINES CHALLENGE

## MAVEN AIRLINES



Arrival Delay in Minutes



Departure Delay in Minutes

1,190.32

Avg. distance in miles

4983

Max Flight Distance in miles

### In - flight Services

★★★★☆

Leg Room Service:

★★★★☆

In-flight Entertainment

★★★★☆

In-flight WiFi Service

★★★★★

In-flight Service

### Easy of facilities

★★★★☆

Lane of Online Booking

★★★★☆

Online boarding

★★★★☆

On-board service

★★★★☆

Check-in Service

★★★★☆

Seat Comfort

### Time

★★★★☆

Departure and Arrival Time Con.

★★★★☆

Gate Location

### Other Services

★★★★☆

Buggage Handling

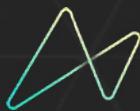
★★★★☆

Food and Drink

★★★★☆

Cleanliness

Pawan Kumar Dalakoti



# AIRLINES CHALLENGE

## Maven Airline

Total Number of Passengers

129,880

Avg. Departure Delay (In Mins)

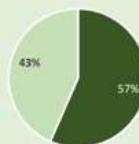
Avg. Arrival Delay (In Mins)

15.09

### Maven Airline Service Ratings



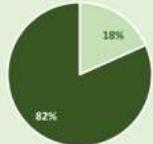
### Customers Satisfaction



57% of the passengers were dissatisfied with the services

■ Neutral or Dissatisfied ■ Satisfied

### Customer Type

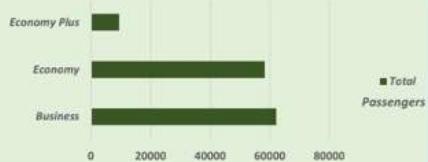


82% Returning passengers compared to 18% First-time passengers

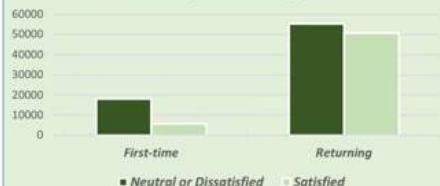
### Recommendations

- First-time passengers:** Attention should be paid to first-time passengers to improve their rate of return by providing discounts, freebies, etc.
- Economy Class:** Services provided to the Economy class should improve to increase satisfaction rating.
- Flight Arrival and Delay:** Flights should Depart and Arrive at the scheduled time to reduce or eliminate Delay.
- Inflight Wifi Service:** High speed Wifi connectivity should be provided to passengers.
- Online Booking:** Make online booking a seamless experience for the customers by providing customer friendly website, Application, and live chat option, etc.
- Gate Location:** Maps and directions should be created to help passengers locate their flight gate.

### Class of Travel

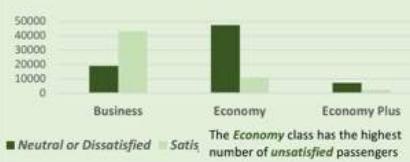


### Satisfaction by customer Type

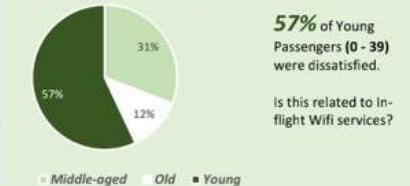


■ Neutral or Dissatisfied ■ Satisfied

### Passenger Satisfaction by class



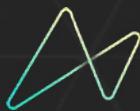
### % of Neutral or Dissatisfied Passengers



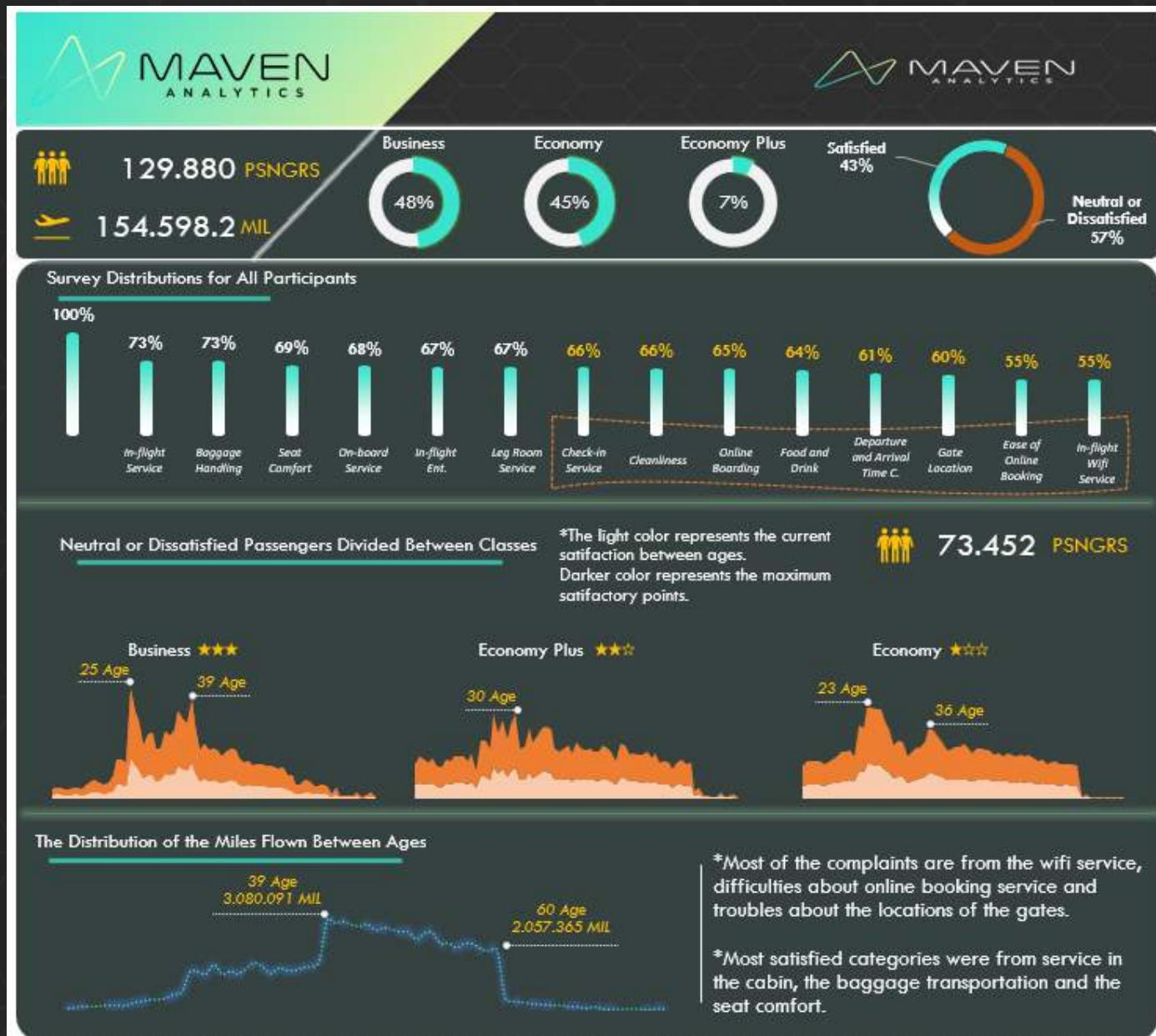
57% of Young Passengers (0 - 39) were dissatisfied.

Is this related to In-flight Wifi services?

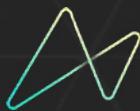
Oluwatoyin Alalade



# AIRLINES CHALLENGE



Olgun Atik



# AIRLINES CHALLENGE



## Maven Airlines Passenger Satisfaction Survey

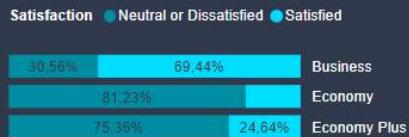


Average Arrival Delay  
15,1  
min

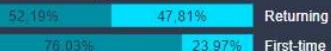
Average Departure Delay  
14,7  
min

Average Flight Distance  
1190,3  
miles

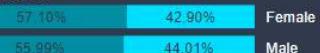
### Customer Satisfaction by Class



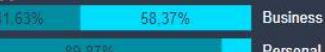
### by Customer Type



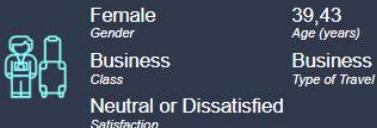
### by Gender



### by Type of Travel



### Average Passenger Profile



### Curious Passenger Facts

- Female passengers tend to be more fastidious.
- Passengers generally prefer to travel in **Business Class**.
- Economy and Economy Plus** Passengers have low level of satisfaction with services.
- First-time** passengers are less satisfied with the airline's services compared to **returning** passengers.
- Passengers travelling **short distances** are less satisfied with airline's services.



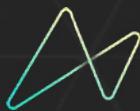
### Recommendations

- Airline **services** that urgently need **improvement**: Gate Location, Ease of booking Online, In-flight Wifi Services.
- Departure and Arrival Delays** should be reduced to a lower rate.
- Economy Plus** offers should be improved since passengers are **less interested** in it.

### Average Satisfaction Rating by Category



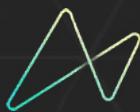
# Yuliya Akhremchyk



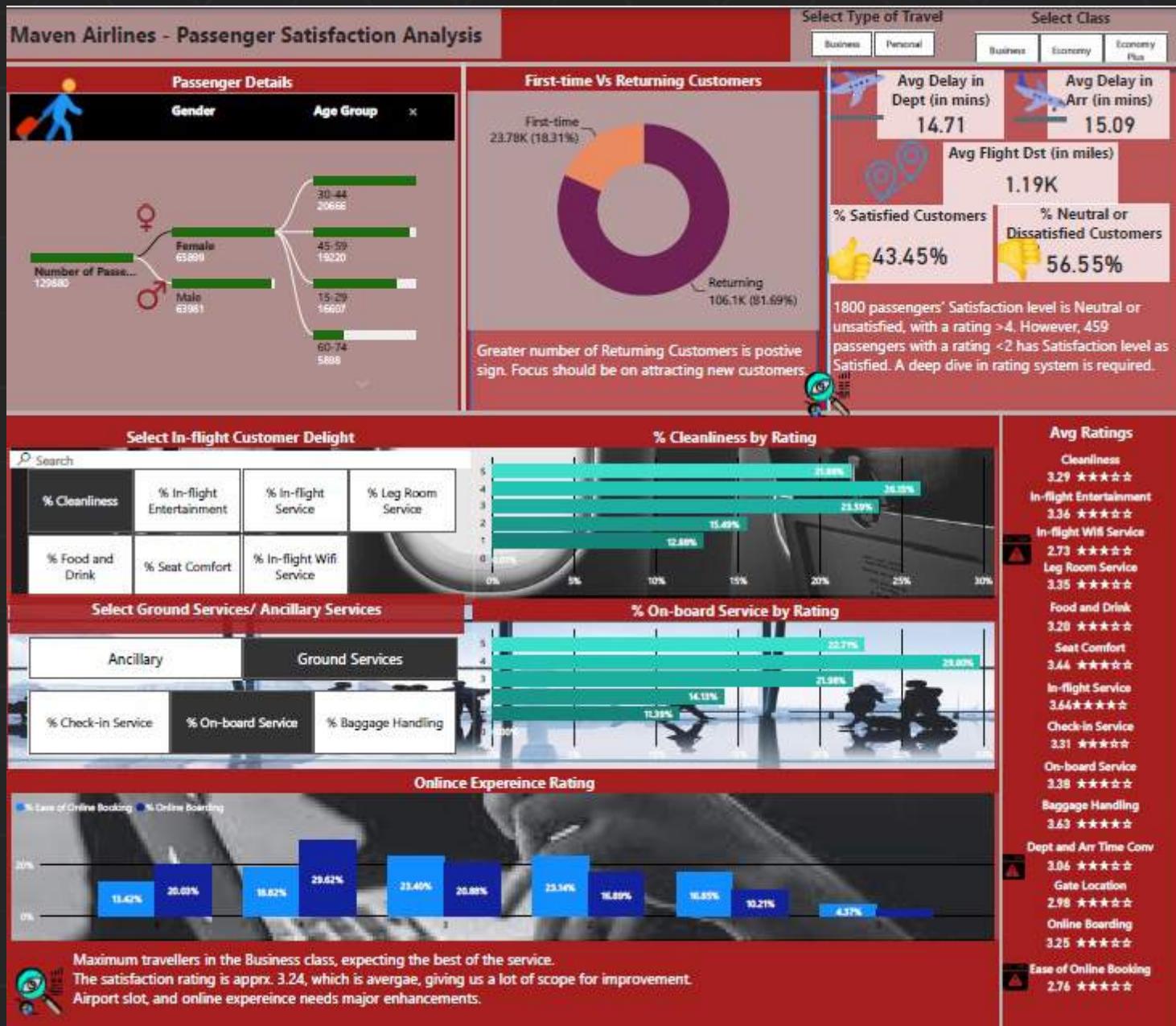
# AIRLINES CHALLENGE

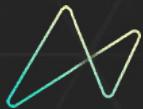


Tania Das



# AIRLINES CHALLENGE





# AIRLINES CHALLENGE



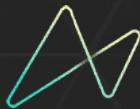
## Maven Airline Customer Satisfaction



On the whole, **44%** of our passengers were satisfied with our services. Business passengers were the most satisfied with our services. **78%** of passengers experienced less than **15** mins delay during their flight.



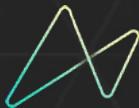
Shanting Wong



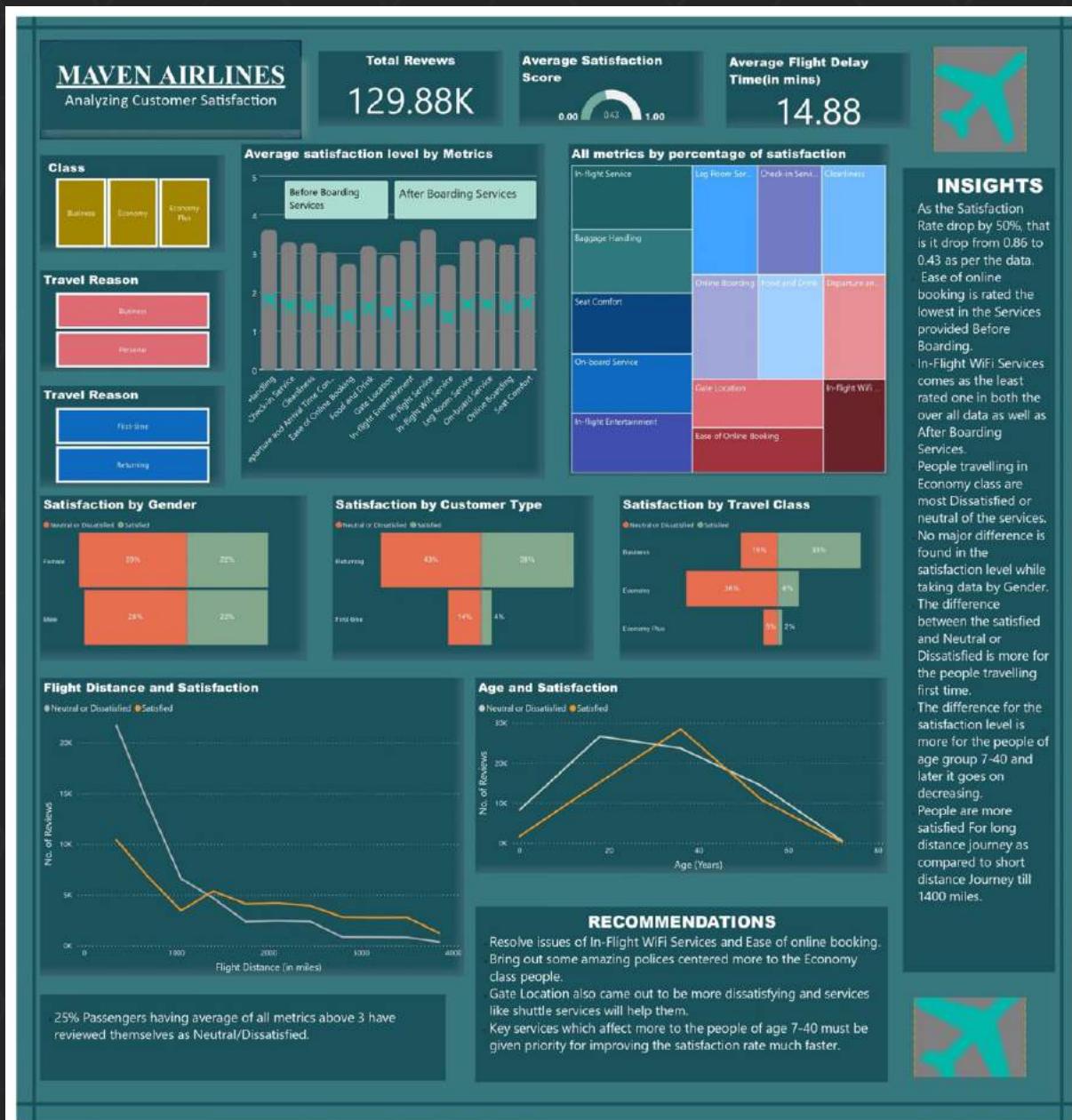
# AIRLINES CHALLENGE



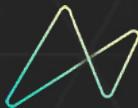
# Ravi Rajkishor Mandal



# AIRLINES CHALLENGE



# Rohit Kumar



# AIRLINES CHALLENGE

**Maven's Airline KPI, Data-driven recommendation report**

**Key Performance**

Passengers <b>130K</b>	Satisfied Percentage <b>43%</b>	First time Customer Satisfaction score <b>3.05 out of 5</b>	Returning Customer Satisfaction score <b>3.28 out of 5</b>
---------------------------	------------------------------------	--	---

**Customer Satisfaction Score by Service**

The chart displays satisfaction scores for various services across two customer types. Services include In-flight Service, Baggage Handling, Seat Comfort, In-flight Entertainment, On-board Service, Leg Room Service, Dining, Cleanliness, Check-in Service, Food and Drink, Departure and Arrival Time, Gate Location, Ease of Online Booking, and In-Flight WiFi Service. The Y-axis represents the satisfaction score from 2.0 to 3.8. Blue bars represent First-Time customers, and orange bars represent Returning customers. An arrow points to the 'Departure and Arrival Time' bar, highlighting a significant difference between the two groups.

Service	First-Time (Blue)	Returning (Orange)
In-flight Service	3.7	3.7
Baggage Handling	3.6	3.5
Seat Comfort	3.0	3.5
In-flight Entertainment	3.2	3.4
On-board Service	3.2	3.4
Leg Room Service	3.2	3.3
Dining	2.7	3.3
Cleanliness	3.2	3.2
Check-in Service	3.2	3.2
Food and Drink	3.2	3.2
Departure and Arrival Time	2.9	3.0
Gate Location	2.9	3.0
Ease of Online Booking	2.6	2.8
In-Flight WiFi Service	2.6	2.6

**MOST Satisfied Service for all Customers are:**  
1. In-flight Service  
2. Baggage Handling  
3. Seat Comfort

**LEAST Satisfied Service for all Customers are:**  
1. In-flight WiFi Service  
2. Ease of Online Booking  
3. Gate Location

**Important Observation:**  
Huge disagreement for **first time** and **returning** customers, this can be explained by **first time** customers are not satisfied with Maven's airline departure and arrival time slot. It is reasonable to predict that those customers unlikely to return.

Our **returning** customers are satisfied with the current time of departure and arrival, this could be one of the reason why their **return** to our airline.

If we want to turn our **first time** customer into **return** customer, this problem should be well addressed.

**For long distance flight (over 3000 miles) almost all passengers choose Business class**

The histogram shows the distribution of passengers based on flight distance. The X-axis represents Flight Distance (miles) from 0 to 5000, and the Y-axis represents the number of passengers from 0K to 12K. Three classes are represented: Business (blue), Economy Plus (orange), and Economy (red). A large peak for Business class is visible between 500 and 1000 miles, with a significant drop-off after 3000 miles. An arrow points to the peak area around 3000 miles.

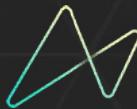
**Business class have average satisfaction of 3.43, Economy and Economy plus have average satisfaction of 3.06.**

The histogram shows the distribution of overall satisfaction scores. The X-axis represents Over all Satisfaction from 1.0 to 5.0, and the Y-axis represents frequency. Three classes are shown: Business (blue), Economy Plus (orange), and Economy (red). The Business class distribution is shifted towards higher satisfaction scores (around 3.4), while Economy and Economy Plus are centered around 3.06.

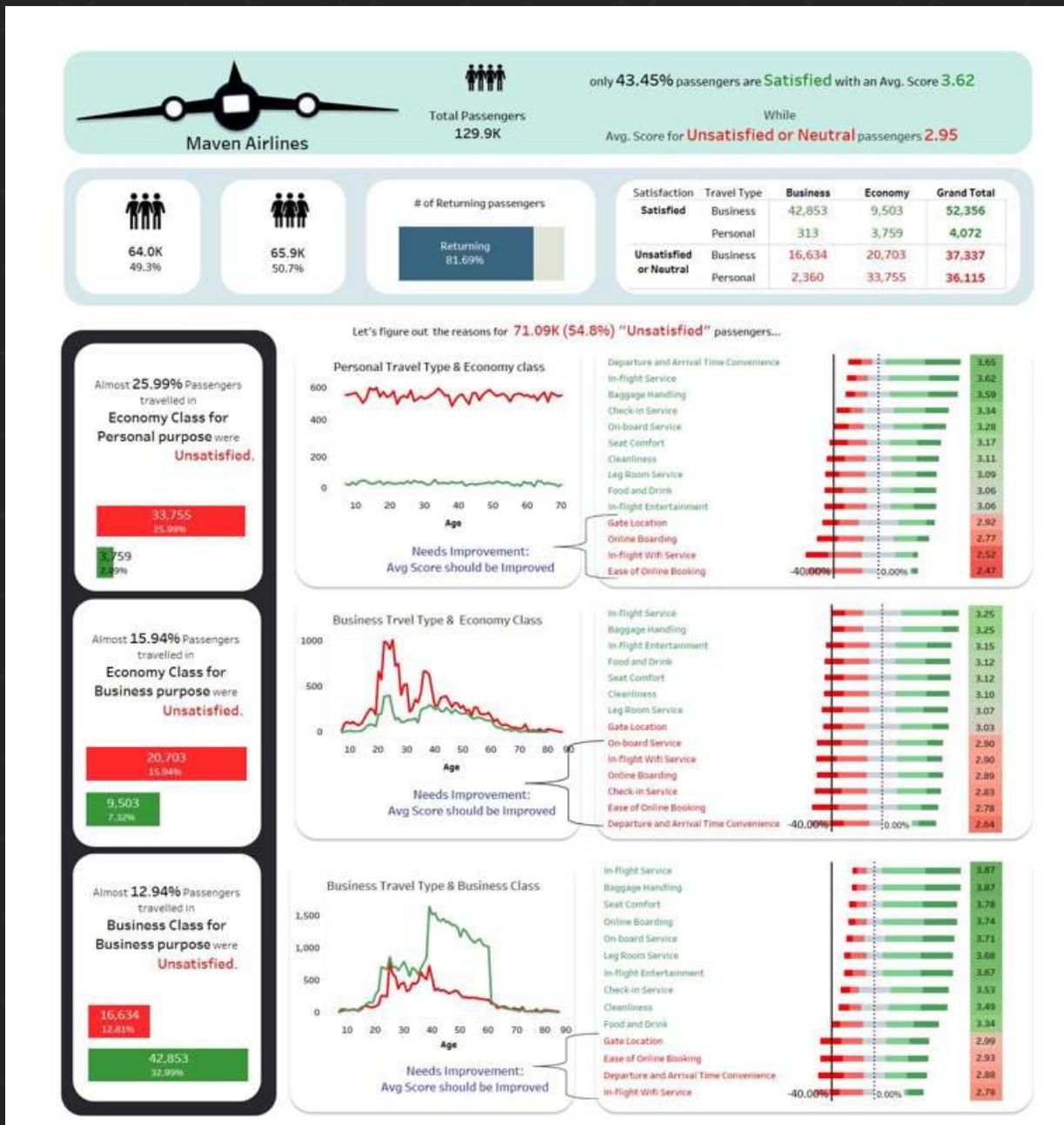
**Recommendation**

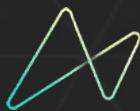
- Upgrade WiFi in airplane, In the data we can see that our returning customers are unhappy about WiFi in plane, first time customers also have similar dissatisfaction.
- Improve Online Booking system for better user experience, both first time and returning..
- Increase choice of time slot, our first time customers are not satisfied with current time slot of depart and arrive. Provide more time slot can improve satisfaction and increase return rate in future.

# Sing Hoi CHEUNG

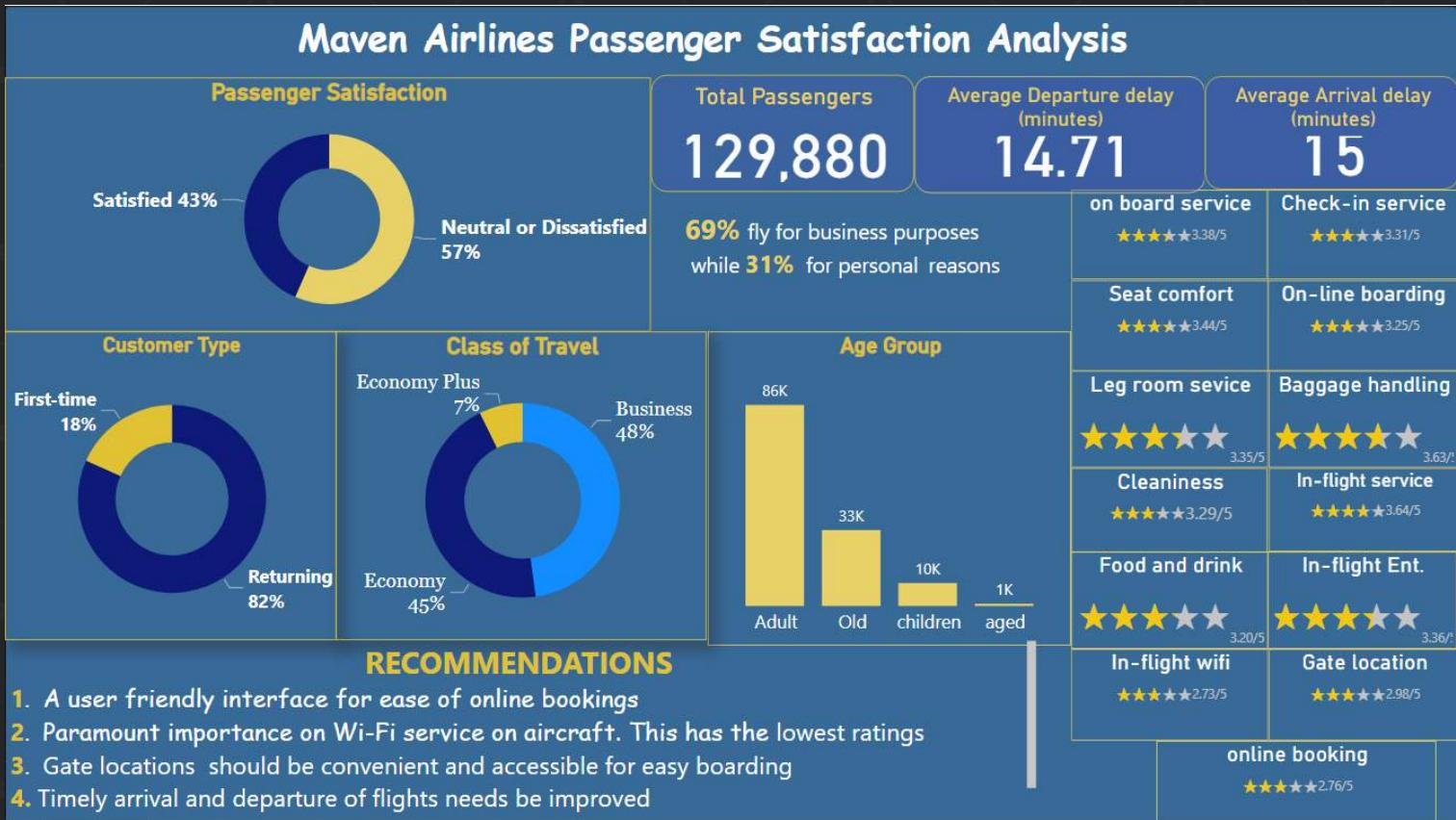


# AIRLINES CHALLENGE

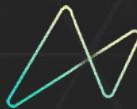




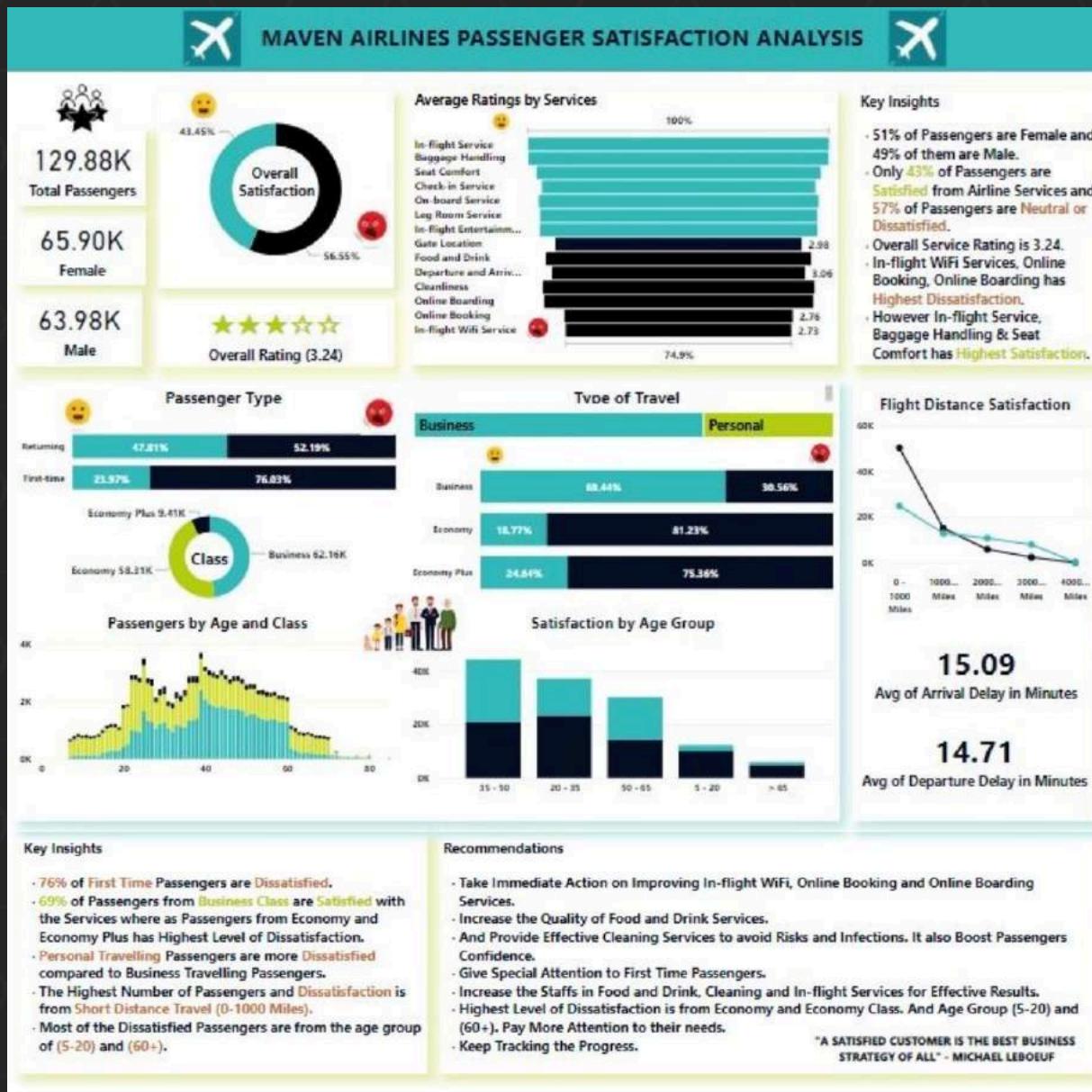
# AIRLINES CHALLENGE



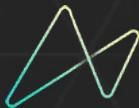
# Abdulrasheed Oluseyi Odeyemi



# AIRLINES CHALLENGE



# Archana M

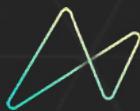


# AIRLINES CHALLENGE



The in flight wifi rating score has the lowest rating which is enough to frustrate some customers to give bad rating therefore, the wifi service should be improved.  
The world is going virtual as everyone now enjoys doing everything online, therefore the website, should be improved so that it can be more attractive and userfriendly as it will ease users flight booking via internet.  
The gate location in the airport should be improved as well.  
The facilities provided for long distance traveller should be made available for short distance travel as well.  
The company should find a way to reduce/eradicate arrival delay and departure delay as it's a great effect on low rating score.

**Abdulateef Sanni**



# AIRLINES CHALLENGE



Customer Satisfaction Report

129,880

Total Passengers

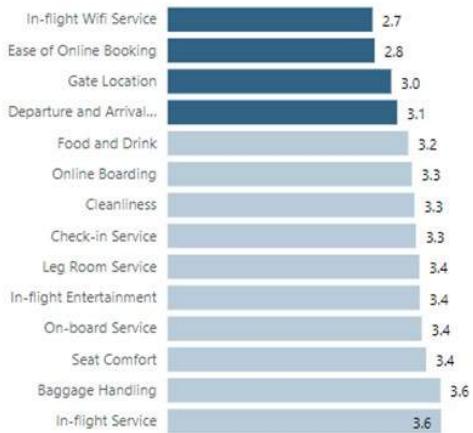
3.2

Overall Rate (from 1 to 5)



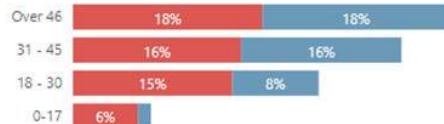
57% of passengers are NOT satisfied with the services

## Average results



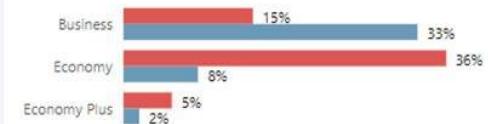
## Age group

● Neutral or Dissatisfied ● Satisfied



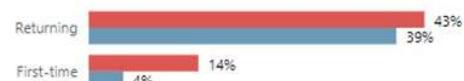
## Class

● Neutral or Dissatisfied ● Satisfied



## Customer type

● Neutral or Dissatisfied ● Satisfied



## Type of travel

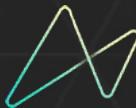
● Neutral or Dissatisfied ● Satisfied



## Key recommendations to improve facilities and services:

- Improve the quality of **the in-flight wifi services** and the website user experience to facilitate **online booking**.
- Provide a guide to facilitate the **gate location**.
- Attention to the **Economy Class** where the most dissatisfied customers are concentrated, representing 36%.
- Create a discount program to **Returning Customer**.

Amanda do Nascimento Barbosa



# AIRLINES CHALLENGE

**Maven Airlines Passengers Satisfaction Survey Analysis**



Legend: ■ Neutral or Dissatisfied ■ Satisfied

**Satisfaction by Customer profile**

Out of 73,452 dissatisfied/Neutral passengers, 51% are Female.

Majority of dissatisfaction is observed from Age group 20-65 years which is usual travelling class and it covers a big chunk of 45%.

Business	40.3%	28.7%
Personal	22.8%	

40.3% represent Business class which are satisfied, but there are dissatisfied passengers in both Business and Economy classes.

Business	33.2%	14.6%
Economy	8.4%	36.5%
Economy Plus	5.5%	

Economy class has 36.5% of dissatisfied/Neutral passengers.

First-time	12.9%	
Returning	39.1%	42.6%

42.6% from Returning passengers group are Dissatisfied/Neutral in satisfaction.

**Recommendations**

1. Improvise in flight WIFI services.
2. Need to make the experience of using Airline booking website/App more user-friendly.
3. Ensure Online booking and boarding processes are smooth as well as less time consuming for Passengers.
4. Gate locations maps shall be revised to provide accurate directions to passengers.
5. Ensure minimum delays for departure and arrivals.
6. In flight services have better satisfaction rates than others, so Staff has to continue doing good work and keep enhancing experience of Passengers during the flight in terms of more food/drink options, cleanliness, better content to watch etc.
7. Provide required attention for Young and elderly travellers.
8. Improve services, response time, perks for Economy class.
9. Implement good loyalty program for Returning passengers.
10. Improve on services for Short flights like provide Snacks/Drinks.

**PROBLEM STATEMENT**

Passenger survey shows that out of Total 129,880 passengers, more than 56% of passengers are either **neutral or dissatisfied** with the flight services. This is a big concern for management. As an analyst, I need to dig down into survey data and figure out what could be reasons for dissatisfaction and how to improve flight services to avoid further Customer Churn.

**Flight Delays and Distance**

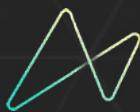
Highest level of dissatisfaction is from Short Flights and is 30.8%.

Departure and Arrival delays are definitely a contributing factors of dissatisfaction in many passengers.

**Satisfaction by Services**

Service Description	Average Rating (Max 5)
In-flight WiFi Service	2.7
Ease of Online Booking	2.8
Gate Location	3
Departure and Arrival Time Convenience	3.1
Food and Drink	3.2
Online Boarding	3.3
Check-in Service	3.3
Cleanliness	3.3
On-board Service	3.4
Seat Comfort	3.4
Leg Room Service	3.4
In-flight Entertainment	3.4
Baggage Handling	3.6
In-flight Service	3.6

# Komal Malani



# AIRLINES CHALLENGE

**MAVEN AIRLINES SATISFACTORY INSIGHTS**

### Overview

**Total Travellers** 129,880

**Avg. Flight distance** 1190

There are a total of 129,880 passengers who travelled with the airline.

Few passengers had an overall satisfaction of 43.4% with the female gender having the highest percentage of the overall satisfaction.

### Gender

Gender	Count
Female	65,899
Male	63,981

The top 6 flight distance in miles which are also the longest shows the overall number of satisfactions of passengers.

### Satisfactions by flight distance

Flight Distance	Neutral or Dissatisfied	Satisfied
2475	278	922
860	338	155
594	324	181
440	296	161
404	330	160
337	568	223
<b>Total</b>	<b>2134</b>	<b>892</b>

Age group:

Satisfaction:

Gender:

### Age groups

About 27.84 % within the ages of 37 to 49 were the most convenient with the departure and arrival time of flights.

Age group	Convenience (%)
11-20	~5%
21-30	~15%
31-40	~22%
41-50	~25%
51-60	~10%

### Ease of online booking by age group

Older people affected by reduced reactivity to technology is seen as only 0.51% of people within the ages of 73-85 had more difficulties in booking their flights online.

Age group	Very Difficult (%)	Difficult (%)	Easy (%)	Very Easy (%)
13-25	~10%	~10%	~70%	~10%
26-35	~10%	~10%	~70%	~10%
36-45	~10%	~10%	~70%	~10%
46-55	~10%	~10%	~70%	~10%
56-65	~10%	~10%	~70%	~10%
66-75	~10%	~10%	~70%	~10%
76-85	~10%	~10%	~70%	~10%

### Satisfactions

There are more passengers who are more satisfied with the in flight services during their trips.

Time	Satisfaction (%)
1	~80%
2	~85%
3	~90%
4	~95%
5	~98%

### Check-in services

An high percentage of passengers (56.5%) are more dissatisfied by the check in service at the airports.

Category	Dissatisfied (%)	Satisfied (%)
Check-in Service	~56.5%	~43.5%

### Online booking

Majority of the returning passengers had online booking (86.3%) very easy, while 10.88% first-time passengers found online booking a bit difficult.

Category	Very Difficult (%)	Difficult (%)	Easy (%)	Very Easy (%)
First-time	~10.88%	~10.88%	~10.88%	~68.24%
Returning	~10.88%	~10.88%	~10.88%	~68.24%

### In-flight services

Majority of the passengers were satisfied with the inflight services of food and drink and also the in flight entertainment of food and drink during the flight.

Service	Satisfied (%)
In-flight Services	~75%
In-flight Entertainment	~75%

### Class type

Approximately 48% of business class travelers have the highest number of passenger seats.

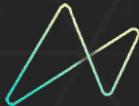
Class Type	Percentage
Business	~48.0%
First	~7.25%
Premium Economy	~44.75%
Economy	~1.0%

### Food and drink

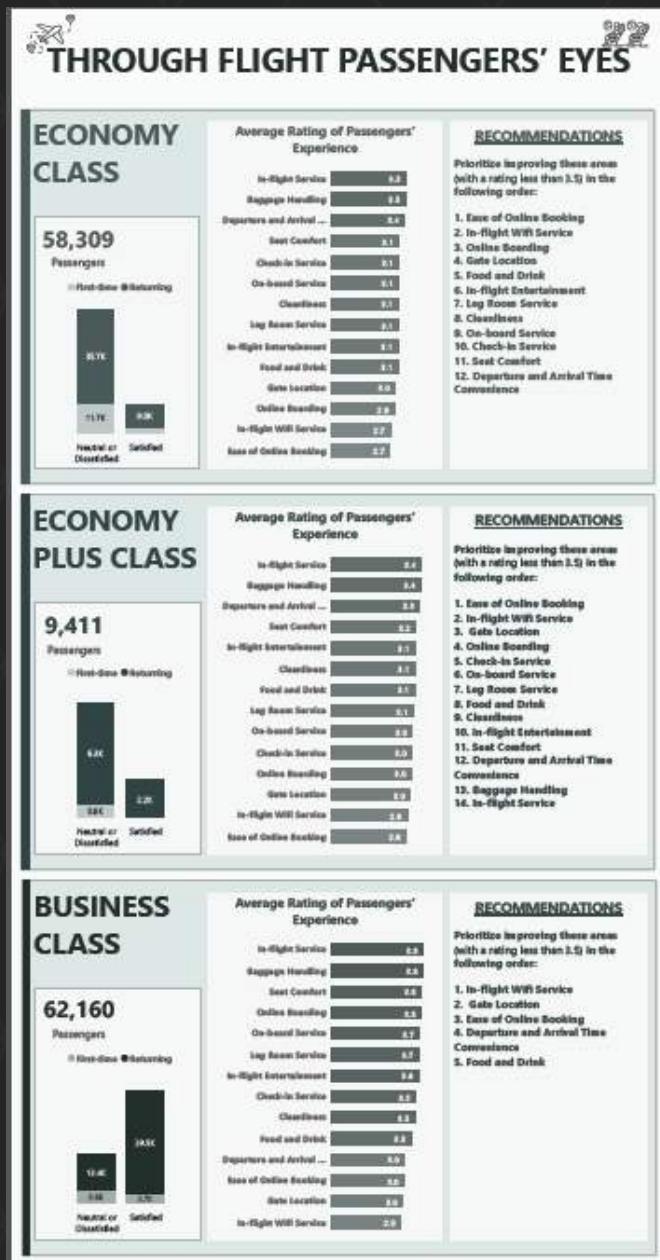
Majority of the passengers were satisfied by the food and drink served during the flight.

Category	Satisfied (%)
Food	~75%
Drink	~75%

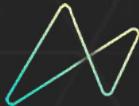
# Enoch Adetunji



# AIRLINES CHALLENGE



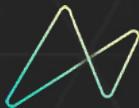
Ezekiel Oladiran



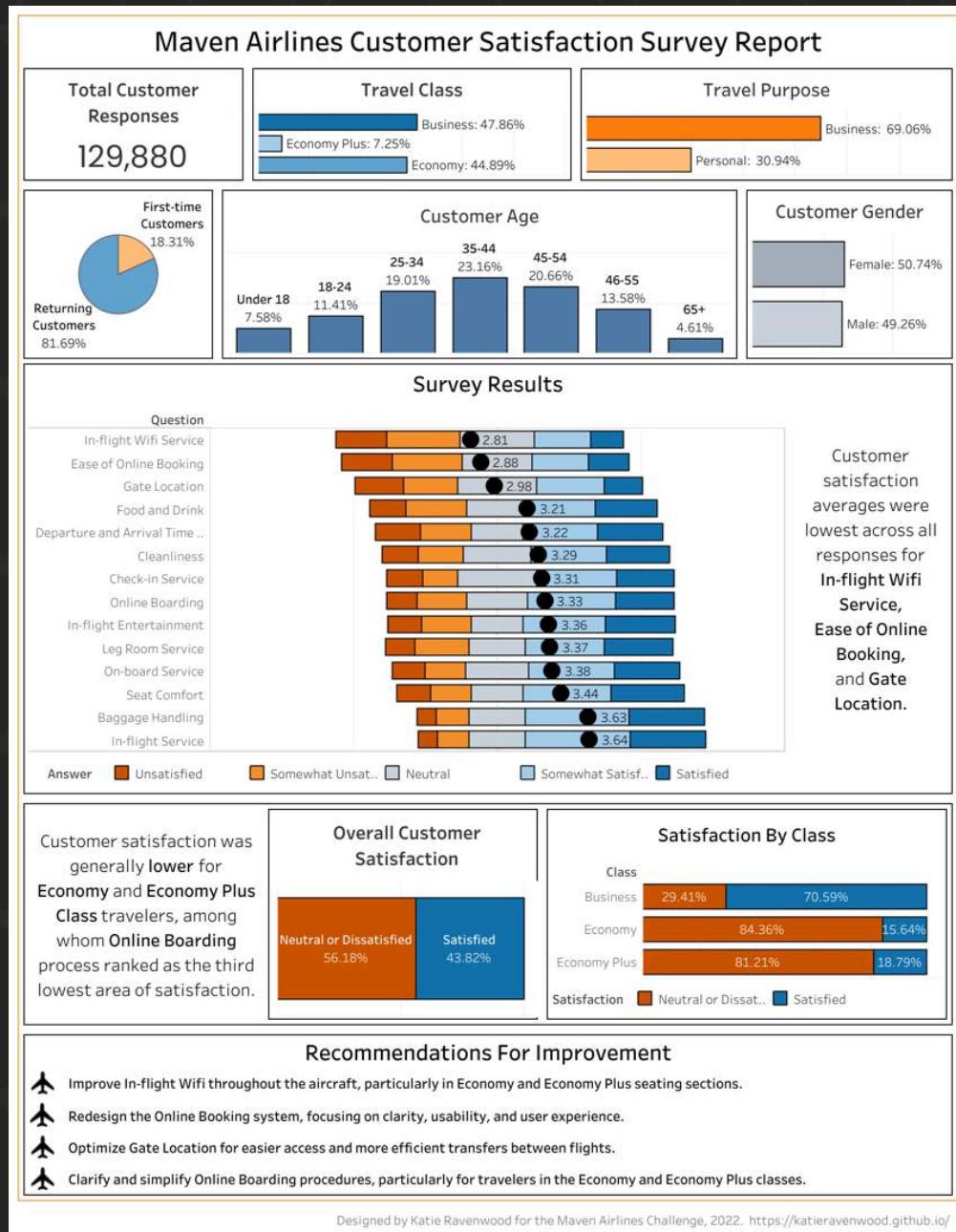
# AIRLINES CHALLENGE



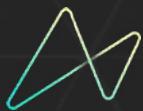
Bryan Ray Bantilan



# AIRLINES CHALLENGE



# Katie Ravenwood



# AIRLINES CHALLENGE

## Maven Airlines Dashboard



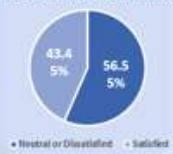
Average Departure Delay (Minutes)	Average Arrival Delay (Minutes)
14.71	15.09

TICKET

TO DO



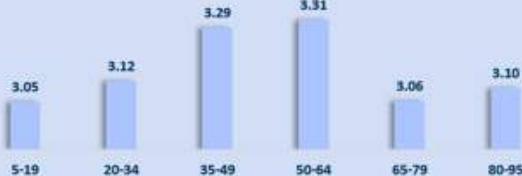
Distribution of Passengers based on their Satisfaction



## Average Customer Ratings

In-flight Service	3.64
Baggage Handling	3.63
Seat Comfort	3.44
On-board Service	3.38
In-flight Entertainment	3.36
Leg Room Service	3.35
Check-in Service	3.31
Cleanliness	3.29
Online Boarding	3.25
Food and Drink	3.20
Gate Location	2.98
Ease of Online Booking	2.76
In-flight WiFi Service	2.73

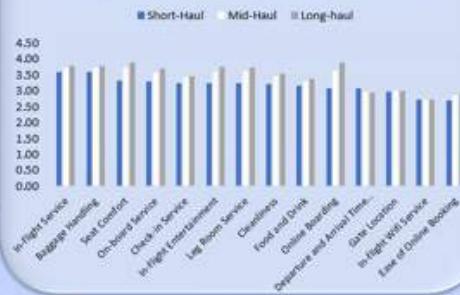
## Average Customer Ratings by Age



Distribution of Passengers Based on their Class (A), Customer Type (B), and Type of Travel (C)



## Average Customer Ratings by Flight Distance



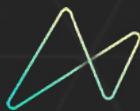
## Average Customer Ratings by Class

	Business	Economy	Economy Plus
In-flight Service	3.85	3.47	3.38
Baggage Handling	3.84	3.45	3.35
Seat Comfort	3.76	3.14	3.17
Online Boarding	3.72	2.81	2.89
On-board Service	3.68	3.12	3.04
Leg Room Service	3.65	3.08	3.06
In-flight Entertainment	3.64	3.10	3.12
Check-in Service	3.52	3.12	3.01
Cleanliness	3.48	3.10	3.12
Food and Drink	3.33	3.09	3.11
Gate Location	2.99	2.97	2.97
Ease of Online Booking	2.92	2.60	2.66
D & A Time Convenience	2.91	3.19	3.21
In-flight WiFi Service	2.91	3.19	3.21

## Strategies for Improvement

- The gate of the flight needs to be in a more convenient location for the passengers; furthermore, ease of online booking, departure and arrival time convenience and in-flight WiFi service needs more improvement.
- More care towards the passengers of low and high age region is necessary.
- The delay in the departure and arrival needs to be mitigated.
- The in-flight service and baggage handling indicates to have the highest amount of positive rating; thus, showcasing these factors as a business-customer communication can be extremely helpful.

# Arhit Roy Chowdhury



# AIRLINES CHALLENGE

**MAVEN ANALYTICS**  
AIRLINE CHALLENGE

Total number of passengers

129880

Satisfaction

Neutral or Dissatisfied (36.55%)  
Satisfied (63.45%)

Type of Travel

Business (10.94%)  
Personal (89.05%)

Class

Business (44.89%)  
Economy (47.86%)  
Economy Plus (7.25%)

DEMOGRAPHIC STRUCTURE OF UNSATISFIED PASSENGERS

Gender of passengers

Gender: Female (51.22%)  
Male (48.77%)

Ages of passengers

Age distribution chart showing a peak around 30-40 years.

Youth (18 to 35 years)

26667

LOWEST RATED SERVICES

In-Flight Wifi

2.40

Ease of Online Booking

2.55

Online Booking

2.66

In-flight Entertainment

2.89

Cleanliness

2.93

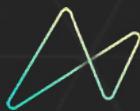
**TASK**

Proposing a data-driven strategy for increasing the satisfaction rate of airline passengers.

**DECISIONS**

- 1 Introducing special discounts for female passengers, especially for mothers with kids.
- 2 Introducing special discounts for young passengers(music festivals or so), students opinion is crucial.
- 3 Special discounts for people who travel with business purposes in economic class.
- 4 Improving the quality of WIFI, some people working online during the flight making more available by price.
- 5 Improving online services(boarding and booking).
- 6 Improving the level of hygiene, pandemic is not yet over.

Aleksandar Vuckovic



# AIRLINES CHALLENGE



Maven Airlines

## Passenger Satisfaction Analysis

129880

Passenger Responses

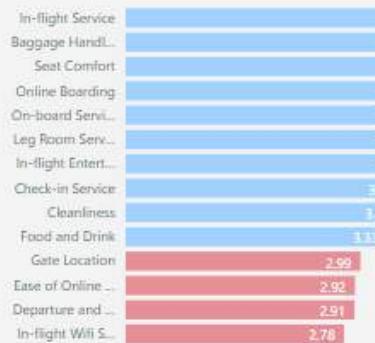
44%

Customer Satisfaction Rate

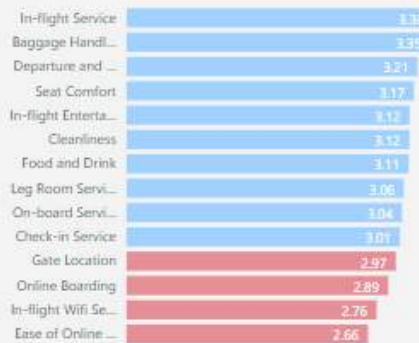


Passenger satisfaction level grouped by travel class. Criteria having average rating less than 3 are highlighted in pink. These areas need to be worked upon to improve passenger satisfaction.

### Business Class



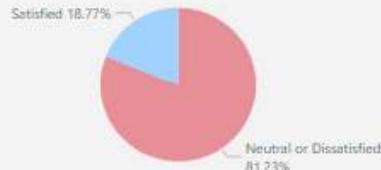
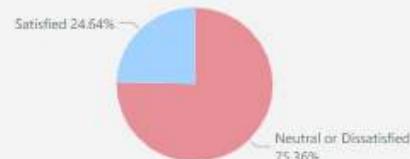
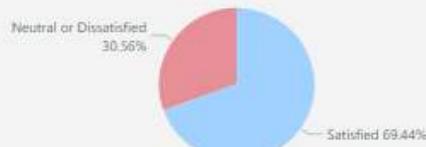
### Economy Plus Class



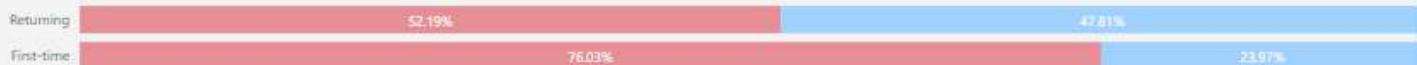
### Economy Class



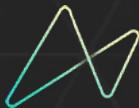
Business class passengers tend to be more satisfied than passengers travelling in other classes



Most first-time passengers do not feel satisfied about their flight experience



# Abhishek Achuthankutty



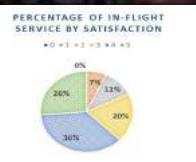
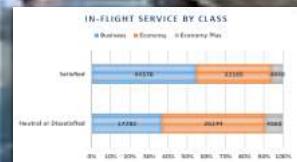
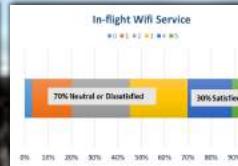
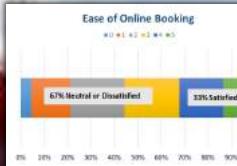
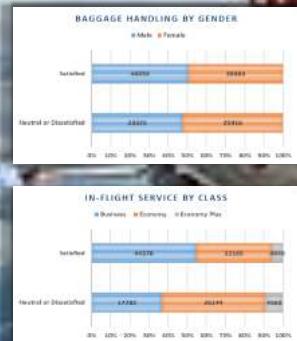
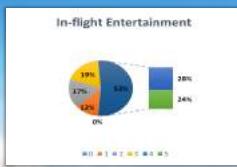
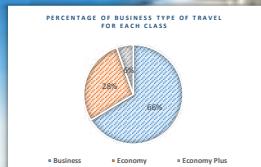
# AIRLINES CHALLENGE

MAVEN ANALYTICS AIRLINES CHALLENGE.

130K

TOTAL PASSENGERS

## PASSENGERS SATISFACTION ANALYSIS.



### Explanations.

- The highest percentage (66%) of individuals travelling for Business reasons travel with the Business class because the average delay is minimal compared to the Economy Class.
- Greater percentage (53%) of the population who were neutral or dissatisfied with the Baggage Handling service were women, while the greater percentage for the satisfied shifted a bit to the male's side (51%).
- The high percentage (53%) of the individuals satisfied with the In-Flight Service was greatly influenced by the Business class of travel, while the neutral or dissatisfied were mostly from the Economy class (54%).

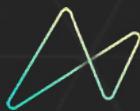
### Recommendations.

- Cost spent on advertising the Business Class of Travel should be more than the cost spent on other classes and should be advertised mainly to Business Organizations.
- The Baggage Handling Service for females should be improved upon to get a greater percentage of Satisfied individuals.
- In-Flight Service for the Economy class should be given great concentration and improved to get the percentage of Neutral or Dissatisfied.

### Insights.

- Services with a higher percentage of Satisfaction to Neutral or Dissatisfied - Baggage Handling (62%), In-Flight Service (62%), Seat Comfort (56%), On-Board Service (53%), In-Flight Entertainment (52%) and Leg-Room Service (52%).
- Services with a higher percentage of Neutral or Dissatisfied to Satisfied - In-Flight Wi-Fi Service (70%), Ease of Online Booking (67%), Gate Location (64%), Food and Drink (54%), Check-in Service (52%) and Cleanliness (52%).
- Only the Online Boarding Service had 50% Satisfied and 50% Neutral or Dissatisfied.

Kanyinsola Darasimi



# AIRLINES CHALLENGE

MAVEN  
ANALYTICS

Total Passengers

120K

Total Flight Distance

146M

Total Delay Hours

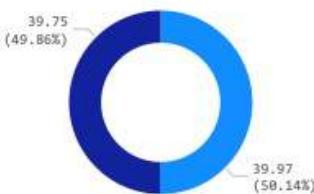
60K

Customer Type

First-time  
Returning

## Gender by Age

Gender ● Male ● Female



## Pre Flight Service Rating

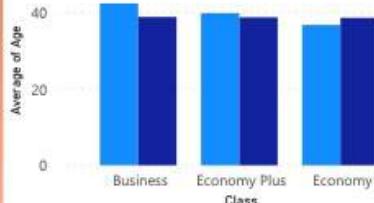
On-board Service	Check-in Service	Ease of O...
3.39	3.29	
Online Boarding	Gate Location	
3.33	2.99	2.88

## In and Post Flight Service Rating

In-flight Service	In-flight Entertainm...	Food an...	Depart...
3.65	3.38		
Baggage Handling	Leg Room Service		
3.64	3.38	3.21	3.21
Seat Comfort	Cleanliness	In-flight Wifi Service	
3.46	3.29	2.82	

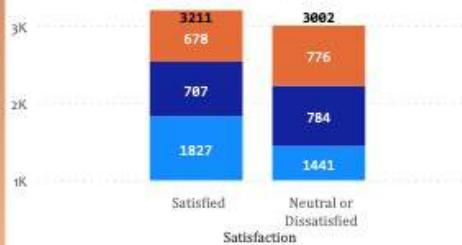
## Age wise Class and Travel Type

Type of Travel ● Business ● Personal



## Class-Satisfaction by Average Flight Distance

Class ● Business ● Economy ● Economy Plus



## Dissatisfied Customers

Neutral or Dissatisfied

Average Age

37.88

Average Flight Distance(Miles)

959.04

Average Arrival Delay(Min)

17.23

## Satisfied Customers

Satisfied

Average Age

42.52

Average Flight Distance(Miles)

1579.68

Average Arrival Delay(Min)

12.67

## Satisfaction by Class and Gender

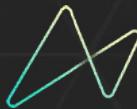
Satisfaction ● Neutral or Dissatisfied ● Satisfied



## Insights and Suggestions

- Out of **28% dissatisfied males**, 37% boarded for the first time; whereas, out of **30% dissatisfied females**, 48% boarded for the first time. 26% of dissatisfied males and females were the regular ones
- Among **58% of a dissatisfied customers**, 48% is shared by Business Class People while Economy and Economy Plus is sharing an equal proportion of people, i.e., 26%
- In the Pre-flight service rating, the returning dissatisfied customers are facing issues in every service except for Check-in. The same is true for In and Post Flight Service Rating
- The average age of returning customers is approx. 40 years and a majority (48%) of them are traveling in Business Class. Thus, improving Wi-Fi and maintaining cleanliness in the flight is a necessity
- The delay in Flight has a maximum impact as **60k hours have been delayed**, out of which **39k hours** have contributed towards **unsatisfied first-time and returning customers**

Uddeshya Harsh



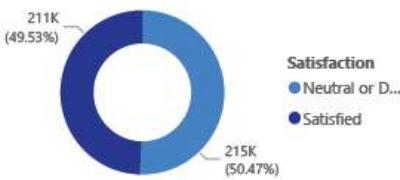
# AIRLINES CHALLENGE

## Maven Airline Passenger Satisfaction



### Passenger Satisfaction

#### Cleanliness by Satisfaction



#### Longest Flight Delay

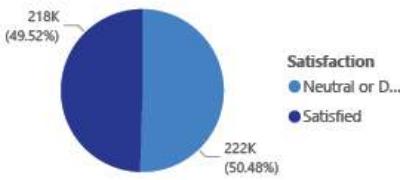
115M

#### Busiest Class - Business

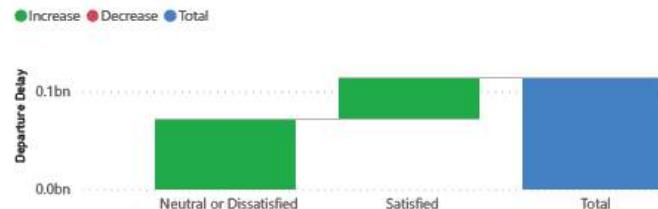
62.16K

Gender: All  
Age Group: All

#### On-board Service by Satisfaction



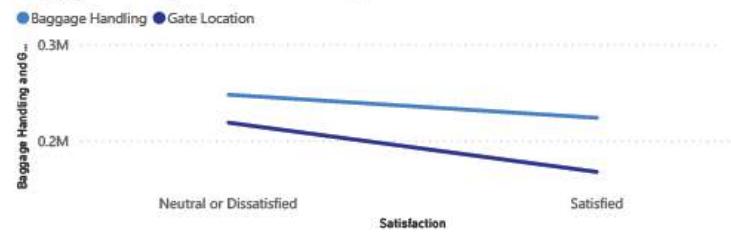
#### Departure Delay and Arrival Time Convenience by Satisfaction



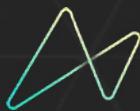
### Recommendations

1. Departure delay and arrival time convenience are on the increase and are an area of concern. Addressing this will go a long way in increasing customer satisfaction.
2. Cleanliness levels need improvement, half of all travellers are more dissatisfied than satisfied.
3. General on-board services need improvement, more than half of all travellers are more dissatisfied than satisfied.
4. Baggage handling and total gate location are positively correlated with each other.

#### Baggage Handling and Gate Location by Satisfaction



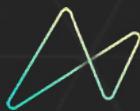
David Amri Gathendu



# AIRLINES CHALLENGE



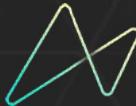
Onur Özcan ÖLMEZ



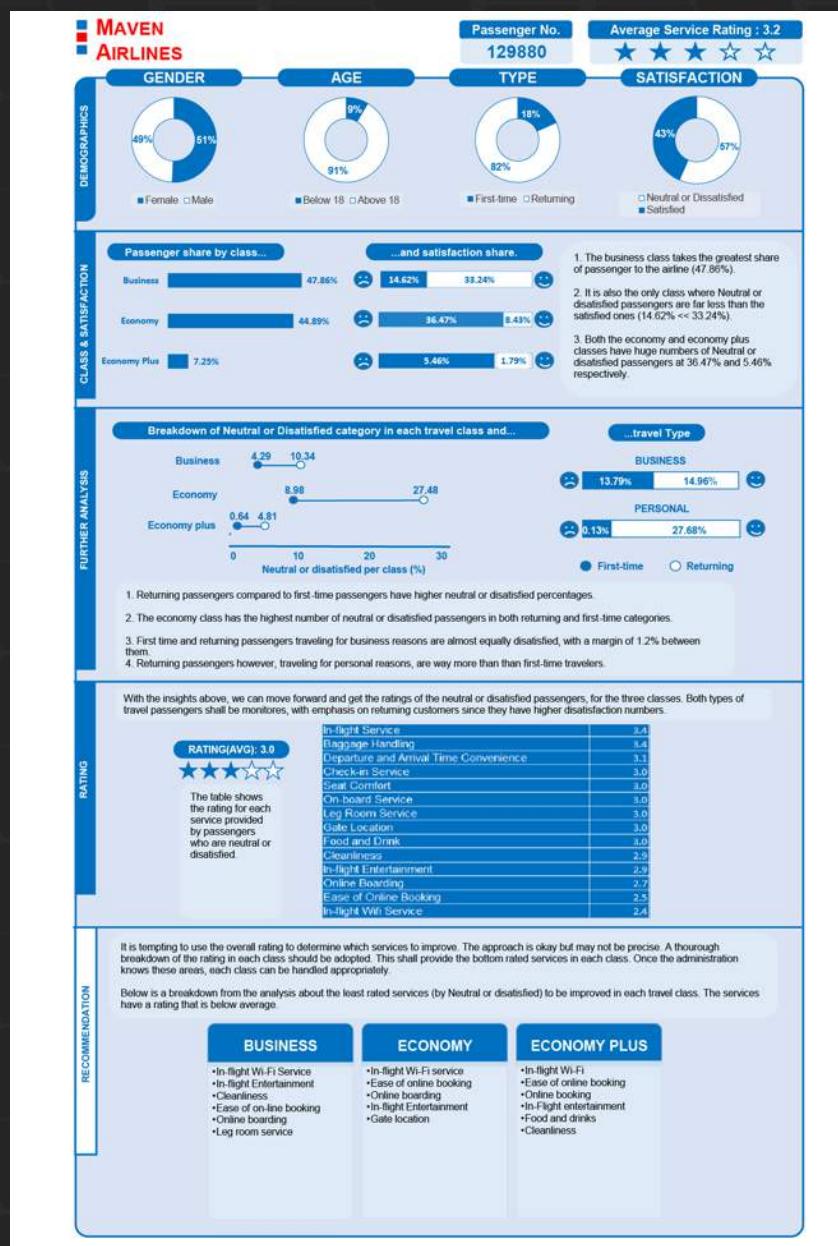
# AIRLINES CHALLENGE



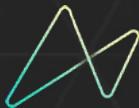
# Bona Nkosingiphile Dlamini



# AIRLINES CHALLENGE



Alinda Alvin



# AIRLINES CHALLENGE

### Maven Analytics Airline Challenge (A Different Approach)

Maven Airlines is a unique company in the aviation world with **48%** of its passengers flying Business Class.

As this report will show, the stark difference between satisfaction rates of Business & Economy class passengers is the MAIN reason behind the low overall satisfaction rates. For simplicity, services have been divided into Pre-Boarding & Post-boarding services.

Records show that even though Business class passengers make up only **48%** of the total number of passengers, they contribute to **77%** of the satisfaction scores for the airline.

So if the airline had an industry-standard Business to Economy class ratio, the overall satisfaction rate of the airline would be around **30%**.

#### Pre-Boarding Services Satisfaction

Overall:

Class	Satisfaction Rate (%)
Business	73%
Economy	22%

Individual Services:

Service	Business (%)	Economy (%)
Baggage Handling	70%	20%
Check-in Service	70%	20%
Flight Time Compensation	70%	20%
Online Booking	70%	20%
Date Location	98%	20%
Online Boarding	77%	20%

Only **21%** of Economy Class passengers are satisfied with Pre-boarding services even though they make up **52%** of the total volume of passengers. Compared to **73%** satisfaction of Business Class Passengers.

#### Post-Boarding Services Satisfaction

Overall:

Class	Satisfaction Rate (%)
Business	75%
Economy	22%

Individual Services:

Service	Business (%)	Economy (%)
Cleanliness	70%	20%
In-Flight Dining	70%	20%
Entertainment	70%	20%
In-Flight Service	70%	20%
WiFi Service	70%	20%
Bag Room Service	70%	20%
On-Board Service	70%	20%
Seat Comfort	70%	20%

Similarly, only **22%** of Economy Class passengers are satisfied with After-boarding services compared to **75%** satisfaction of Business Class Passengers.

#### Summary

1. Maven Airlines disproportionately provides better service for Business class passengers over Economy even though Economy passengers make up **52%** of their customer base!
2. The same services provided to both classes consistently show a big gap in satisfaction rates.
3. The ONLY thing Business & Economy class passengers have in common is their low rating for the Date Location, Online Booking & In-flight WiFi services.

**Economy** Vs. **Business**

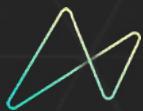
Service	Business (%)	Economy (%)
Date Location	98%	20%
Online Booking	77%	20%
In-Flight WiFi	70%	20%

#### RECOMMENDATIONS

It's essential to Improve **ALL** services for Economy class passengers if the company wants to retain that class. Alternatively, they can switch the strategy to serve only Business class passengers & eliminate Economy class (if feasible). In either case, they will have a **77%** satisfaction rate.

Combine that with improving the lowest rated 3 services to above an average rating of 3.0 & the company can easily surpass the **80%** satisfaction rate.

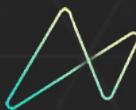
# Mohamed Elsayed



# AIRLINES CHALLENGE



# Ozzy Refandi



# AIRLINES CHALLENGE

## Maven Airlines Customer Satisfaction Analysis By The CoCo

**Total passengers** 129.88K **Maximum delay time** 1592 **Satisfied Customers** 56.43K **Dissatisfied Customers** 73.45K **Lowest avg rating** 2.73 **Average of In-flight ...**

**Customer Type**

Customer Type  
● Returning  
● First-time

**Customer Type Compared By Age**

Customer Type ● First-time ● Returning  
50K  
0K  
10-15 16-29 30-49 50 above

**INSIGHTS**  
This chart shows that majority of the customers are middle aged and above.  
The middle aged and above also make over 80% of the returning customers.  
The returning customers stand at 81.69% of the total customers which shows the company has a high retention rate.  
The new customers are minimal which has a positive and negative side:  
Positive side being that customers are being retained.  
Negative side being that the company is not doing enough to attract new customers.

**Gender**

Female  
Male

**Satisfaction**

Neutral or Di...  
Satisfied

**INSIGHTS**  
A lot of people were either neutral or dissatisfied which is not a good look for the company.  
More women felt unsatisfied with the services compared with the men, although the margin wasn't much.

**Satisfaction By Class**

Satisfaction ● Neutral or Dissatisfied ● Satisfied  
100%  
50%  
0%  
Business Economy Economy Plus

**INSIGHTS**  
Majority of the neutral and dissatisfied came from people who boarded the Economy and Economy plus class of flight.  
This needs to be looked into.

**AVG Of Rating On Services**

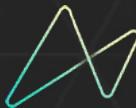
Service	Rating
Baggage Handling	3.63
Check-in Service	3.31
Cleanliness	3.29
Ease of Online Booking	2.76
Food and Drink	3.20
Gate Location	2.98
In-flight Entertainment	3.36
In-flight Services	3.36

**INSIGHTS**  
The in-flight wifi services had the lowest average rating followed by the ease of online booking.

**RECOMMENDATIONS**

1. The WiFi in flights have to be looked into as passengers are not satisfied with it.
2. The economy and economy plus class shouldn't be treated as outcasts compared to the business class.
3. There should be a reach out to the younger generation as majority of the passengers are above middle age.
4. The online booking website has to be made user friendly to enable easy booking of flight.

# Kingsley Okpara



# AIRLINES CHALLENGE

## Maven Airline | Customer Satisfaction Report



The recent maven airline customer satisfaction survey results dropped under 50% for the first time ever. This report shows Key insights to be focused on for getting back on track.

Total Passenger

**129,880**

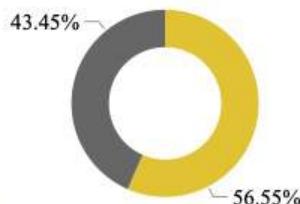
Avg. Departure Delay

**14.71**

Avg. Arrival Delay

**15.09**

Overall Satisfaction. 43.4% are satisfied passengers while 56.5% are either Neutral or Dissatisfied passengers.



### Satisfaction By Class

● Neutral or Dissatisfied ● Satisfied



### Top 3 customers' Satisfaction

#### On-board Service

67.66% ★★★★☆ 3.38/5

#### In-flight Entertainment

67.16% ★★★★☆ 3.36/5

#### Seat Comfort

68.83% ★★★★☆ 3.44/5

### Recommendations

1. In flight, wifi has the lowest rating and needs to be fixed by ensuring high-speed internet is available.
2. Online Booking systems need to be more user-friendly.
3. Provide maps for easy access to the gate location.

### Bottom 3 customers' Satisfaction

#### In-flight Wifi Service

54.57% ★★★★☆ 2.73/5

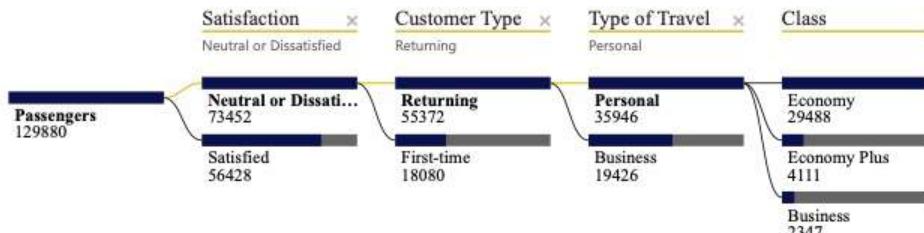
#### Ease of Online Booking

55.14% ★★★★☆ 2.76/5

#### Gate Location

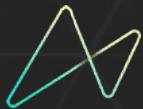
59.54% ★★★★☆ 2.98/5

We need to focus more on First- Time passengers and Economy class passengers.

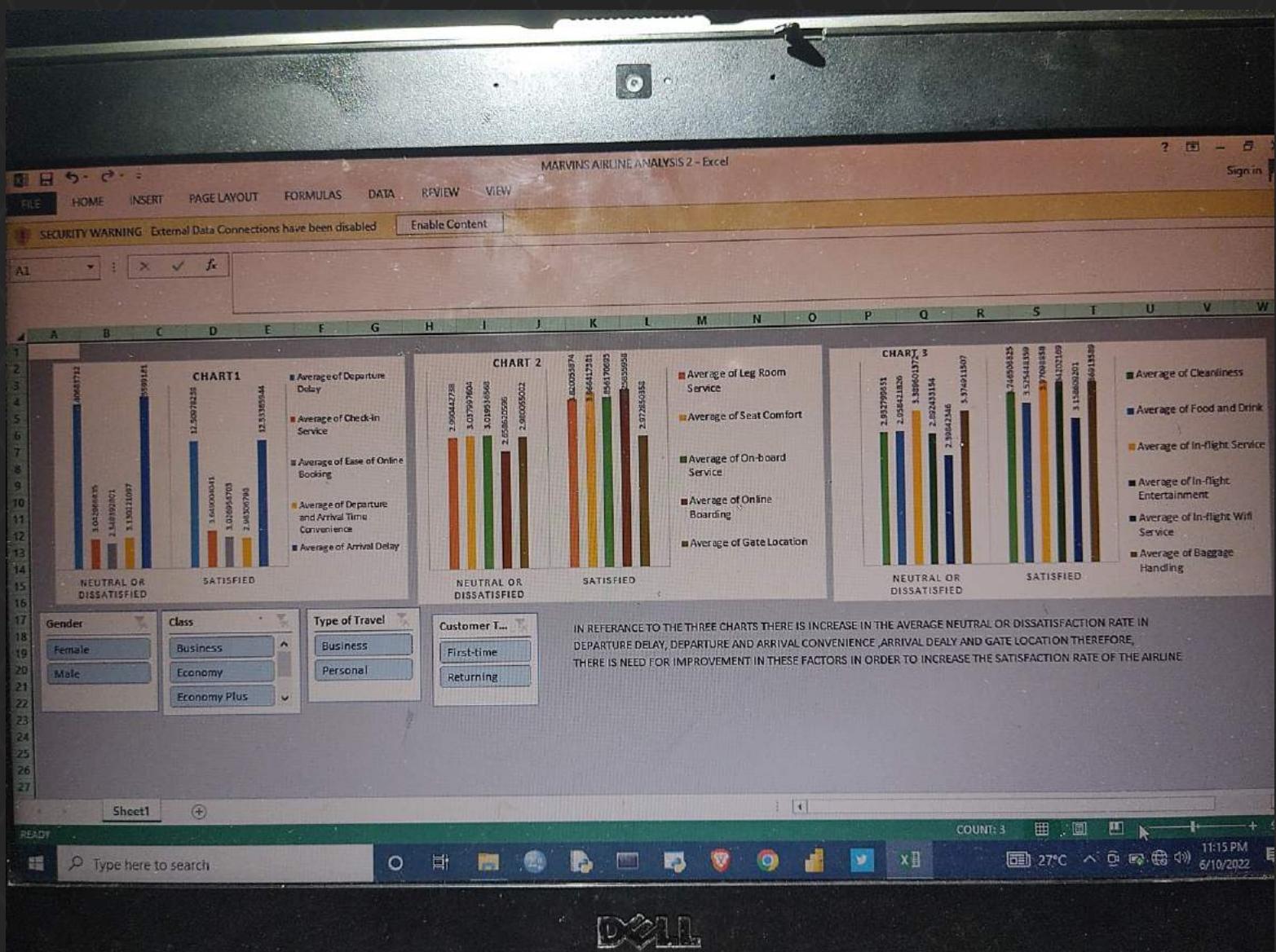


Dashboard Created By Aminat Adedigba.

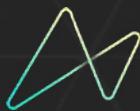
# Aminat Adedigba



# AIRLINES CHALLENGE



Ogunbode Abubakri



# AIRLINES CHALLENGE

**Maven** **Airlines**

<https://www.linkedin.com/in/gaurav-kumar-imags/>

Gaurav Kumar

## Satisfaction meter

**130K**

Total Passengers.

82%  
Regular Customers

18%  
First-time Customers

**1,190**

Avg. Distance

48%  
Business

52%  
Economy

**39 Yrs**

Avg. Age

9%  
14

83%  
40

7%  
65

**3.24/5**

Avg. Rating

3.18  
Pre-Flight Service Rating

3.30  
In-Flight Service Rating

**15 Min**

Avg. Arrival Delay

Baggage Handling  
Check-in Service  
Online Boarding  
Clearliness  
Departure and Arrival Time Convenience  
Gate Location  
Ease of Online Booking

In-flight Service  
Seat Comfort  
On-board Service  
In-flight Entertainment  
Leg Room Service  
Food and Drink  
In-flight Wifi Service

Satisfaction  
All

3.97  
3.65  
4.03  
3.75  
3.13  
2.98  
3.03

3.97  
3.97  
3.86  
3.96  
3.82  
3.53  
3.16

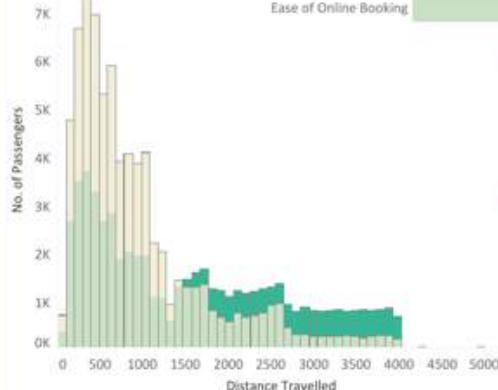
**15 Min**

Avg. Departure Delay

57%

73,452

No. of Passengers



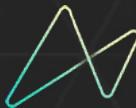
## Findings:

- # 82% of total footfall are loyal customers whose distribution is approximately equally b/w business and economy class.
- # Approval ratings are below par for all categories except business class for regular customers.
- # Flight Distances greater than 1500KM, conclusively have, above average satisfaction rating and vice-versa.
- # In-Flight service rating is found to be satisfactory by customers in comparison to Pre-Flight Services.

## Recommendations:

- # Pre-Flight services vis-a-vis low distance flight dissatisfaction indicates the need for overhauling of unoptimized processes and technical infrastructures.
- # Standardization of economy class as per market leader standards for acquiring and subsequently retaining future customers. Currently economy class is driving away future customers.
- # Fixing & improving wifi-services can lead to increase in regular customer pool and is the most common complaint among customers.
- # Expanding new flights on routes longer than 1500KM rather than focusing on short routes will create customer-stickiness and more footfall as per current trend.

**Gaurav Kumar**



# AIRLINES CHALLENGE



## CUSTOMERS SATISFACTION REPORT



MAIN GOAL: "Elaborate a data-driven strategy for increasing Maven Airlines' satisfaction rate."

Gender  
All

Age Range  
All

Customer Type  
All

Type of Travel  
All

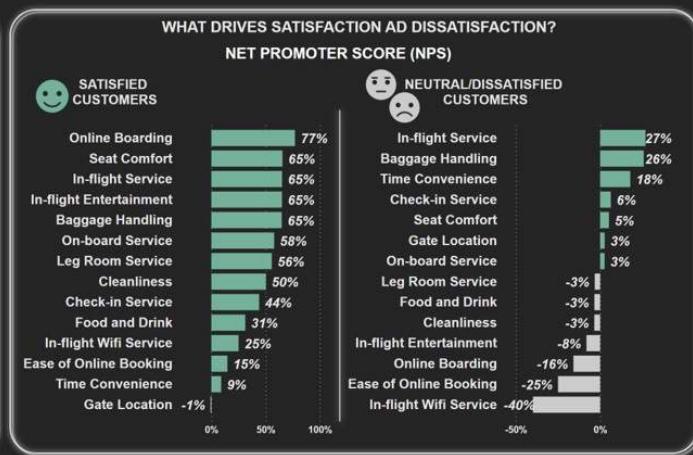
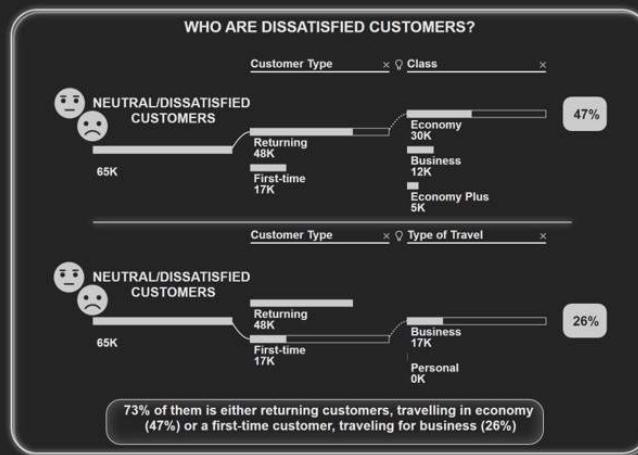
Travel Class  
All

Delay / No Delay  
All

Selected Sample: N= 120K

Percentage Total Sample 100%

### KEY INSIGHTS



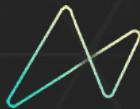
### WHAT NEXT?

- ⌚ **DELAYS:** TRY TO REDUCE THEM AS IT WOULD SLIGHTLY REDUCE GENERAL DISSATISFACTION. HOWEVER, THERE IS TO KEEP IN MIND THAT "NO-DELAY" IS A BASIC BENEFIT FOR CUSTOMERS AND THIS FACTOR ALONE WOULD NOT RESOLVE THE ISSUE (ONLY 49% OF CUSTOMERS WITHOUT DELAY ARE SATISFIED vs. 43% OF THOSE HAD A DELAY)
- 😊 **SATISFIED CUSTOMERS:** FOCUS ON KEEP THEM HAPPY BY CONTINUING TO PROVIDE HIGH QUALITY STANDARDS IN THE SERVICES THEY APPRECIATE THE MOST (ONLINE BOARDING, SEAT COMFORT, IN-FLIGHT SERVICE/ENTERTAINMENT, BAGGAGE HANDLING, ON BOARD SERVICE AND LEG ROOM SERVICE).
- 😐 **NEUTRAL/SATISFIED CUSTOMERS:** TRY TO BOOST THEIR SATISFACTION BY IMPROVING IN-FLIGHT WIFI, EASE OF ONLINE BOOKING AND ONLINE BOARDING, WHICH ARE THE ELEMENTS THAT ARE DRIVING DOWN THEIR SATISFACTION THE MOST
- 📍 **WARNING:** ONLINE BOARDING IS HIGHLY POLARIZING SERVICE, HIGHLY APPRECIATED BY SATISFIED CUSTOMERS BUT ALSO STRONGLY DRIVING DISSATISFACTION AMONG THE NEUTRAL/DISSATISFIED ONES: CONSIDER INVESTIGATE FURTHER IF THERE MIGHT BE ANY TECHNICAL ISSUE THAT COULD PREVENT THIS SERVICE TO WORK PROPERLY - GATE LOCATION SHOULD BE ALSO IMPROVED AS IT IS NOT REALLY APPRECIATED NEITHER AMONG SATISFIED CUSTOMERS NOR AMONG NEUTRAL/DISSATISFIED ONES

Dataset clean-up and data excluded from analysis: (a) Removed entries with age <18 y.o. as suspected false entries (e.g. some kids in business trip) - (b) Deleted entries when "arrival delay = blank" as of ambiguous interpretation (e.g. 2hrs of departure delay and "blank" arrival delay causes imprecision in delay understanding). **Analyst Note:** the removal of the mentioned entries do not affect the general customer trends, on the contrary, it allows their sharper interpretation.

NPS: Net Promoter Score = Difference between the percentage of consumers who are satisfied (answered "4" or "5") and the percentage of consumers who are dissatisfied or very dissatisfied (answered "2" or "1"), when rating each of the Airline's offered service.

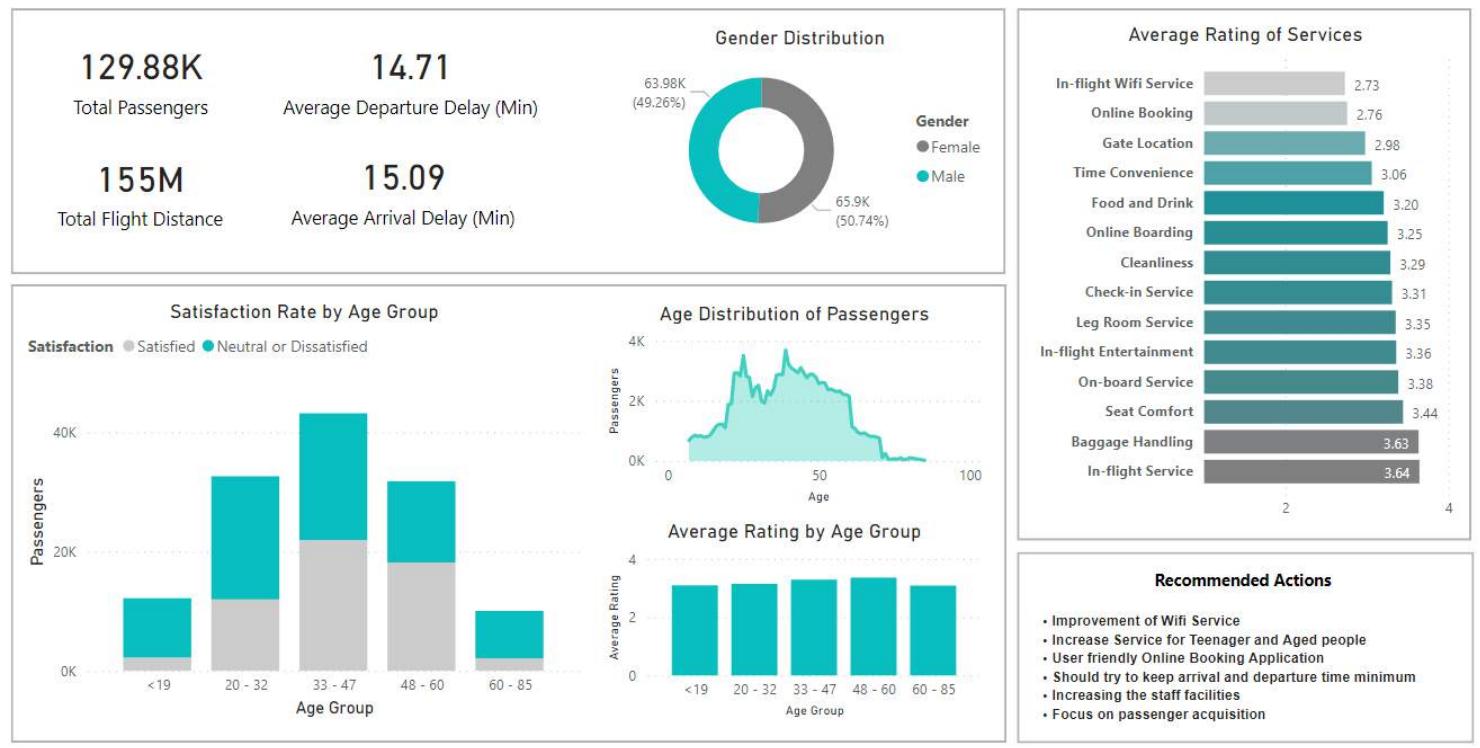
# Stefano Ciurlia



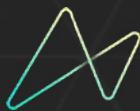
# AIRLINES CHALLENGE



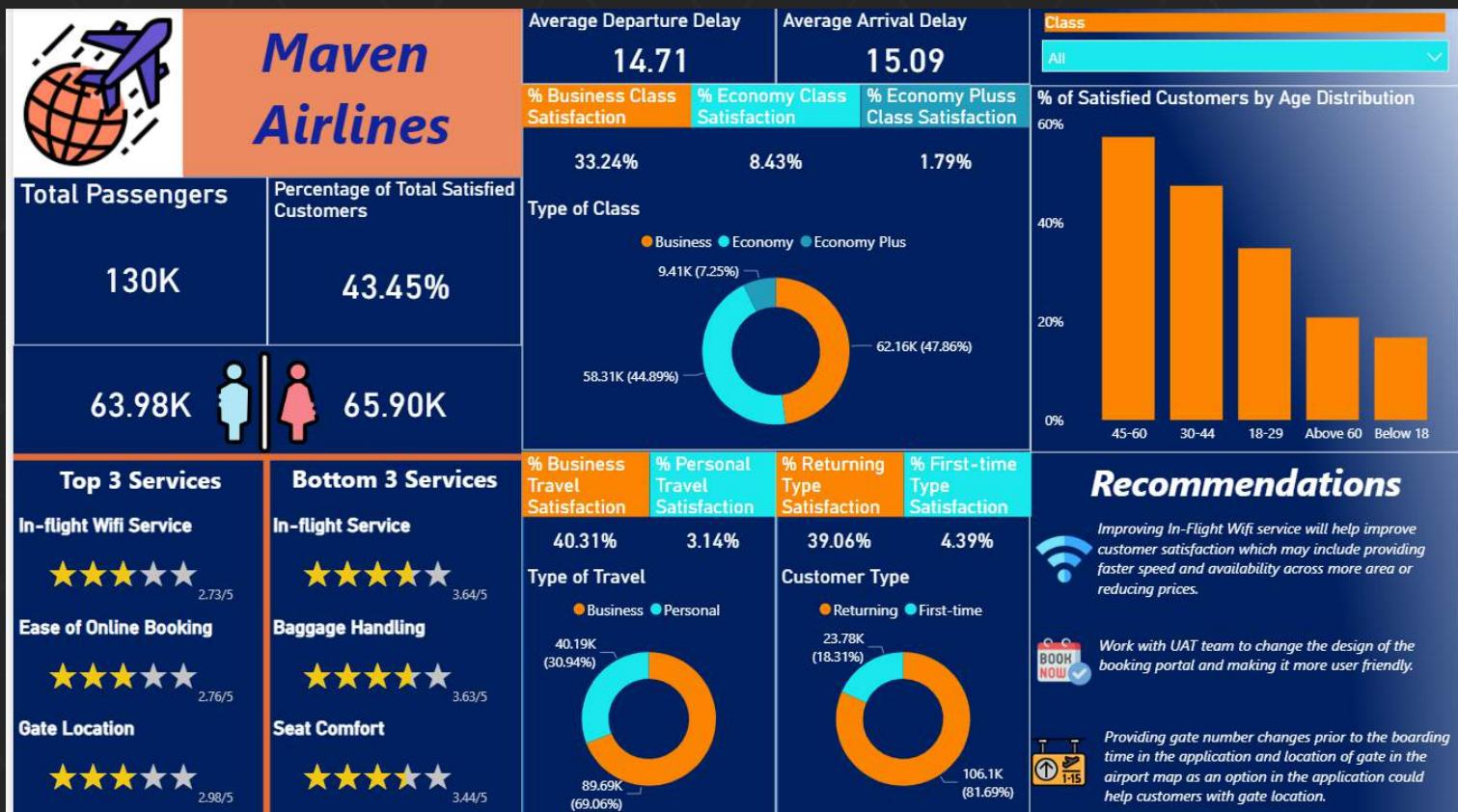
## Maven Airline Passengers Satisfaction Analysis



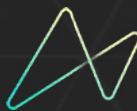
Ahad Chowdhury



# AIRLINES CHALLENGE



Indraneel Phirke



# AIRLINES CHALLENGE



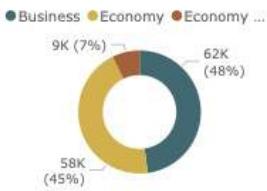
Maven Airlines

**130K**

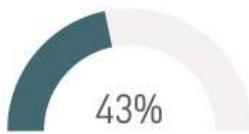
Total Passengers

**3.28**

Overall Rating



Satisfaction Rate



## Quick Insights:

- Male to female ratio is almost same, 50-50.
- 48% of passengers travel business class, eco & eco plus are 52%.
- Satisfaction rate is 43% with overall rating of 3.28.
- Most dissatisfied or neutral passengers are in age group of 25-36, mostly traveling in economy class.
- Most satisfied passengers are in age group of 39-60, mostly traveling in business class.
- Maximum dissatisfaction rate is in economy class, out of total 56%, 36% are from economy class.

## Improvement Areas:

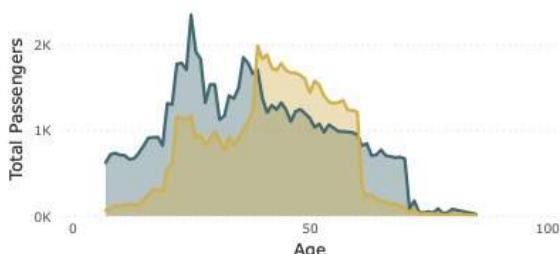
- Inflight Wifi, Ease of online booking and Gate location scored lowest (less than 3) and hence needs improvement.
- Online boarding and food & drinks also needs improvement in case of economy passengers as they score below 3.
- For business class passengers, Arrival and departure delay time is high in short distanced flights compared to long leading to dissatisfaction.

## Average Rating

3.64	Inflight Service
3.63	Baggage Handling
3.44	Seat Comfort
3.38	Onboard Service
3.37	Legroom
3.36	Inflight Entertainment
3.33	Online boarding
3.31	Check-in Service
3.29	Cleanliness
3.22	Dep/Arr Time convenience
3.21	Food & Drink
2.98	Gate Location
2.88	Ease of online booking
2.81	Inflight Wifi

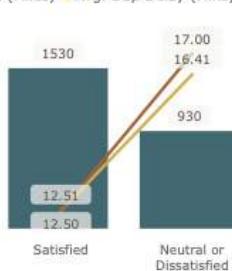
## Satisfaction by Age group

● Neutral or Dissatisfied ● Satisfied

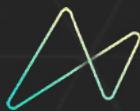


## Distance Vs Delays

● Avg. Distance (Miles) ● Avg. Dep Delay (Mins) ● Avg. Arrival Del...



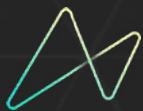
Jaidev Solanki



# AIRLINES CHALLENGE



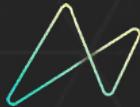
# Siddharth Chakravorty



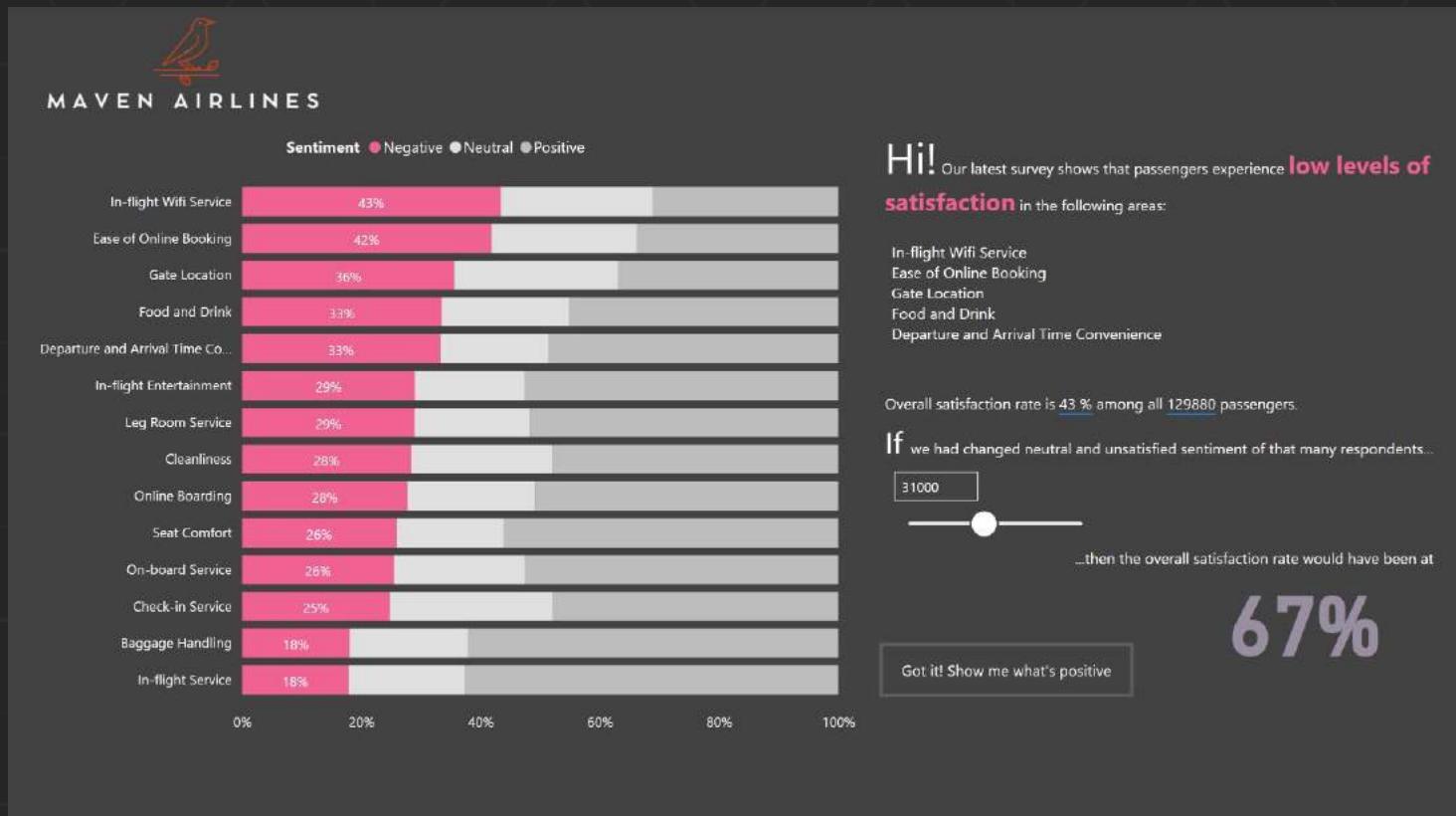
# AIRLINES CHALLENGE



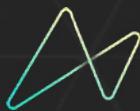
Nebojsha Antic



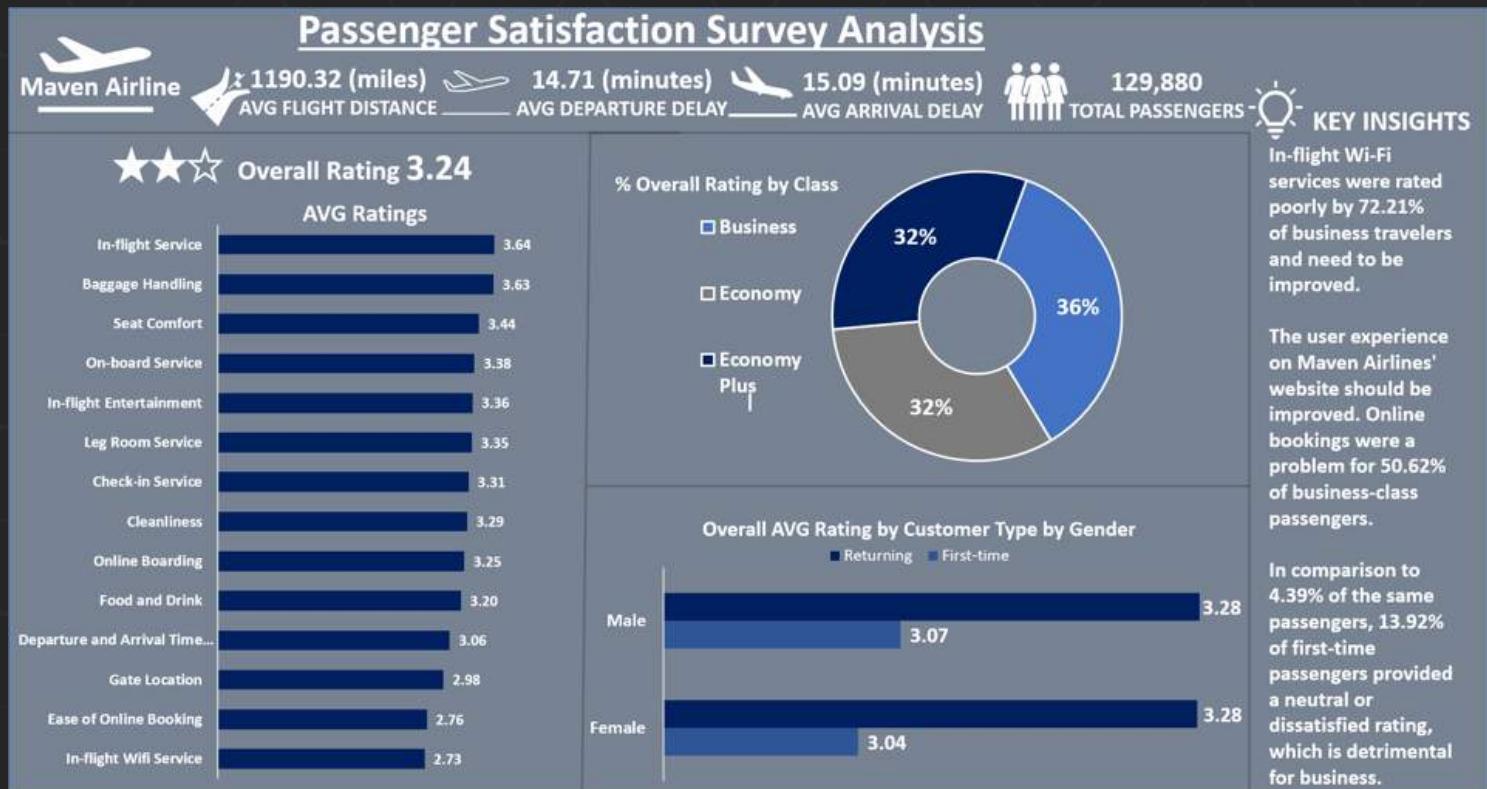
# AIRLINES CHALLENGE



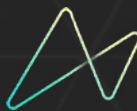
Adrian Wawrzyniak



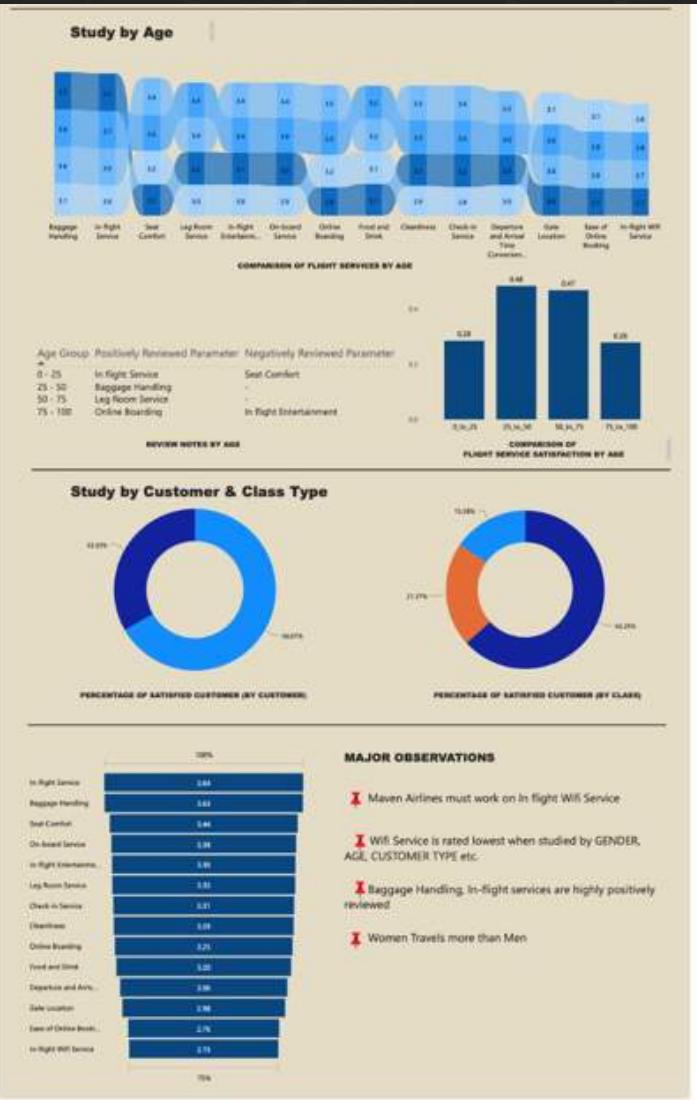
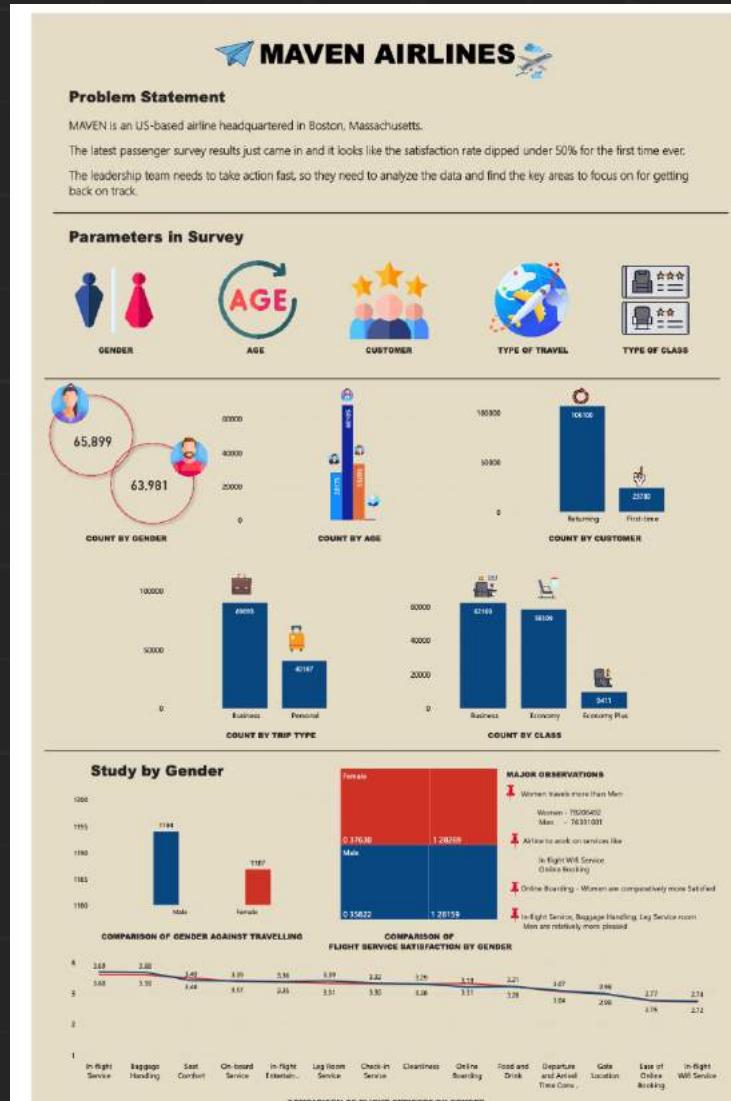
# AIRLINES CHALLENGE



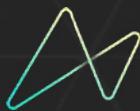
## Sheriffdeen Abatan Oluwatobiloba



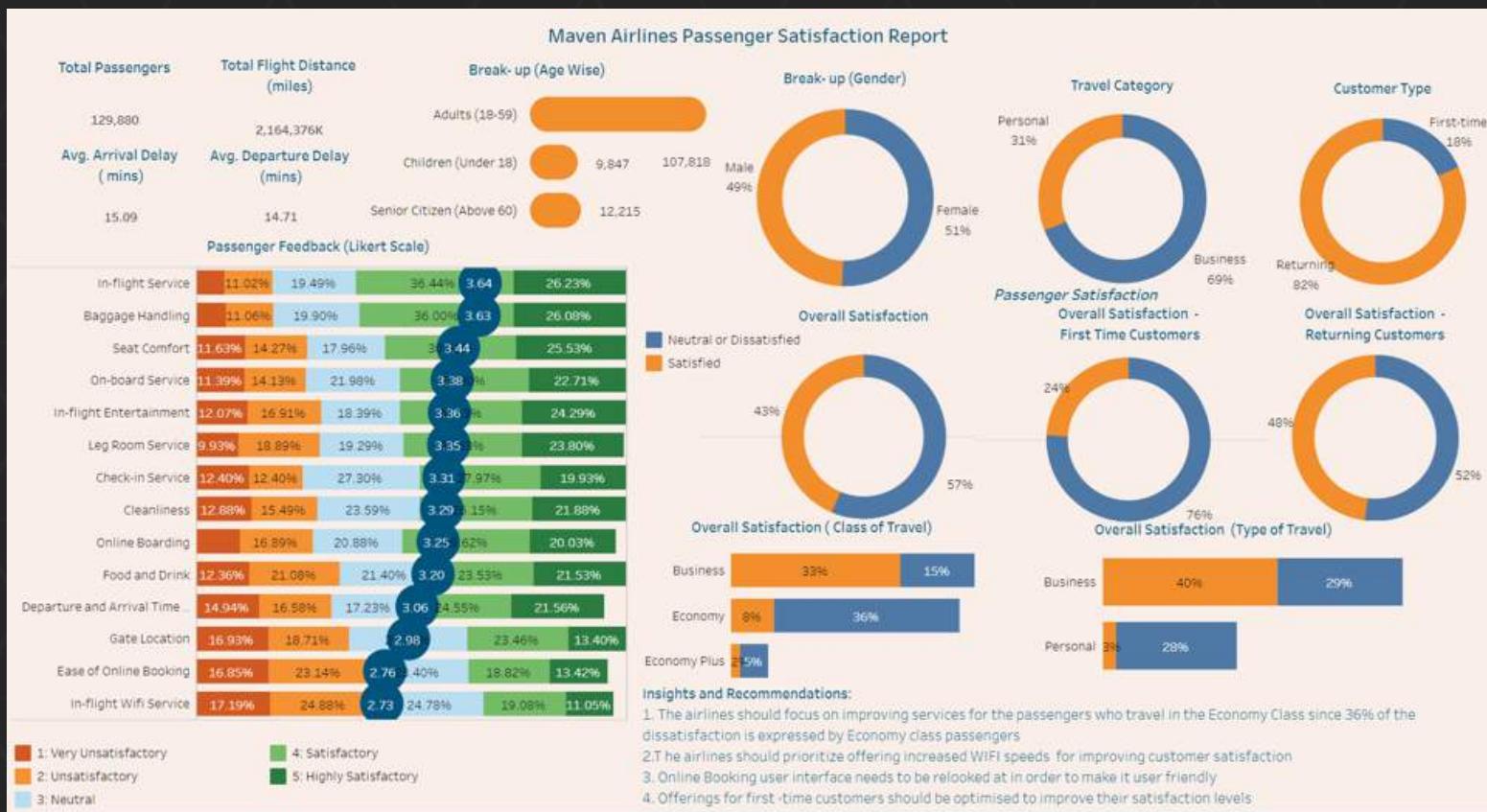
# AIRLINES CHALLENGE



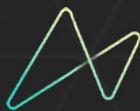
Vedala Satvik



# AIRLINES CHALLENGE



# Divya K. Nayak



# AIRLINES CHALLENGE

## MAVEN AIRLINES

Type of Travel	Class
All	All

1911017

Departure Delay

1954105

Arrival Delay

Average Age, Min of Age and Max of Age

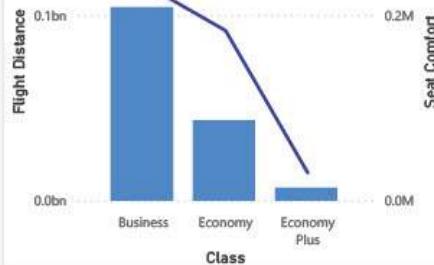


Average Flight Distance



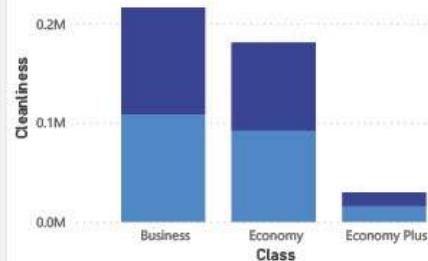
Flight Distance and Seat Comfort by Class

Flight Distance ● Seat Comfort

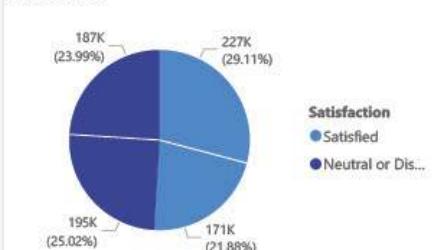


Cleanliness by Class and Gender

Gender ● Female ● Male

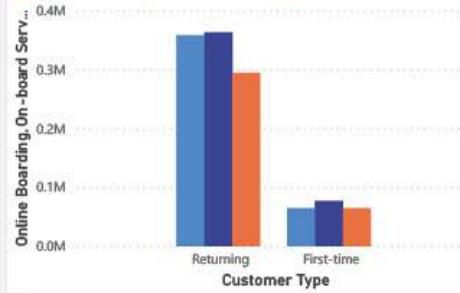


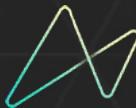
Online Boarding and Ease of Online Booking by Satisfaction



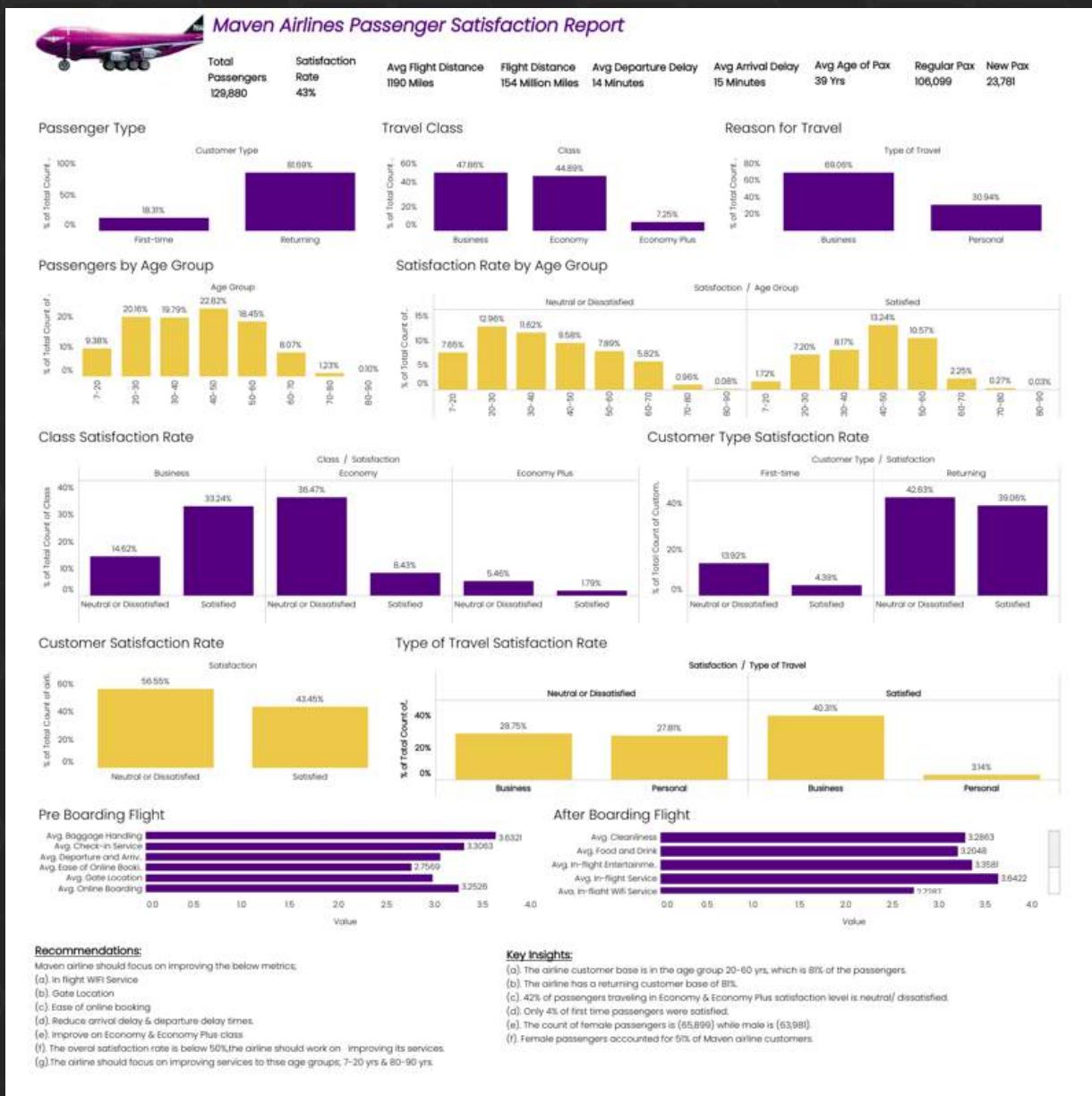
Online Boarding, On-board Service and Ease of Online Booking by Customer Type

Online Boarding ● On-board Service ● Ease of Online Booking

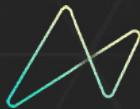
**Ekaspreet Kiran**



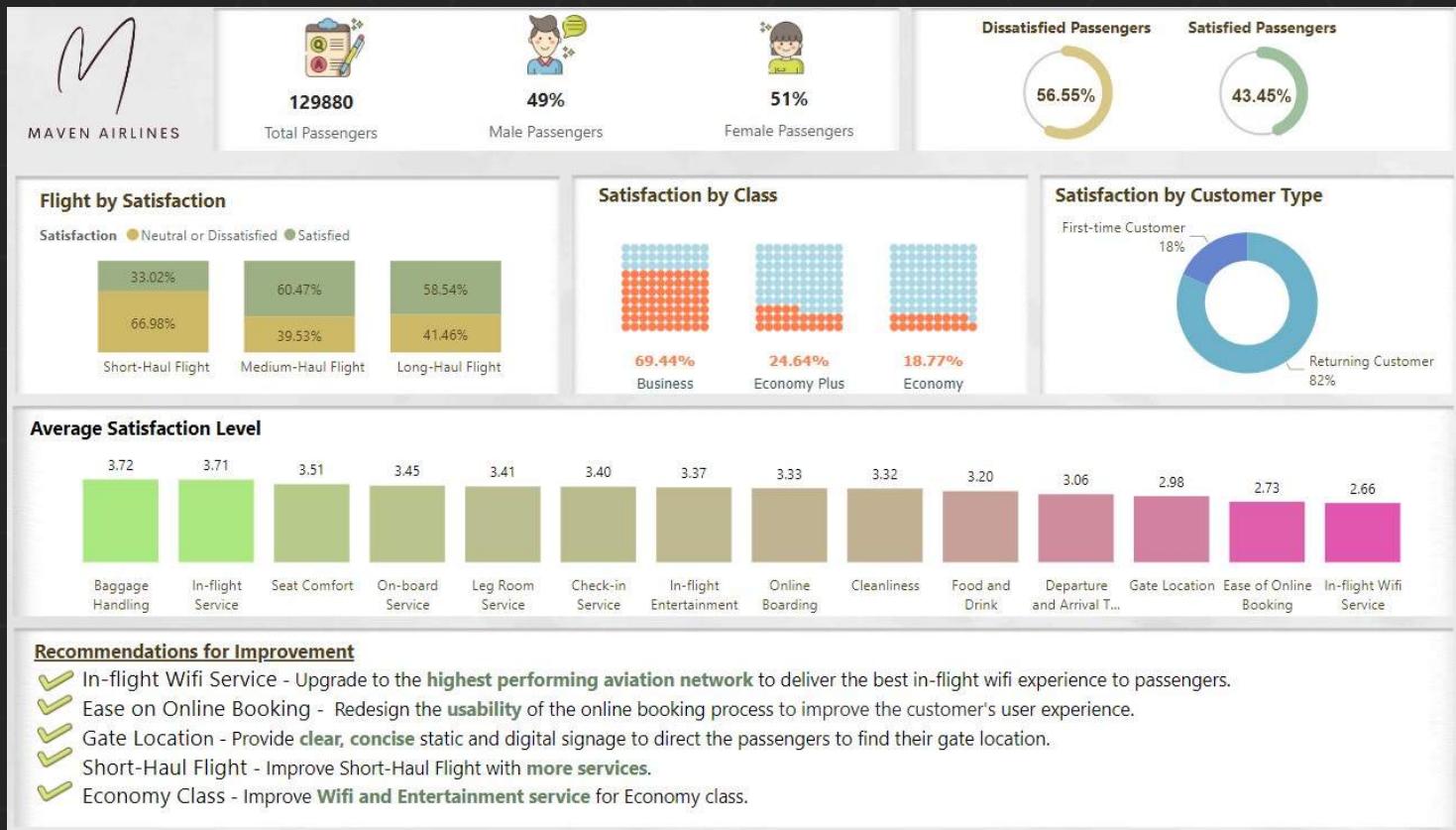
# AIRLINES CHALLENGE



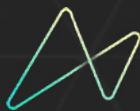
# ANTHONY NDUNGU



# AIRLINES CHALLENGE



**Diane Lim**



# AIRLINES CHALLENGE

## MAVEN AIRLINES

### Basic Informations

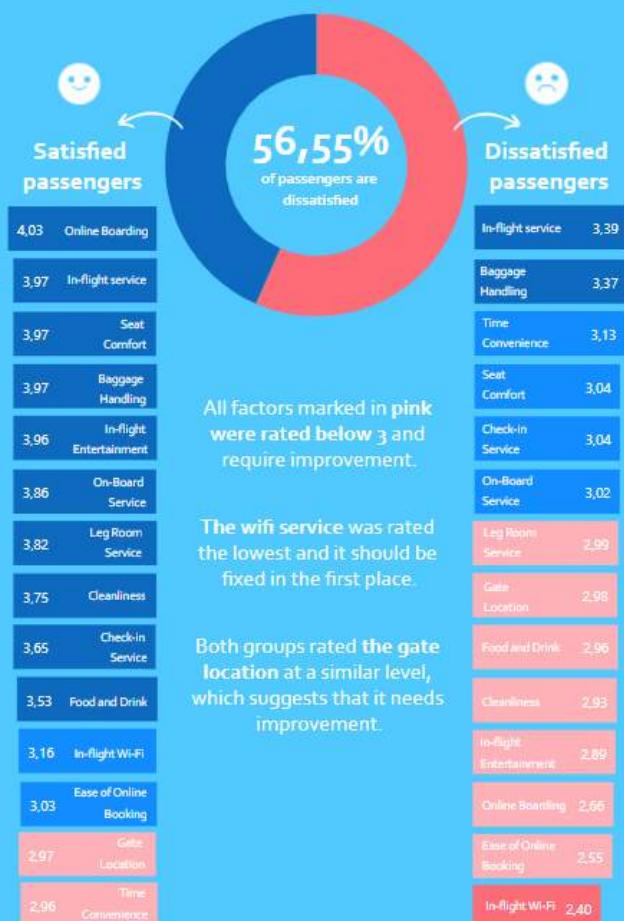


### Age of passengers

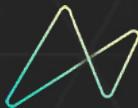
The age group worth focusing on are passengers aged 60-75, they are also a group with a high percentage of dissatisfaction



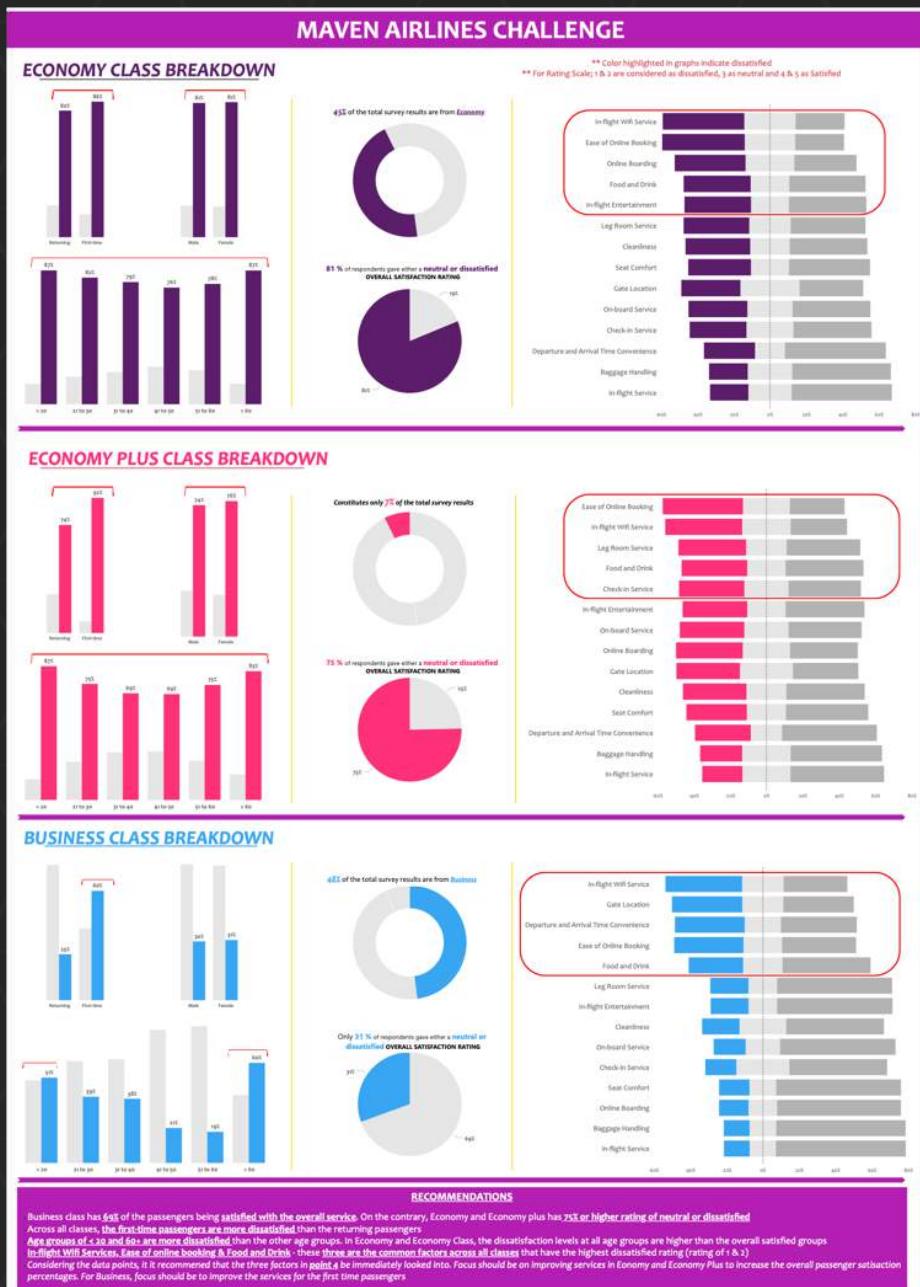
### Satisfaction levels



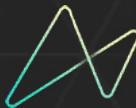
# Justyna Sulisz



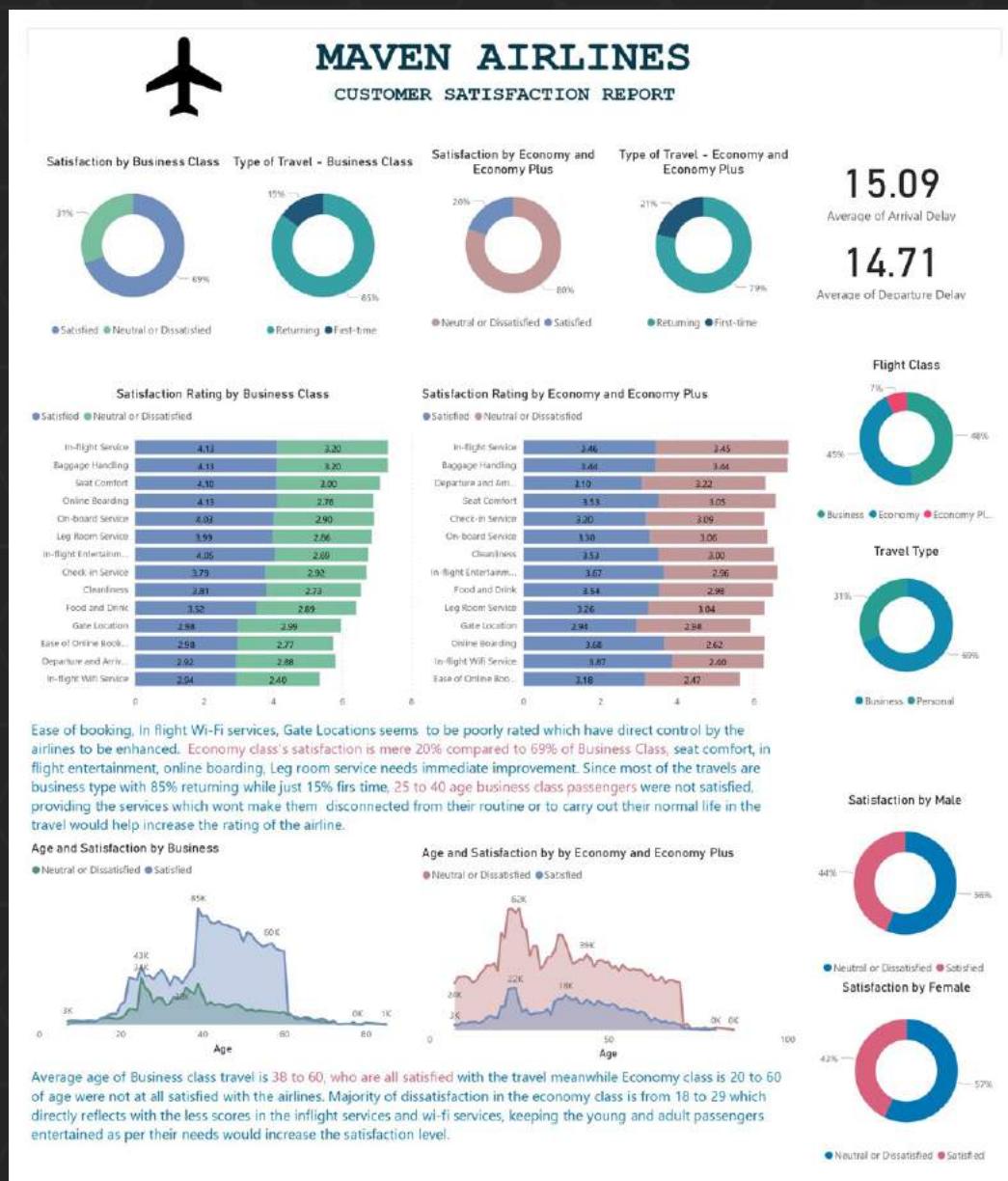
# AIRLINES CHALLENGE



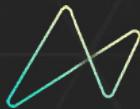
# Mukul V Bharadwaj



# AIRLINES CHALLENGE



# Vignesh Kumar



# AIRLINES CHALLENGE



## MAVEN Airlines Customer Satisfaction Report



Overall Rating  
**3.24**



Reviews  
**130K**



% of Satisfied Customers  
**43.45%**



% of Unsatisfied Customers  
**56.55%**

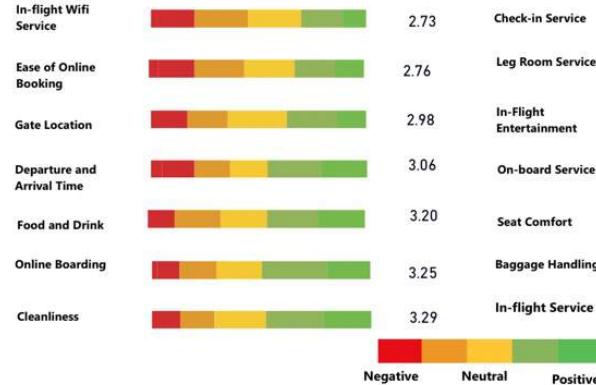
### Customers Satisfied or Dissatisfied by Age groups



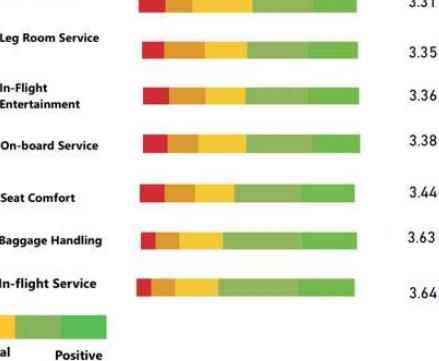
### Overall rating By Customer type and Class



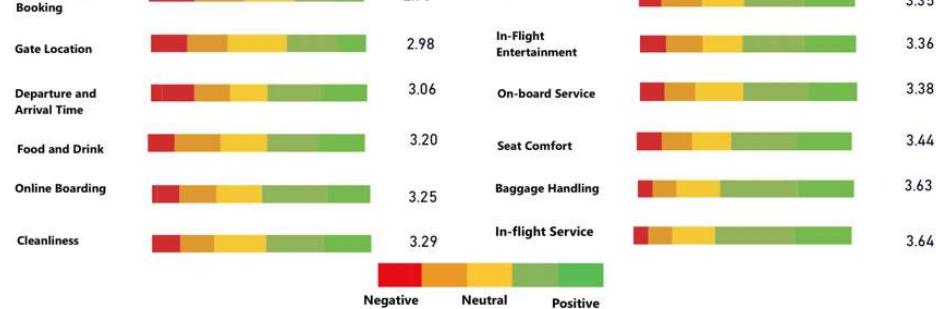
### In-flight Wifi Service



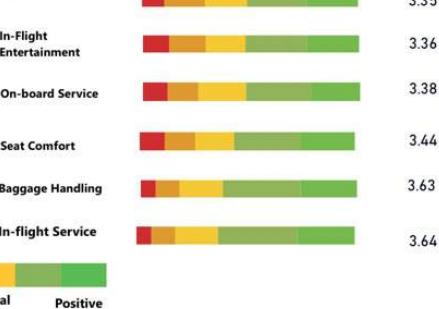
### Check-in Service



### Ease of Online Booking



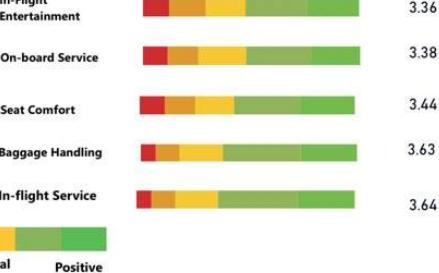
### Leg Room Service



### Gate Location



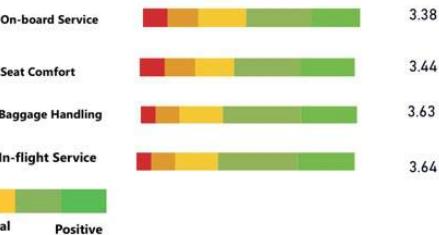
### In-Flight Entertainment



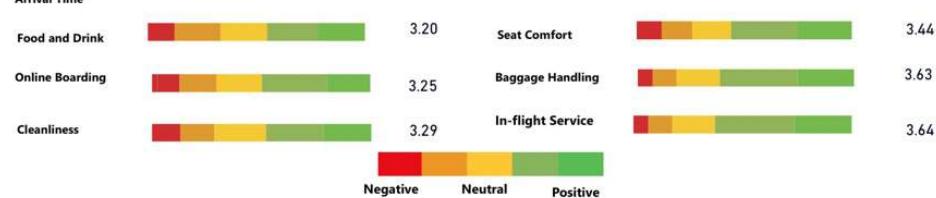
### Departure and Arrival Time



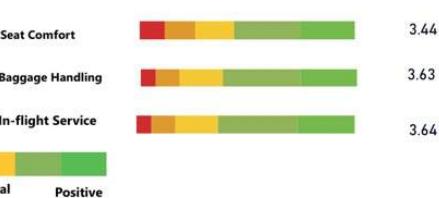
### On-board Service



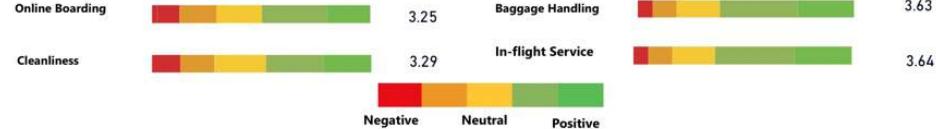
### Food and Drink



### Seat Comfort



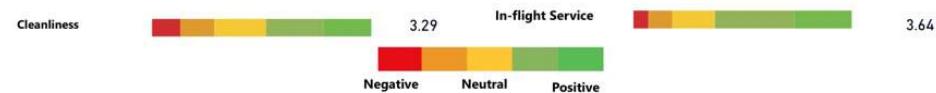
### Online Boarding



### Baggage Handling



### Cleanliness



### In-flight Service



Negative      Neutral      Positive

Source: [https://www.mavenalytics.io/data-playground](https://www.mavenanalytics.io/data-playground)

### Suggestions:

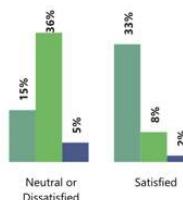
- Most common issue is In-Flight Wi-fi issue need to take quick actions on this.
- Economy class customers are most unsatisfied ones with 81% they are facing issue with online booking and In-Flight Wi-fi service adding more instructions in online booking for economy class might helps.
- Not only for economy class all customers are facing issues with online booking better if we add more instructions at booking page or a option like need help contact our expert.
- Issue with gate location is one common issue changing gate location might helps.

### Insights:

- In Business Class all the ratings are above average rating and Economy plus class having lower than average rating.
- 76.41% of customers travelling are adults.
- In-Flight service is the one having highest average rating over all the classes
- 76% of first time customers are unsatisfied the one of the reasons for them is departure and arrival time convenience average rating is 2.39

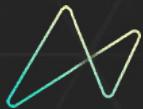
### Customers Satisfied or Dissatisfied by Class

Class    Business    Economy    Economy Plus



Vamsinath Reddy Koduru

# VAMSINATH REDDY



# AIRLINES CHALLENGE

**MAVEN AIRLINES**

Hey! How are you?

Me too! I think it would be nice to have a break.

Me: I am fine. I am providing you with the best service.

Customer: I am going to tell your management about this!

Average of 3.63

Average of 3.36

Average of 2.73

Average of 3.31

Average of 3.29

Average of 3.20

Average of 3.35

Average of 3.25

Average of 3.44

Average of 3.38

Average of 2.98

Average of 3.06

It Happens all the time over the WiFi because of off-set ground.

Me: I interact with you. But the app connects & Baggage handling is good.

Only 10% of the Personal Traveling Passenger satisfied.

OH NO! It's like a game in like a searching Treasure. IT'S Damn Hard. Dude I am Tired.

Satisfaction by Age:

Satisfaction by Class:

Satisfaction by Customer Type:

Satisfaction by Flight Distance:

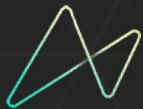
The Passenger with Age Range of less than 35 - is Dissatisfied.

The Passenger in ECONOMY Class are Mostly Dissatisfied.

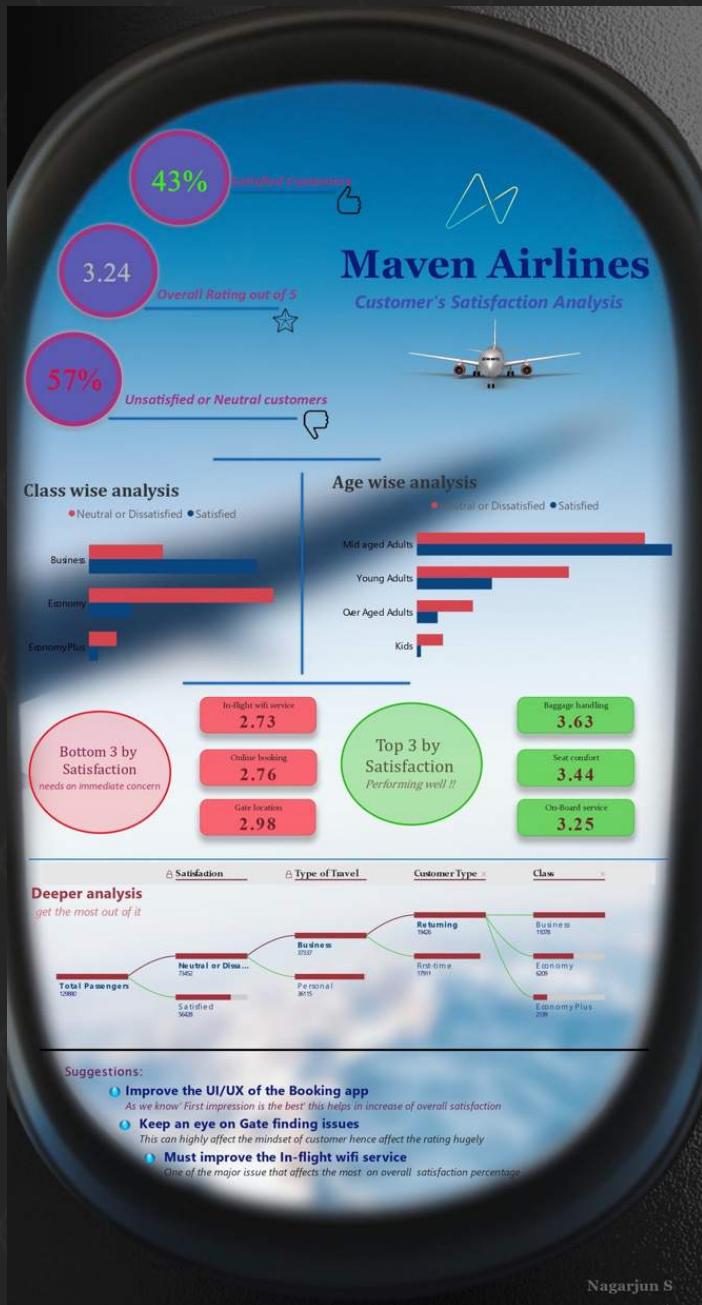
There is First time traveler facing the Discomfort as we see ONLY avg of 24% First time Customers were Satisfied.

The Shorter distance Flight Dissatisfied then Longer Flight.

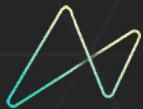
# Athepathi S



# AIRLINES CHALLENGE



# Nagarjun



# AIRLINES CHALLENGE

**Maven Airlines**  
Passengers Satisfaction Survey Analysis

Total Passengers **19.98K**

Flight Distance (Avg) in mile **788**

Arrival Delay in Min **15**

Departure Delay in Min **14**

Avg of Passengers age **38**

**Passenger Satisfaction Percentage**

Satisfaction	Percentage
Neutral or Dissatisfied	10.06%
Satisfied	89.94%

**Passengers by Class and Customer Type**

Class	Passenger Count
Economy	16.4K
Economy Plus	2.2K
Business	1.3K

**Passenger type**

- First-time
- Returning

**Type Of Travel**

- Business
- Personal

**Passengers Gender**

- Female
- Male

**Passenger Class**

- All

**Average of Cleanliness** 61.18% ★★★★☆ 3.06/5

**Average of Leg Room Service** 64.56% ★★★★☆ 3.23/5

**Average of On-board Service** 66.60% ★★★★☆ 3.33/5

**Average of Check-in Service** 66.79% ★★★★☆ 3.34/5

**Average of Gate Location** 58.57% ★★★★☆ 2.93/5

**Average of Online Boarding** 50.90% ★★★★☆ 2.55/5

**Average of In-flight Service** 75.13% ★★★★☆ 3.76/5

**Avg of In-flight Entertainment** 61.01% ★★★★☆ 3.05/5

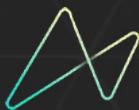
**Average of Food and Drink** 60.64% ★★★★☆ 3.03/5

**Average of In-flight Wifi Service** 50.48% ★★★★☆ 2.52/5

**Average of Seat Comfort** 60.52% ★★★★☆ 3.03/5

**Average of Baggage Handling** 74.39% ★★★★☆ 3.72/5

Aniket Vinod Jadhav



# AIRLINES CHALLENGE

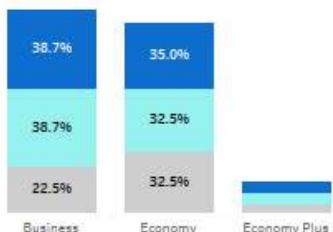


**MAVEN AIRLINES**

Author: Adil Raheem  
Source: John D, via Kaggle

## Gate location

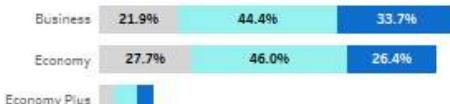
Economy class and economy plus passengers were slightly more satisfied with their gate location with 35.0% and 36.1% satisfied passengers respectively. Business class had approximately the same percentage of satisfied and dissatisfied passengers.



\*The grey bands represent passengers who gave neutral ratings.

## Wi-Fi services

All classes had a higher percentage of dissatisfied passengers.



**129,880 Passengers**

Of all 14 airline service variables, 3 failed to record an average or above average rating. These 3 services are Ease of online booking, Gate location and In-flight Wifi services.



**43.4% Satisfied Passengers**

**56.6% Dissatisfied Passengers**

## Online booking

A significant large percentage of first timers were dissatisfied with the online booking process. This indicated that the process must have been more complex or time consuming as compared to their past experience with other airlines.



## Recommendations

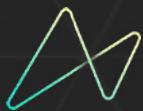
- Improve In-flight Wifi services for all classes.
- Simplify the online booking process.
- Kids and youngsters represent the most dissatisfied age group, this can be improved on by occupying them with what they enjoy during flights, this can be in form of kids' special treats, comic books, children movies or tv shows and games.
- Work towards improving all airline services as none of the services had an overall average rating in the 75th percentile (i.e. 3.75 and above).

## Based on Age group

Only middle-aged adults (36 - 55) had more overall satisfied passengers. Kids (7 - 17), young adults (18-35) and old adults (56-85) were all greatly dissatisfied with the overall airline services.



**Adil Raheem**



# AIRLINES CHALLENGE

## MAVEN AIRLINES CHALLENGE

### FLIGHT DISTANCE BAND

All

### AGE GROUP

All

### GENDER

All

### CUSTOMER TYPE

All

### CLASS

All

### TOTAL DELAY HOURS BAND

All



129.9K

Total Respondents



43%

Satisfied



56.6%

Neutral or Dissatisfied

Convenience

Arrival & Departure Convenience



Gate Location



Service

Ease of Online Booking

2,755



Onboarding Service



Checkin Service



Inflight Service



Aircraft Condition

Cleanliness



Seat Comfort



Food & Drink

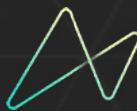


- Average convenience score is 3 for both Arrival and departure and the location of the gate
- Passengers below the age of 10 seem to not mind the arrival & departure convenience as they gave it a higher than average score
- First time passengers on the other hand are less happy with the A&D convenience as they scored it lower than average

- Long distance travelers (>2000 miles) and people above 35 years had a better onboarding service compared to the rest
- People below the age of 20 had a worse ease of online booking experience compared to other age groups
- Customers in the business class generally had better service experience across all parameters compared to other classes
- Also general service experience is directly correlated to the total customer delay hours

- Aircraft condition general rating is directly correlated with passenger flight distance
- Passengers below the age of 20 and first time travelers were particularly more critical with regards to aircraft conditions
- Customers in the business class had better experience with regard to the aircraft conditions compared to other classes

Belinda Mwirigi



# AIRLINES CHALLENGE

Average Age

**39.43**

Total Passenger

**129.88K**

Average Satisfaction Customers

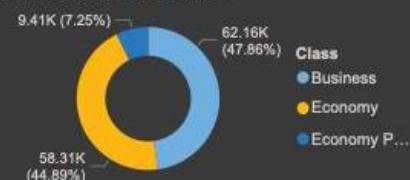
**0.43**

Gender ▾

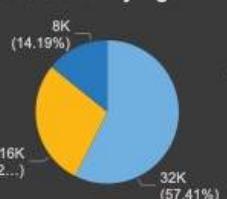
Female

Male

Passenger Class Type



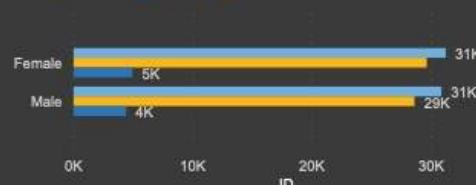
Satisfaction By Age



## Airline Passenger Satisfaction

Class By Gender

Class ● Business ● Economy ● Economy Plus



1.19K

Average of Flight Distance

**14.71**

Average of Departure Delav

Age Categ...

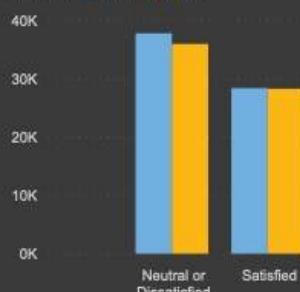
All

**15.09**

Average of Arrival Delay

Satisfaction BY Gender

Gender ● Female ● Male



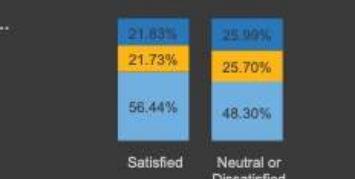
In Flight Evaluation analysis

● In-flight ... ● In-flight ... ● In-flight ... ● Leg Roo... ● On-boar... ● Seat Co... ● Food an... ● Cleanlin...



Average of Flight Distance by Satisfaction and Class

Class ● Business ● Economy ● Economy Plus

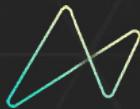


Other services Evaluation analysis

● Online Boarding ● Gate Location ● Ease of Online ... ● Check-in Service ● Baggage Ha... ● Departure an...



**Mustafa Hemdan**



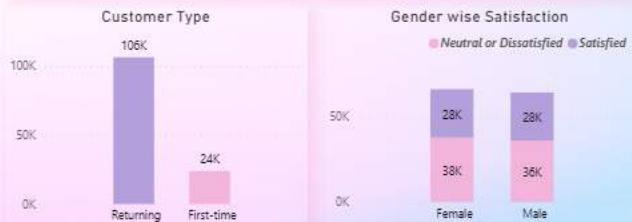
# AIRLINES CHALLENGE

## Maven Airlines -Passenger Satisfaction Report



	Avg Rating
In-flight ser...	3.64
Baggage han...	3.63
Seat Comfort	3.44
On-board Se...	3.38
In-flight Ent...	3.36
Leg Room	3.35
Online Boar...	3.25
Check-in ser...	3.31
Cleanliness	3.29
Food and Dri...	3.20
Dept & Arriv...	3.06
Gate location	2.98
Online Booki...	2.76
In-flight Wif...	2.73

-In Economy class : **81%** of Passengers are Neutral or Dissatisfied.  
**-86% First Timers & 80% Returners** are unhappy in Economy Class.  
**-3:2** is the ratio of unhappy to happy First Timers in Business Class.



Avg Flight Distance

1190

Total Passengers

129880

Avg Departure Delay

15

Avg arrival delay

15

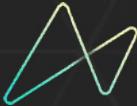
Who say YAY

- There are double amount of Satisfied passengers in Business class than who are Neutral or Dissatisfied.
- Nearly **75%** of Returners are happy in Business class.
- Age group **45** and above as an avg, seems to be more satisfied than younger generation.
- Most of the Passengers are happy with In-flight services and Baggage handling services as an Avg rating of **3.6**.

Who say NAY

- Passengers in Economy class are unhappy with services.
- **89%** of passengers in age group **7 to 30** are unhappy with services.
- Passengers are more concerned with Wifi, Online booking and Gate location services with avg rating of **2.8** which need to be improved.
- Services in Economy class should be taken considered of, Returners with high dissatisfaction rate is not a good sign.

# Vaibhav Patidar



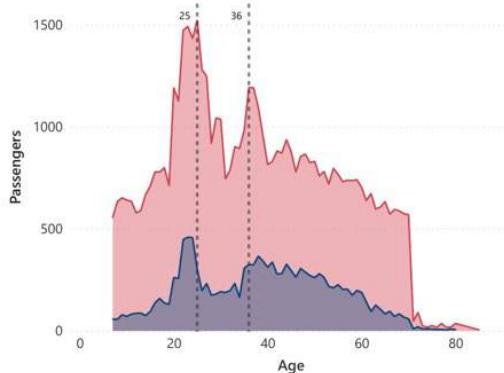
# AIRLINES CHALLENGE

## MAVEN AIRLINES PASSENGER SATISFACTION SURVEY

### Economy & Economy Plus Class

The **high dissatisfaction** levels are most common among the **25 - 36** age group passengers.

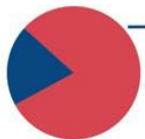
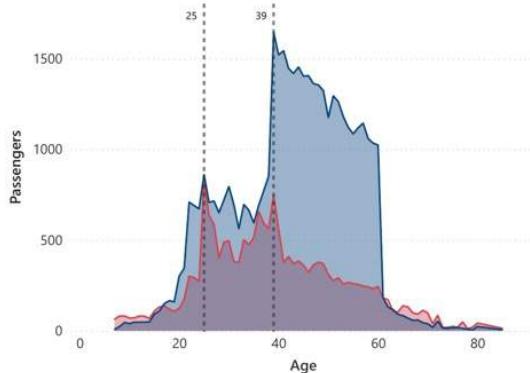
● Neutral or Dissatisfied ● Satisfied



### Business Class

**Dissatisfied** and **Satisfied** passengers are **positively correlated**. Though **high dissatisfaction** is mostly associated with the **25 - 39** age group.

● Neutral or Dissatisfied ● Satisfied



**80%** of the **Economy and Economy Plus class** Passengers have a **dissatisfied judgement** of the maven Airlines.



Only **31%** of the **Business class** passengers are **not satisfied** with the Maven Airline services. Generally, **Most of the passengers are satisfied** with the Airline.

**General Analysis** of the top 5 key areas with the **highest dissatisfaction levels** in **Economy, Economy Plus and Business Classes** that need to be improved.

**43%** of the passengers in **both classes** feel **highly dissatisfied** with the **in-flight wifi service** though **31%** of the same passengers feel **satisfied with the service**.



● Low (1-2) ● Neutral (3) ● High (4-5)

**49%** of the passengers in **both classes** feel **highly satisfied** when it comes to **Departure and Arrival Time Convenience** and still **45%** of the passengers feel **contented with the Food and Drink issue**.

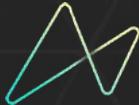
### Recommendations

**In flight Wi-fi Service** : Should be given **top priority** as most passengers are within the **25 - 39** age group which is well known for having the **most active internet users world wide**.

**Ease Of Online Banking** : This can be improved by implementing more **user friendly online booking engines**.

**Food and Drink Service** : This can be improved by knowing **target audiences** and making **smart customer targeted decisions basing on data**.

# Herbert Wasswa



# AIRLINES CHALLENGE

## Maven Airlines Challenge Passenger Satisfaction

**Business Problem:**  
Latest survey shows that out of almost 130,000 passengers, at least 73,000 felt that they were not satisfied with their overall flying experience.

### Demographics

Gender	Female	Male
51%	49%	

Customer Type	Returning	First-Time
82%	18%	

Travel Type	Business	Personal
69%	31%	

Age Group	Youth <25	Adult 26-60	Senior >60
19%	73%	8%	

Passenger Class	Economy	Economy+	Business
45%	7%	48%	

**Problem #1:**  
No parameter reached a satisfaction rating of 4.00/5.00

**MAX 3.64**  
**MIN 2.81**  
from 1(lower) to 5(highest)

**Recommendation #1:**  
Focus on improving the 3 parameters with the LOWEST satisfaction ratings

Parameter	Rating
Gate Location	2.98
Ease of Online Booking	2.88
Inflight Wi-fi Service	2.81

Parameter-level satisfaction rating

**Problem #2:**  
Low overall satisfaction rating for Economy Class Passengers which account for 45% of the total passengers surveyed.

Only 19% or 15 economy class passengers were satisfied with their overall flying experience.

Passenger Class	Economy	Economy+	Business
19%	25%	69%	

Overall satisfaction rating

**Recommendation #2:**  
Contrary to Business Class who were mostly satisfied, majority of Economy Class passengers felt dissatisfied despite both accounting for at least 45% of the total population.

**Problem #3:**  
Low overall satisfaction rating among first-time travelers

24%  
Satisfaction rating for First-time travelers is only 24% or out of almost 24,000 First-time passengers 10,000 were not satisfied.

First-Time	Returning
24%	48%

Overall satisfaction rating

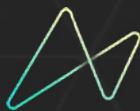
**Recommendation #3:**  
**FIRST IMPRESSIONS LASTS**  
Despite not being high-population cluster, improving the overall satisfaction of first time customers should be a priority especially since its currently alarmingly low rating.

**CONCLUSION**

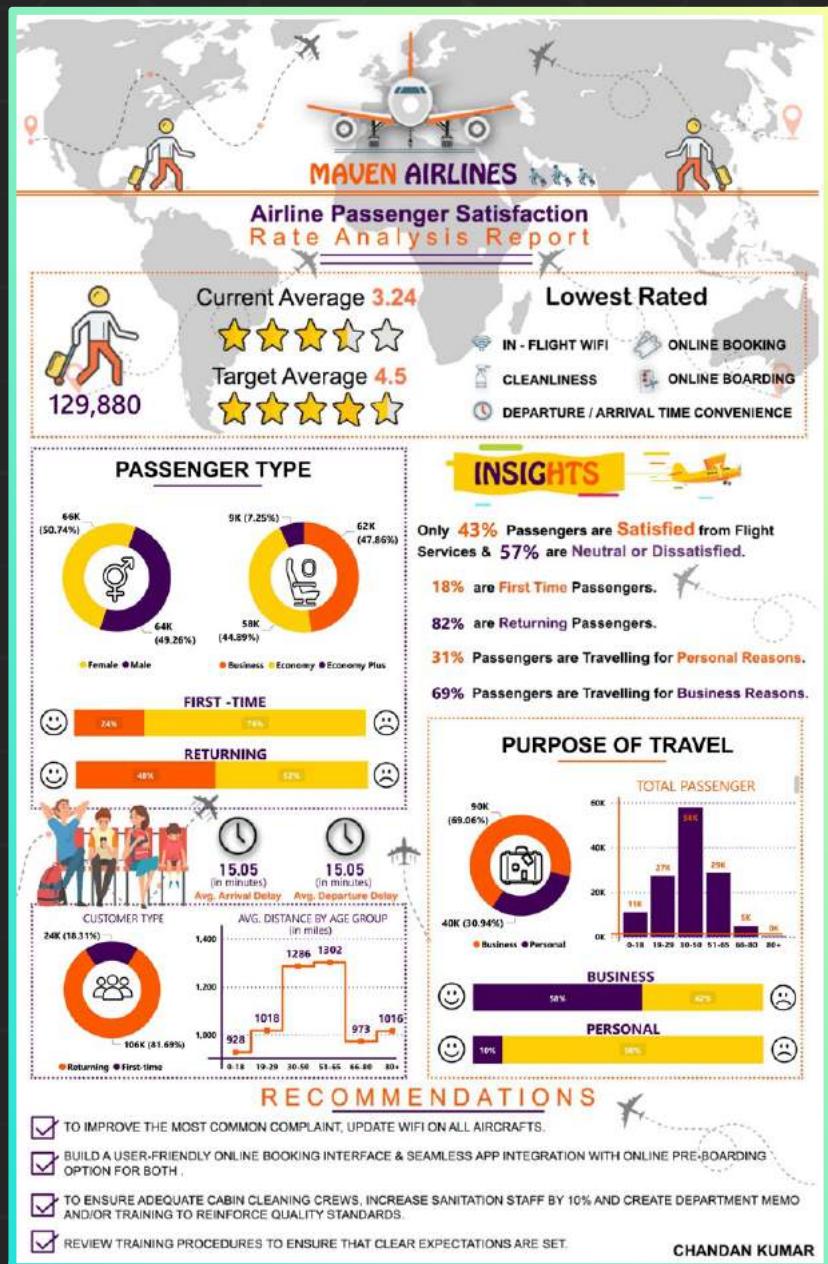
- All parameter should be improved starting with the 3 with the lowest ratings (Gate location, Ease of Online Booking, and Inflight Wi-fi service). This will help improve the overall satisfactory rating.
- Improve service delivered to Economy Class passengers especially since they account for 45% of the total passengers.
- Lastly, also prioritize improving the satisfaction of first-time passengers to drive retention\*.

Submitted by: Jill Harry Algabre  
Data Source: <https://www.mavenabletics.io/data-playground>

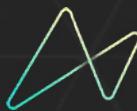
# Jil Harry Algabre



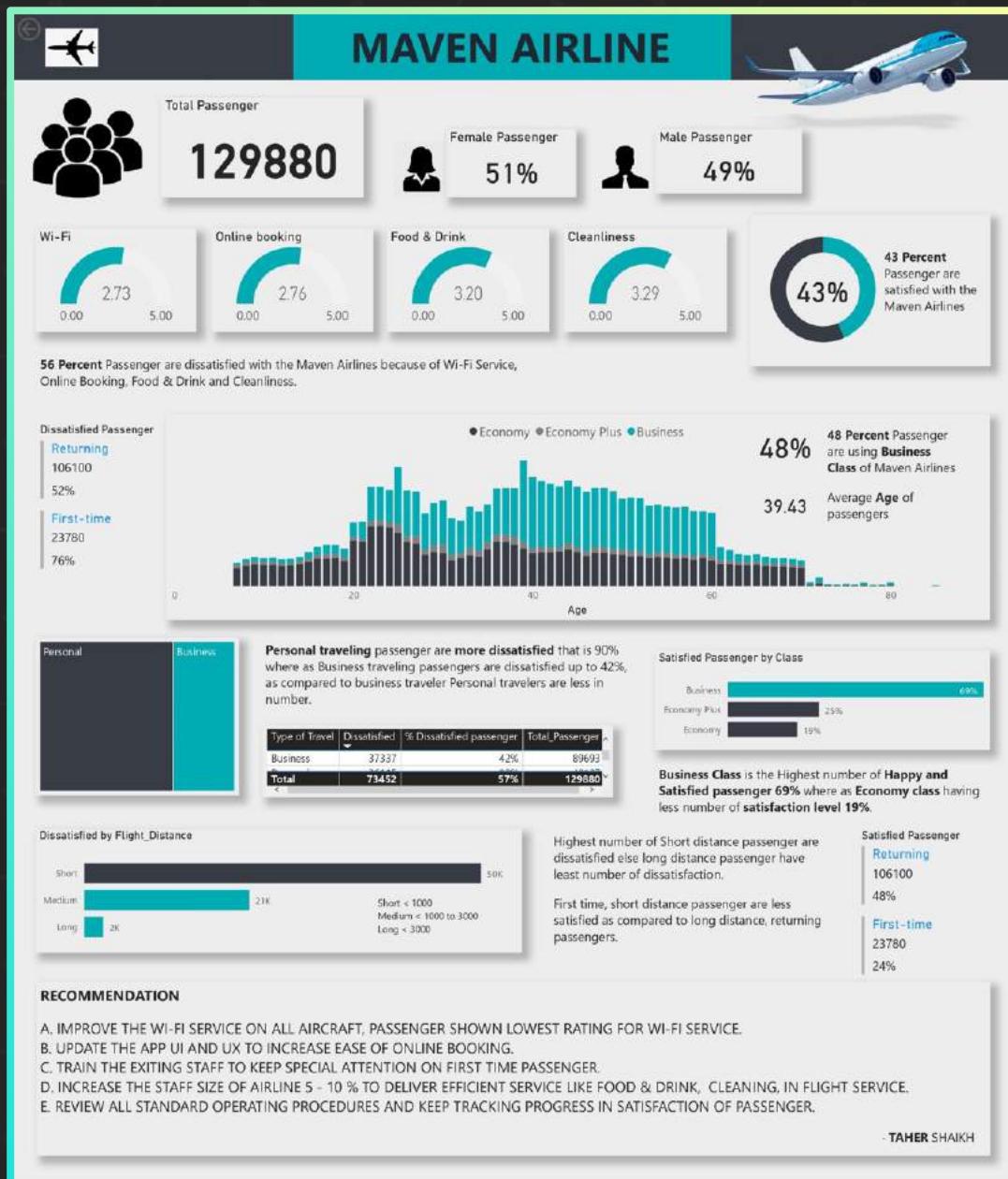
# AIRLINES CHALLENGE



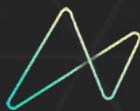
# Chandan Kumar



# AIRLINES CHALLENGE



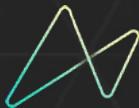
# Taher Shaikh



# AIRLINES CHALLENGE



Stuti Parakh



# AIRLINES CHALLENGE

## Maven Airlines Satisfaction Strategy

Finding: About half of the passengers, both personal and business travelers, experience Online Boarding as neutral or negative. 87% of them are also dissatisfied with Maven Airlines

Recommendations: - Further investigation into the causes of the discontent of Online Boarding  
- Follow up the findings of the investigation to increase the Satisfaction Rate by turning the negative feeling into positive

Disclaimer: The Satisfaction Rate is a snapshot and highly dependent on the group composition of the survey respondents



### Percentage of passengers dissatisfied per score

Question about	1	2	3	4	5
Cleanliness	80%	79%	57%	46%	39%
Food and Drink	80%	61%	60%	47%	45%
In-flight Entertainment	86%	79%	73%	39%	35%
In-flight Wifi Service	67%	75%	75%	40%	1%
On-board Service	80%	74%	68%	47%	35%
Online Boarding	86%	89%	86%	38%	13%

### Relation between Scores and Satisfaction

86% of the people who gave 'Online Boarding' a value of 1, answered the Maven Airlines Satisfaction question with 'Neutral' or 'Unsatisfied'

Also the passengers who gave a 2 or 3 to 'Online Boarding' have a relative low score on overall Satisfaction

On the other hand, only 13 % of the people who gave a 5 to 'Online boarding', were not Satisfied with Maven Airlines

### Passengers to focus on

50% of the passengers doesn't like the 'Online Boarding'. They give a 1, 2 or 3 score. 87% of them are also dissatisfied with Maven Airlines

This are 54 K passengers, both personal and business, 42,5% of all

If you manage to improve the online boarding system, the effect will reflect on the overall Satisfaction Rate

9.100 extra passengers were needed for a 50% ratio, that is 16,8% of total potential ( total potential is 54.241)

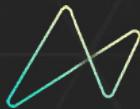
### Online Boarding



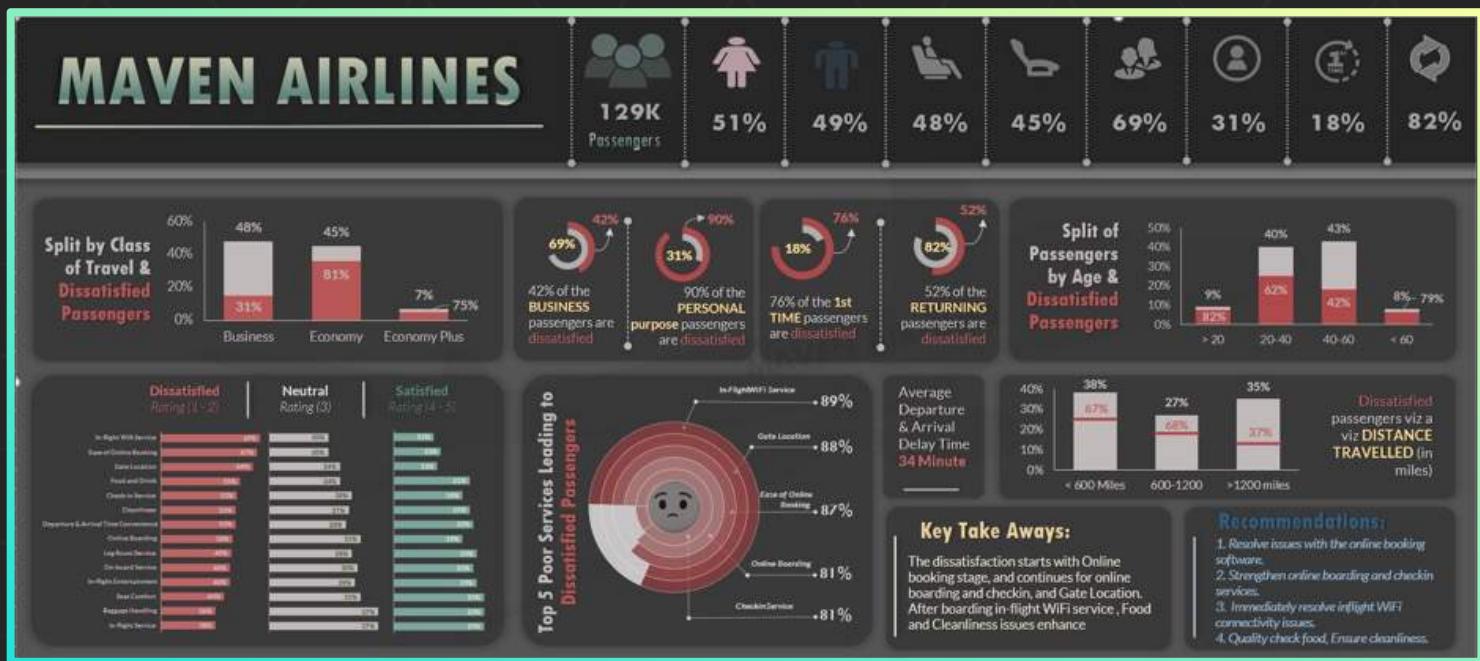
[LinkedIn.com/in/MarjoleinOpsteegh](https://LinkedIn.com/in/MarjoleinOpsteegh)

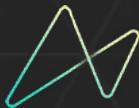
#MavenAirlineschallenge

# Marjolein Opsteegh



# AIRLINES CHALLENGE

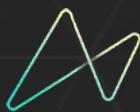




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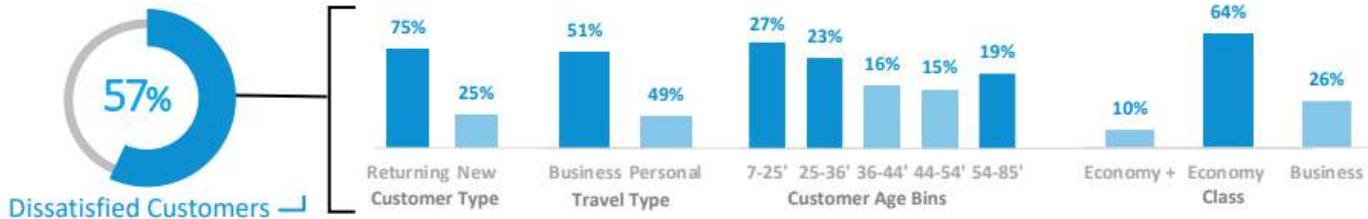


Aman Patel



# AIRLINES CHALLENGE

## 130K Customers Maven Airlines



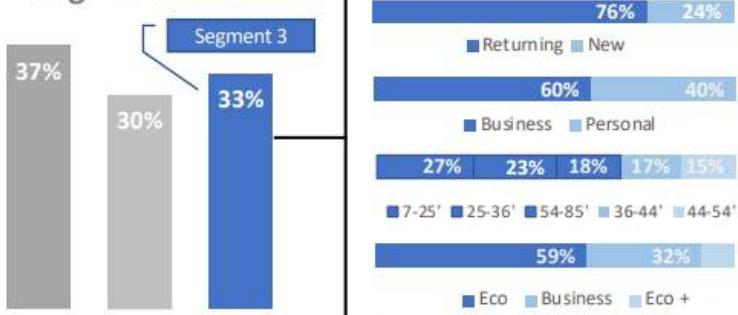
### Satisfaction Drivers ordered by Importance

### Survey Insights All Customers

### Customers Segmentation

	Convenience	Comfort	Service	Satisfaction by Segment
Segment1	Green	Light Green	Light Green	65%
Segment2	Red	Light Green	Light Green	50%
Segment3	Orange	Red	Orange	12%

### Segments Size



### Recommendations:

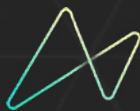
Reach out customers from Segment 3 to interview them on causes that made them put low scores on:

- Seat Comfort
- Food & Drink
- Cleanliness
- Inflight Entertainment
- Inflight Wi – Fi

### Develop Loyalty Program for customers:

- Offer Program Membership
- Score Miles Each Time When Customer Travels
- Upgrade Features from Comfort Driver in Exchange on Miles

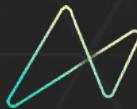
# Eugene Grobov



# AIRLINES CHALLENGE



# Ismaila Omeiza Mumuni



# AIRLINES CHALLENGE

**M AVEN**  
AIRLINES

Passenger Survey  
Results Analysis

47,9%  
7,2%  
44,9%

129,9 K  
Total Number Of Passengers Analysed

Business (62,2 K)      Economy Plus (9,4 K)      Economy (58,3 K)

**Majority of Economy & Economy Plus classes are not satisfied**

Neutral or Dissatisfied (56,6%)	14,62%	5,46%	36,47%
Satisfied (43,4%)	33,24%	8,43%	

The majority (69%) of our passengers are prefer business trips.

Only 4% of Business class passengers prefer flying with us for personal purposes

Economy Plus passengers are almost equally distributed when it comes to travel type.

Economy class passengers are prefer to fly both business and personal purposes.

Business (69%)	25.304	4.902	59.487	33.005	4.509
Personal (31%)					

**In-flight Wifi Service Is The Most Disliked Service Among Others**

Considering Economy Class passengers choosing Neutral or Dissatisfied (47.366 passengers)

**In-flight Wifi Service**  
Only 34 passengers voted above 3 point. This means more than 99% of people didn't like the service.

**Ease of Online Booking**  
93,23% of the passengers voted 3 or below for this service.

**Gate Location**  
No one voted 5 points for this service and more than 1/3 of the passengers voted for 2 points.

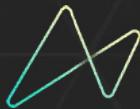
Service / Point	> 30%	> 20% or < 30%	< 0%			
	0	1	2	3	4	5
Departure and Arrival Time Convenience	11,86% (5.617)	14,40% (6.821)	15,53% (7.358)	28,86% (13.668)	23,68% (11.215)	5,67% (2.687)
<b>Ease of Online Booking</b>	18,72% (8.865)	<b>29,96% (14.189)</b>	29,89% (14.160)	14,66% (6.944)	3,79% (1.795)	2,98% (1.413)
Check-in Service	15,92% (7.540)	15,50% (7.344)	<b>26,34% (12.477)</b>	26,98% (12.781)	15,25% (7.224)	0,00% (0)
Online Boarding	16,71% (7.917)	<b>27,26% (12.912)</b>	30,17% (14.289)	18,27% (8.652)	5,34% (2.529)	2,25% (1.067)
<b>Gate Location</b>	14,01% (6.635)	17,10% (6.138)	<b>34,13% (16.165)</b>	16,44% (12.523)	8,24% (3.905)	0,00% (0)
On-board Service	16,02% (7.587)	17,31% (8.197)	<b>25,65% (12.151)</b>	25,38% (12.022)	15,64% (7.409)	0,00% (0)
Seat Comfort	17,19% (8.141)	19,44% (9.208)	<b>21,94% (10.390)</b>	23,03% (10.908)	18,41% (8.718)	0,00% (0)
Leg Room Service	13,90% (6.588)	<b>23,11% (10.946)</b>	23,69% (11.223)	21,04% (9.965)	17,77% (8.415)	0,49% (231)
Cleanliness	17,31% (8.199)	20,57% (9.741)	<b>22,90% (10.849)</b>	21,63% (10.247)	17,58% (8.326)	0,01% (4)
Food and Drink	17,08% (8.091)	<b>22,28% (10.555)</b>	22,40% (10.612)	20,25% (9.593)	17,87% (8.463)	0,11% (52)
In-flight Service	7,90% (3.743)	12,19% (5.776)	<b>25,45% (12.054)</b>	34,70% (16.437)	19,75% (9.356)	0,00% (0)
<b>In-flight Wifi Service</b>	<b>20,20% (9.570)</b>	33,22% (15.737)	33,20% (15.726)	13,30% (6.299)	<b>0,06% (30)</b>	0,01% (4)
In-flight Entertainment	17,93% (8.494)	<b>21,94% (10.392)</b>	22,22% (10.526)	20,40% (9.661)	17,50% (8.789)	0,01% (4)
Baggage Handling	7,99% (3.785)	12,30% (5.850)	<b>26,24% (12.430)</b>	13,99% (16.101)	19,41% (9.194)	0,00% (0)

**Conclusion & Suggestions**

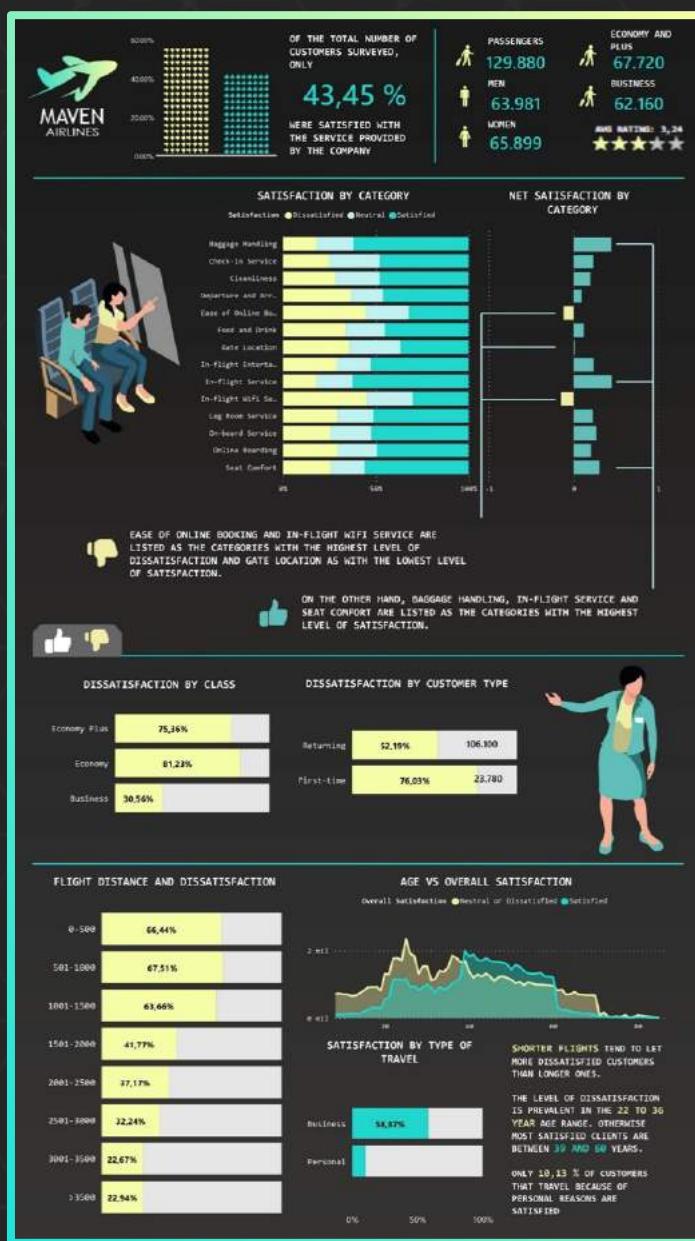
1. We should focus on the desires of the most dissatisfied class, which is Economy Class with rate of 36,47%  
 2. When we examined which services are the most disliked services, we see that In-flight Wifi Service should be improved in order to increase our satisfaction points among Economy Class passengers.

Designed by Salih Hocaoğlu • Founder @ Excel 751

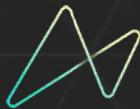
Salih Hocaoğlu



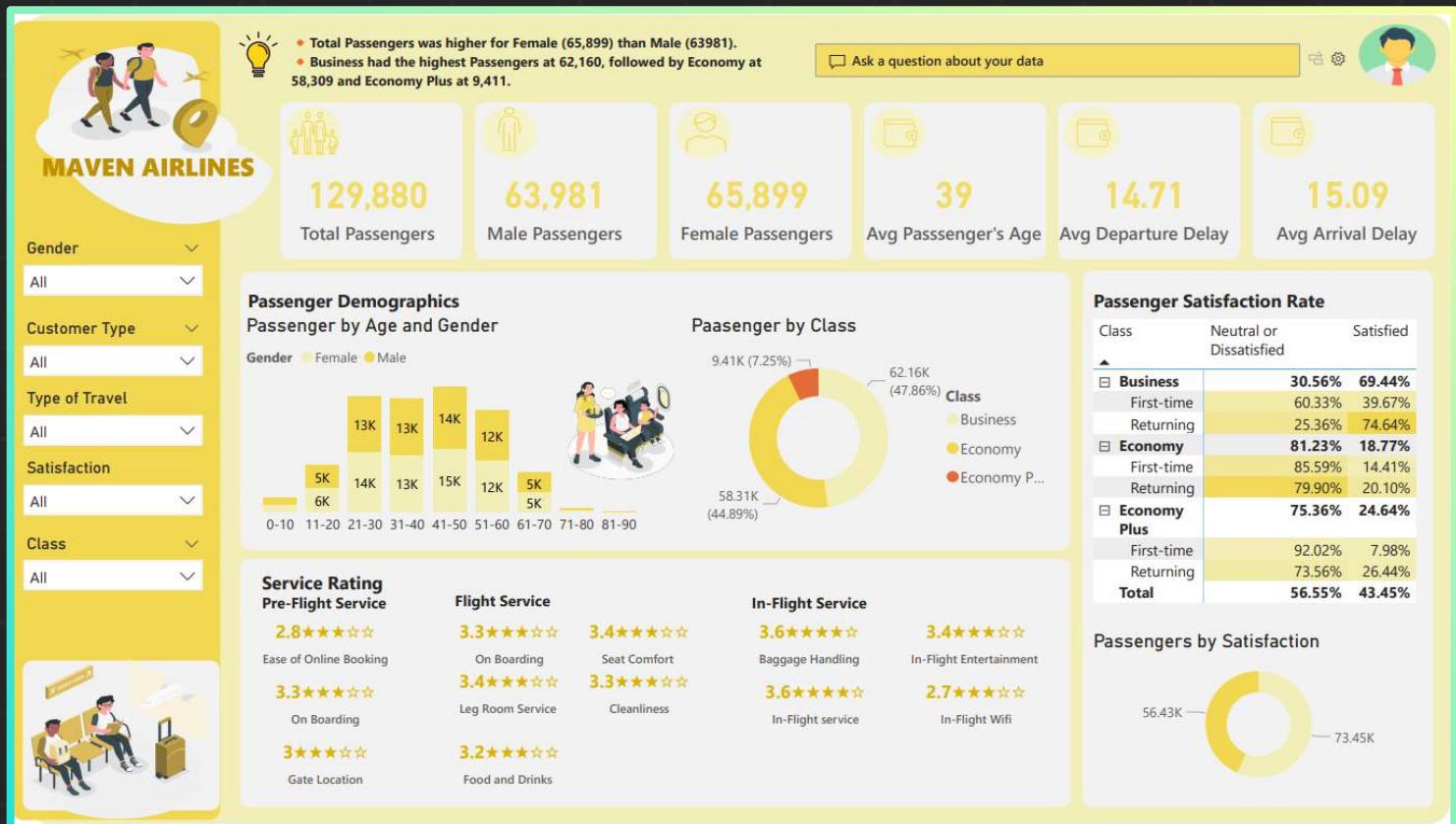
# AIRLINES CHALLENGE



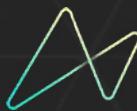
Camilo Corrales Gallo



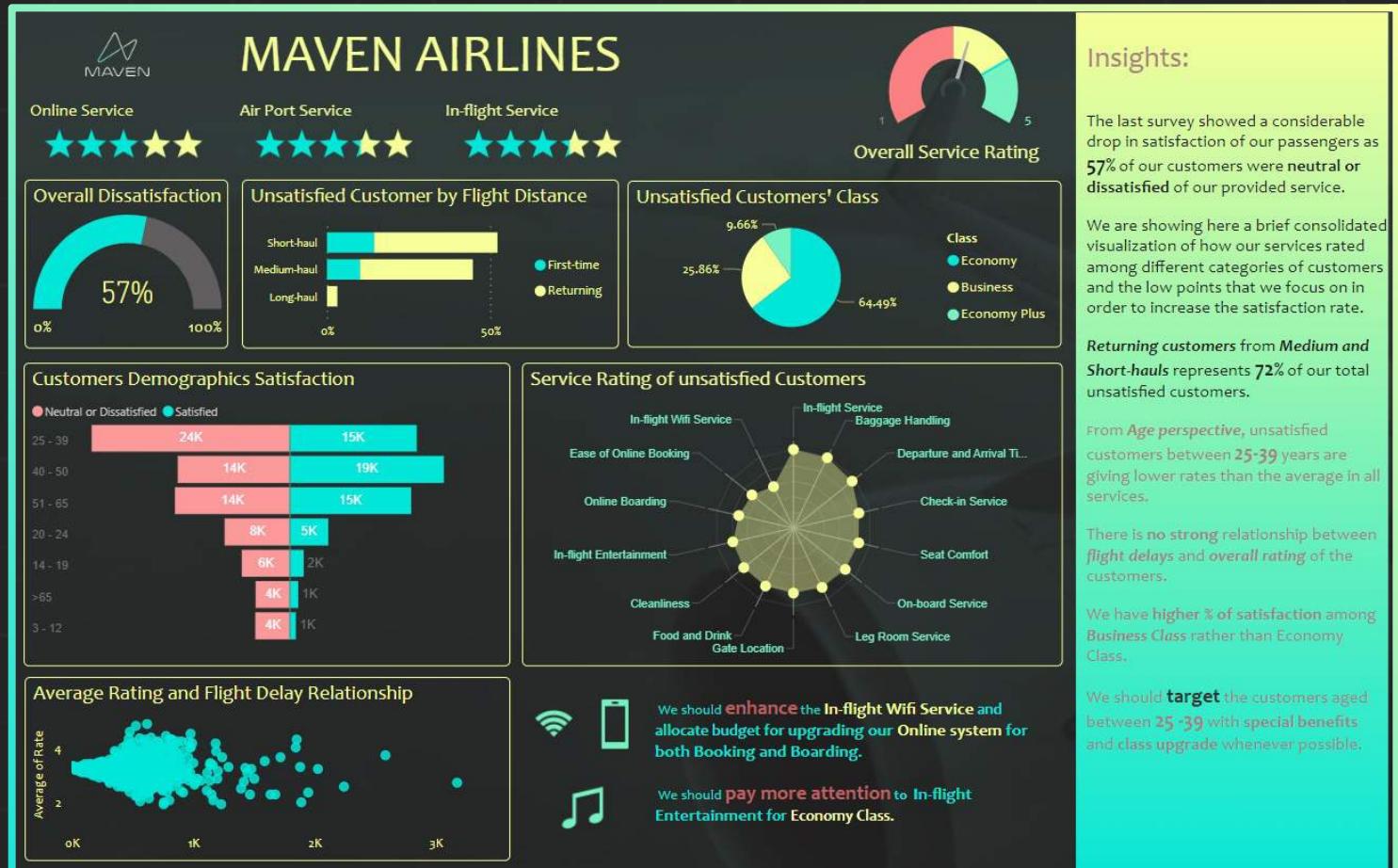
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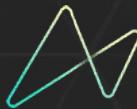


## Adjei Arafat Chrispin

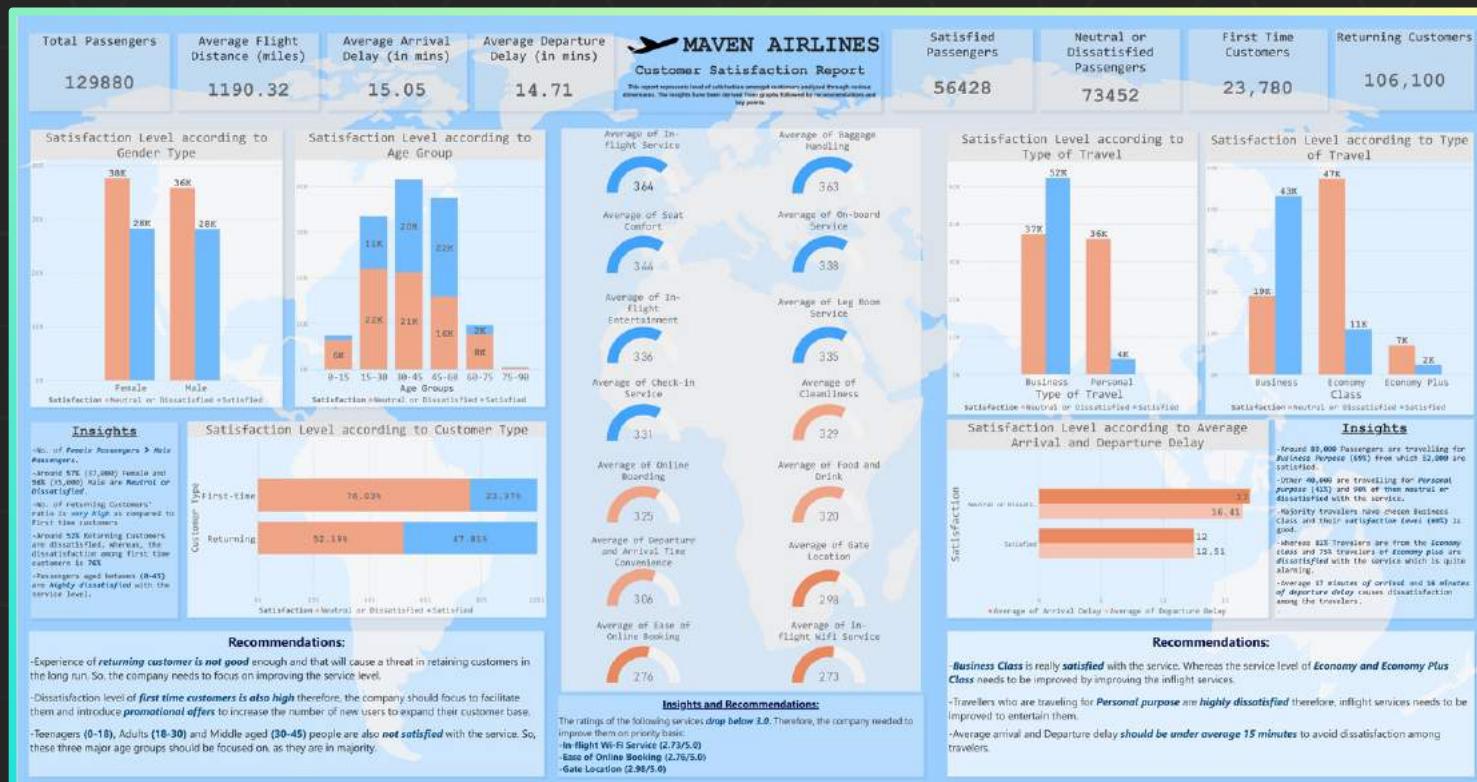


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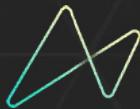




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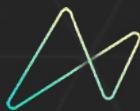
# Hadiqa Malik



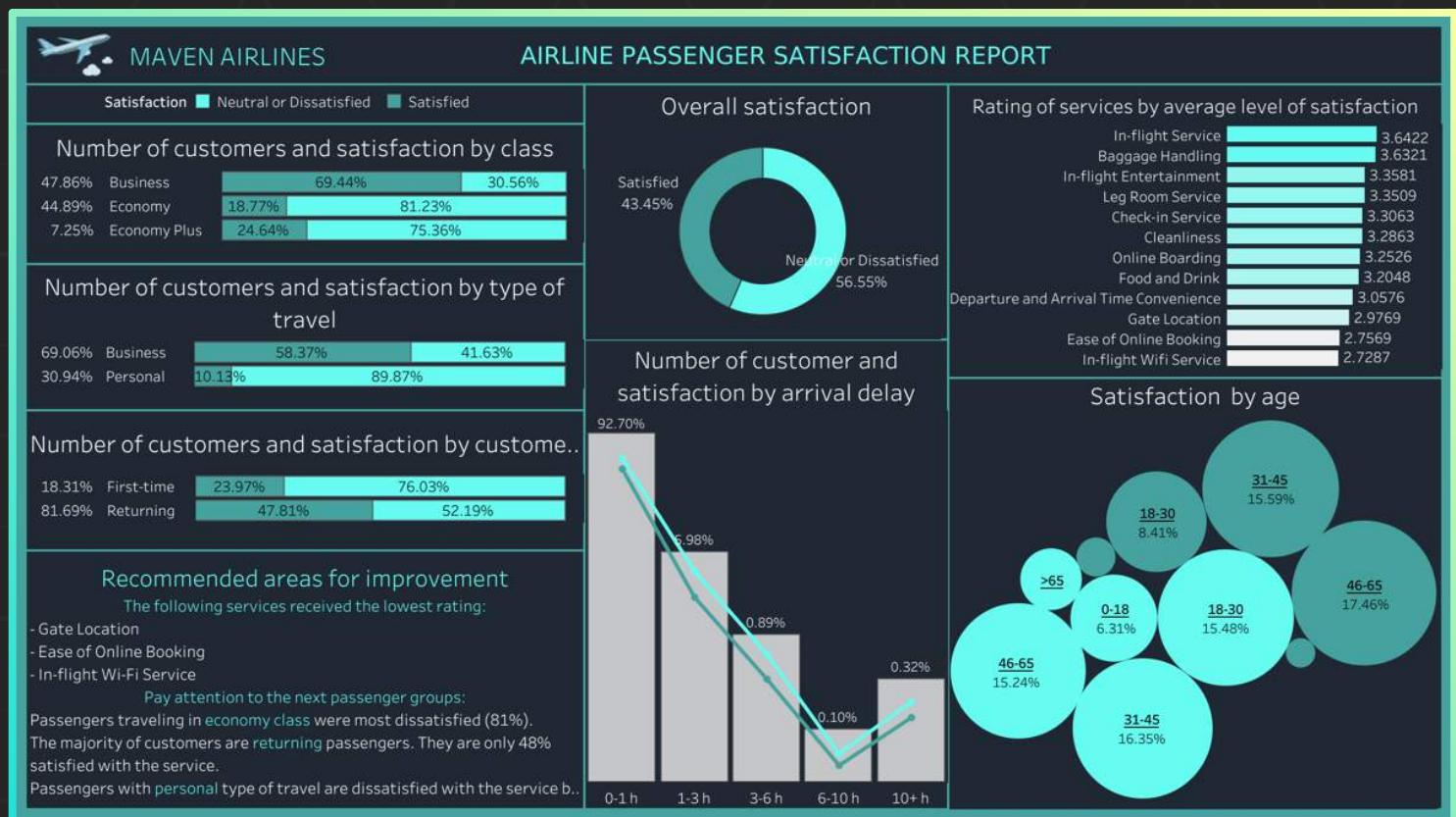
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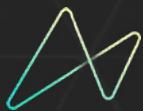
Jenelyn Rosales



# AIRLINES CHALLENGE



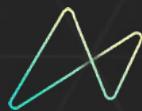
Olena Konstantynova



# AIRLINES CHALLENGE



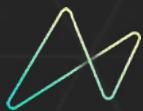
Nikhil Dasaro



# AIRLINES CHALLENGE

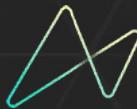


Abdullah Iqbal Radiowala



# AIRLINES CHALLENGE





# AIRLINES CHALLENGE

## Maven Airlines - Customer Satisfaction Dashboard

The latest passenger survey results just came in and it looks like the satisfaction rate dipped under 50% for the first time ever.

### Satisfaction rate

Satisfaction	First-time	Returning
Neutral or Dissatisfied	13.92%	42.63%
Satisfied	4.29%	39.06%

### Satisfaction

Satisfaction	Business	Economy	Economy+
Neutral or Dissatisfied	14.62%	36.47%	5.46%
Satisfied	39.24%	8.45%	1.79%

### Customer Profile

Typical customer is almost 40 years old female who decided to return and book a ticket in economy class for business purpose. The average flight distance is 1190.32 miles.

### Gender

Gender	Count	Percentage
Female	64K	50.74%
Male	64K	49.26%

### Type of Travel

Type of Travel	Count	Percentage
Personal	40K	30.94%
Business	90K	69.05%

### Customer Type

Customer Type	Count	Percentage
Returning	104K	81.6%
First-time	24K	18.31%

### Class

Class	Count	Percentage
Economy	58K	44.8%
Business	62K	47.6%
Economy+	9K	7.28%

### Age Bucket

Middle Aged customers (between 30 and 45 years old) are neutral or the most dissatisfied with the service.

#### Legend

■ GT Customer Neutral or Dissatisfied ■ GT Customers Satisfied

Age Group	Neutral or Dissatisfied (%)	Satisfied (%)
Elderly (above 60)	12.13%	8.86%
Children & Teenagers (under 18)	12.4%	3.6%
Seniors (between 45 and 60)	22.11%	26.77%
Adults (between 18 and 30)	18.3%	26.32%
Middle Aged (between 30 and 45)	27.22%	32.87%

## Satisfaction Level

Three features with the lowest rate are: in-flight Wi-Fi service, ease on online booking and gate location.

Service	Score
In-flight Wi-Fi Service	2.73
Ease of Online Booking	2.76
Gate Location	2.98
Departure and Arrival Time Convenience	3.04
Food and Drink	3.2
Online Boarding	3.25
Cleanliness	3.29
Check-in Service	3.31
Lay Room Service	3.35
In-flight Entertainment	3.34
On-board Service	3.38
Seat Comfort	3.44
Baggage Handling	3.63
In-flight Service	3.64

## Delays

Returning clients who decided to fly in Economy+ class for business purpose meet the highest flight departure and arrival delays.

```

graph LR
    subgraph Arrival [Arrival]
        E1[Economy+ 15.80] --> E2[Economy 15.62]
        E2 --> E3[Business 14.49]
        E3 --> E4[Personal 14.44]
        E4 --> E5[Returning 16.90]
    end
    subgraph Departure [Departure]
        D1[Economy+ 14.71] --> D2[Economy 15.08]
        D2 --> D3[Business 14.30]
        D3 --> D4[Personal 14.17]
        D4 --> D5[Returning 15.62]
    end

```

## Red Flags Decomposition

```

graph TD
    WiFi[WiFi 2.73] --> Business[Business 2.76]
    WiFi --> Economy[Business 2.76]
    WiFi --> EconomyPlus[Economy+ 2.76]
    WiFi --> Economy[Economy 2.67]
    WiFi --> Personal[Personal 2.52]
    WiFi --> FirstTime[First-time 2.59]
    WiFi --> Returning[Returning 2.52]

    Booking[Booking 2.76] --> Business[Business 2.92]
    Booking --> Economy[Business 2.66]
    Booking --> EconomyPlus[Economy+ 2.66]
    Booking --> Economy[Economy 2.60]
    Booking --> Personal[Personal 2.47]
    Booking --> FirstTime[First-time 2.49]
    Booking --> Returning[Returning 2.47]

    GateLoc[Gate Loc 2.98] --> Business[Business 2.99]
    GateLoc --> Economy[Business 2.97]
    GateLoc --> EconomyPlus[Economy+ 2.97]
    GateLoc --> Economy[Economy 3.03]
    GateLoc --> Personal[Personal 2.92]
    GateLoc --> FirstTime[First-time 2.92]
    GateLoc --> Returning[Returning 2.92]

```

## Recommendation

Focus on the needs of target customer segment  
It is appropriate to focus on the target customer segment and improve satisfaction level.

### 3 Red Flags

Company should focus on three features with the lowest rate.  
Red Flags are among returning clients who decided to travel in economy class, for personal purpose.

#### In-flight Wi-Fi service

It should be revised as soon as possible and repaired.  
It might be considered to remove the Wi-Fi service from current service.

#### Process of online booking

It should be revised and make it as easy as possible for customers.  
It is the point where company can lose customers because they can decide to book the flight with another company.

#### Gate Location

This feature can be beyond control of the company but it should be revised how it can be improved

#### Arrival and departure delays

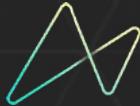
The image of the company can be damaged in the eyes of returning business customers.  
Company should investigate how to decrease the arrival and departure delays.

#### Quality of Data

Satisfaction survey should be reviewed. Classification of satisfaction should be splitted into 3 groups: Satisfied, Neutral, Dissatisfied.

Current customer satisfaction survey include Neutral and Dissatisfied into one group which can impact on the data presentation and conclusions

# Mateusz Wiatr



# AIRLINES CHALLENGE

## Maven Airlines CUSTOMER SATISFACTION REPORT

For the first time ever, customer satisfaction rate is now under 50%. This proposal is written to rectify the situation quickly and effectively.

### TYPICAL CUSTOMER PROFILE

**Family:** 21-45 years old adults with young kids (<16 years old).  
**Business Travelers:** >51 years old adults.  
**Seniors:** >45 years old adults.

**Short haul flights:** > 3000 miles of flight distance.

**Returning Customers:** Majority of the customers are returning customers.

**Delayed:** For both arrival and departure, about 44% of the customers faced the delay.

**Loyalty:** The only age group with low returning customers rate are young adults with 58%. This aligns with our target customer segment. Furthermore, it would not be logical to be putting efforts on the first time customers when it only made up for 12% of the customer base. Therefore, improvement on services that are attractive to business travelers, families and seniors should be explored.

**No. of customers by age group:**

Age Group	Percentage
Older adults (60+ years old)	87%
Young Adults (18-30 years old)	58%
Middle-aged (31-40 years old)	84%
Seniors (41+ years old)	95%

**Patience:** It seemed business travel tends to have people less bothered by the general inconveniences. In comparison to the personal travel, 10% satisfactory level from people who travel on personal trips are still extremely low number. Perhaps qualitative research for this particular customers would bring more insights on what are the areas the customers find lacking.

**Business Travel:** 58%  
**Personal Travel:** 10%

### Instant red-flags: The three lowest rated measures are in-flight Wi-Fi service, ease of online booking and gate location. It's important to tackle the lowest rated aspects first and prepare the work plan on how to improve those aspects.

**Avg satisfaction level:**

Measure	Avg satisfaction level
In-flight Wi-Fi Service	3.0
Ease of Online Booking	3.0
Gate Location	2.9
Flight Delay	3.0
Departure and arrival Time Convenience	3.0
Check-in Counter	3.0
Baggage Handling	3.0
On Board WiFi Service	3.0
Layover Service	3.0
On-board Service	3.0
Food Quality	3.0
Baggage Handling	3.0
In-flight Service	3.0

**Even happiest are not so happy:** The customers in business class are happiest amongst the three groups even then, 69% satisfactory level for business class could be considered low. Business class is the highest service level the airline can offer and 3 in 10 customers being unhappy about the service is not a good sign.

**Another aspect is that 99% of long haul flights are reported to be business class customers only. Are long haul flights unprofitable in these cases?**

**KEY TAKE AWAY:**

Focus on target customer segment. It'd be impossible to please all the customers at all time. In the important times like this, it's more appropriate to focus on the target customer segment and focus the service improvements based on likes and dislikes of this segment.

Focus areas: User friendliness of the online booking portal, gate location and in-flight Wi-Fi service are 3 key areas that need to be improved as soon as possible. It might be helpful to remove the Wi-Fi service from the service catalog until the service is performing up to satisfactory level. No Wi-Fi could be better than slow Wi-Fi.

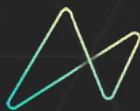
Returning customers: Although returning customers' satisfaction level is generally higher than the first time customers, it's important to run the deep dive analysis to understand if the customers are returning because of the financial rewards or are they returning because of the better service than competitors.

Are long-haul flights profitable: As the dataset does not contain the financial figures, it'd be difficult to assess the profitability. However, it might be worthwhile to take a look at the profitability of long-haul flights.

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K

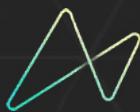
# Khin Moet Moet Nyein



# AIRLINES CHALLENGE



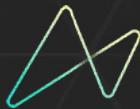
Samra Nadarevic



# AIRLINES CHALLENGE



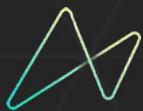
Mihir Thakkar



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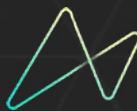
Davide Cocchia



# AIRLINES CHALLENGE

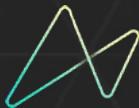


# Mohamed Elmotazbellah



# AIRLINES CHALLENGE

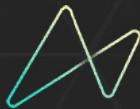




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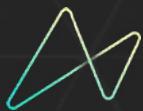
# Rachael Allyn



# AIRLINES CHALLENGE



# Jochem Zwienenberg



# AIRLINES CHALLENGE

**Filters**

Class: Todas Customer Type: Todas Type of Travel: Todas Gender: Todas

**Metrics**

Average Age surveyed: 39,66

Average Flight Distance: 1.255,84 Thousands of miles

Total surveyed: 22.378 Thousand

Women surveyed: 11.427 Thousand

Men surveyed: 10.951 Thousand

Total surveyed: 9839 Thousand

Total surveyed: 12539 Thousand

**Results, survey and conclusion**

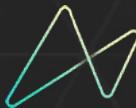
Average by Survey

Legend:

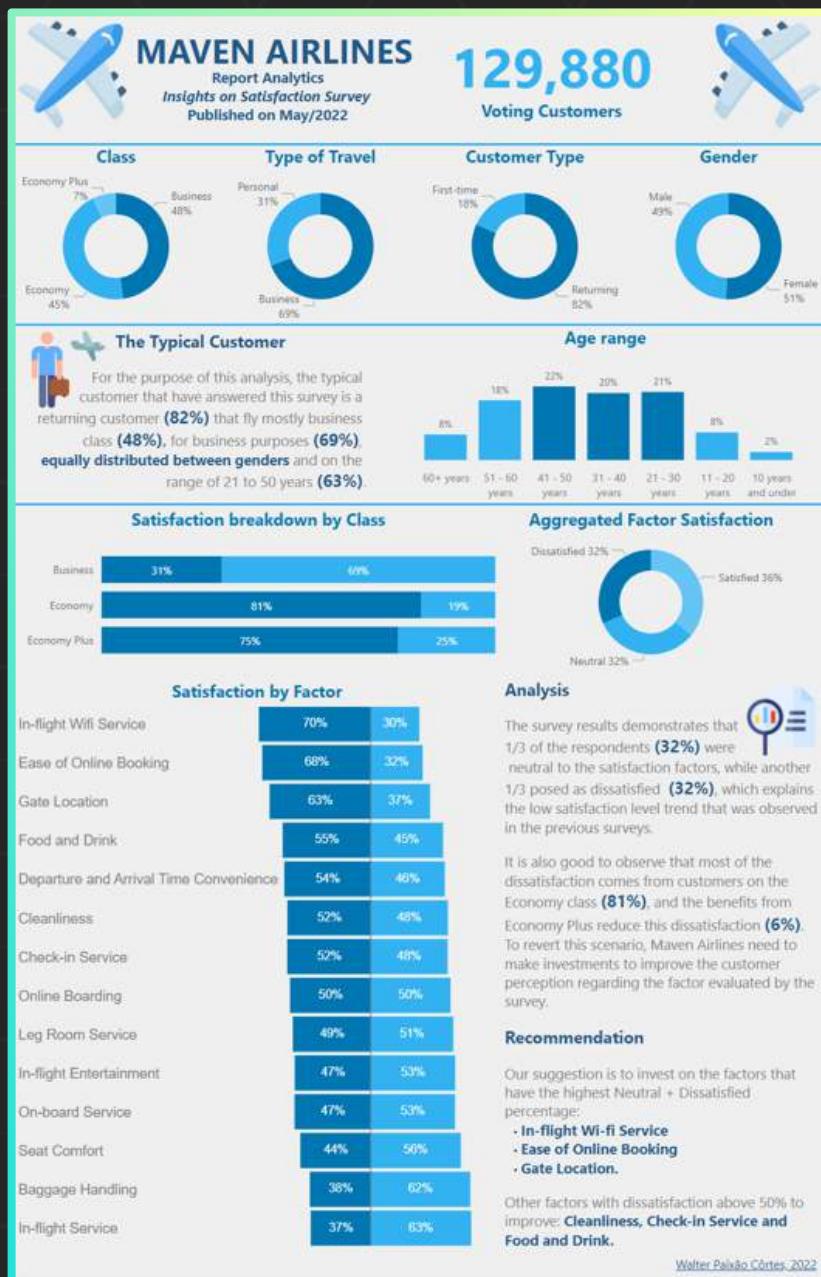
- Avg In-flight Service
- Avg Baggage Handling
- Avg Seat Comfort
- Avg On-board Service
- Avg In-flight Entertainment
- Avg Leg Room Service
- Avg Check-in Service
- Avg Cleanliness
- Avg Online Boarding
- Avg Food and Drink
- Avg Departure and Arrival Time Convenience
- Avg Gate Location
- Avg Ease of Online Booking

Here you can see all the averages by survey and observe which are the opportunities for improvement.

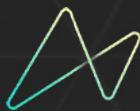
Vicente Antonio Juan Magallanes



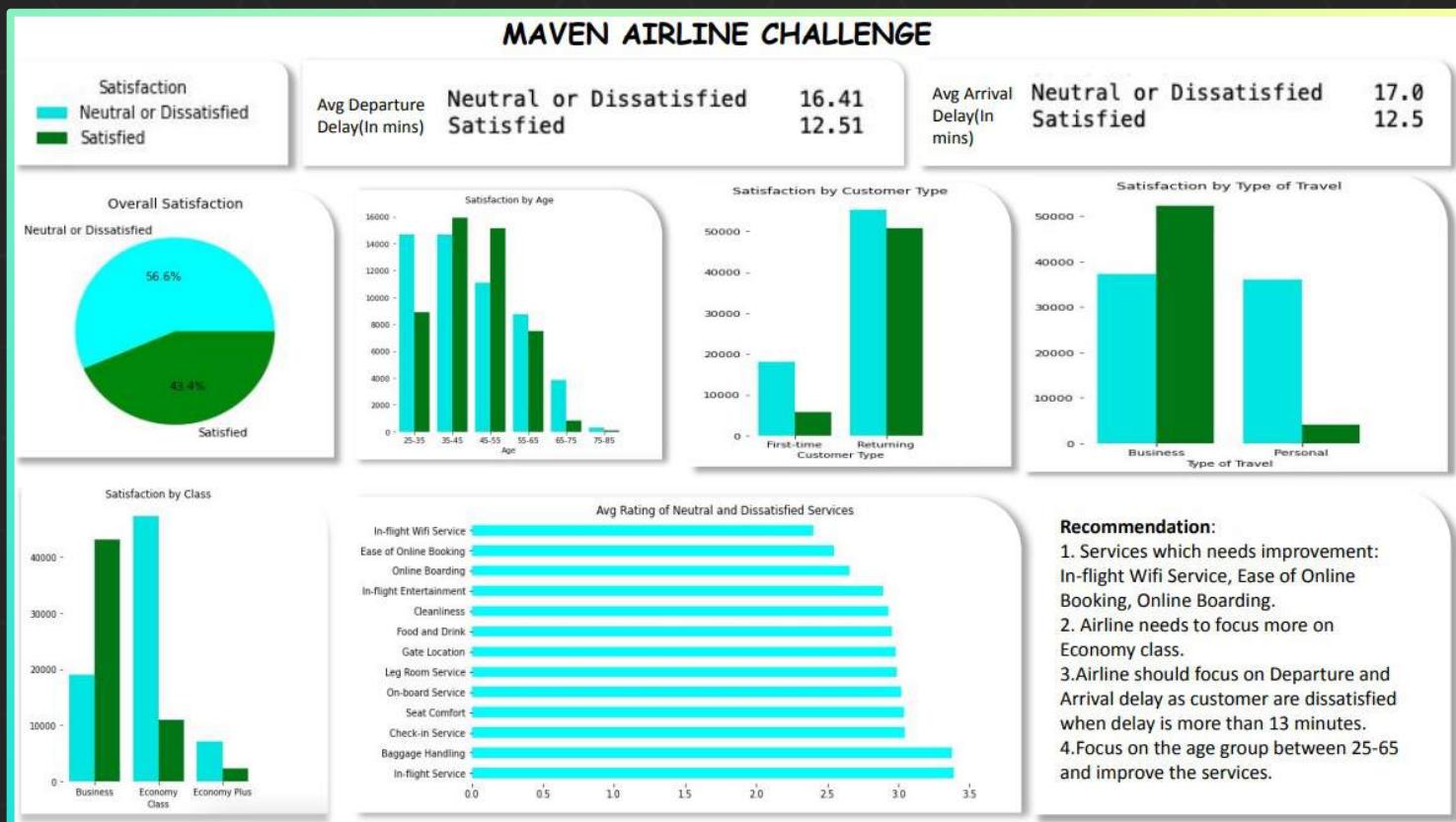
# AIRLINES CHALLENGE



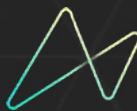
# Walter Ritzel Paixão Côrtes



# AIRLINES CHALLENGE



Sana Maryam



# AIRLINES CHALLENGE

**MAVEN AIRLINE**

**WHO ARE DISSATISFIED?**

- First time passengers of age range 21-40 travelling for business purposes are dissatisfied.
- Returning passengers(both male and female) travelling with an economy class for personal travel purpose are dissatisfied.
- Generally, passengers of age over 60 and age between range 31 and below are dissatisfied with the services maven airline renders. Most of this dissatisfied passengers are of female gender. Both male and female gender are dissatisfied.

**PASSENGERS SATISFACTION ANALYSIS**

Category	Neutral or Dissatisfied	Satisfied
ID by Age Group and Satisfaction	~10K	~18K
ID by gender and Satisfaction	Female: ~35K, Male: ~30K	Female: ~28K, Male: ~25K
ID by customer type a...	Returning: ~45K, First-time: ~10K	Returning: ~40K, First-time: ~5K
ID by class and Satisfaction	Business: ~10K, Economy: ~40K, Economy Plus: ~5K	Economy: ~35K, Economy Plus: ~2K
ID by purpose of Travel...	Business: ~30K, Personal: ~40K	Personal: ~25K

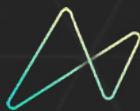
**IN AROYEWUN AIRAT**

**HOW SATISFIED ARE THE PASSENGERS ?**

- roughly 70% of passengers are dissatisfied with the online booking service.
- Most passengers are dissatisfied with the Wi-fi service provided. This can be done by developing better software.
- most passengers are dissatisfied with the gate location.

First time passengers between age of 0-30 should be our main target. This generation make travelling a priority compared to other generations, making first time passengers satisfied encourage them to return to maven airline and also encourage them to recommend maven airline to family and friends.

# Aroyewun Airat



# AIRLINES CHALLENGE

## Maven Airlines

Maven Airlines recently found that satisfaction had dropped below 50%, with 57% of passengers either unsatisfied or neutral. How can we fix this problem?

Count of Customers  
129,880

Avg. Age  
39

Avg. Overall Rating  
3.24

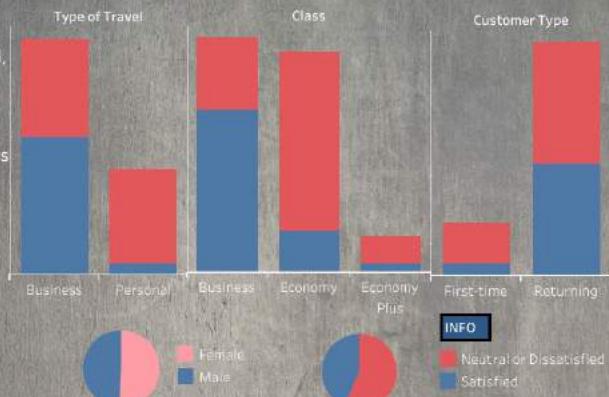
Avg. Flight Distance  
1,190

Avg. Arrival Delay  
15.05

Avg. Departure Delay  
14.71



First-time flyers, personal travel, and economy class have lower satisfaction ratings. When available, a free upgrade to business class for these travelers may help ratings.

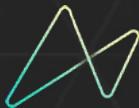


If we look at average specific ratings, we can see that in-flight wifi service, online booking, and gate location are lowest rated. But when we filter for those who were neutral or dissatisfied, we find wifi, online booking, and online boarding rated poorly. Thus, we recommend Maven Airlines improve in-flight wifi service, ease of online booking, and online boarding to increase customer satisfaction.

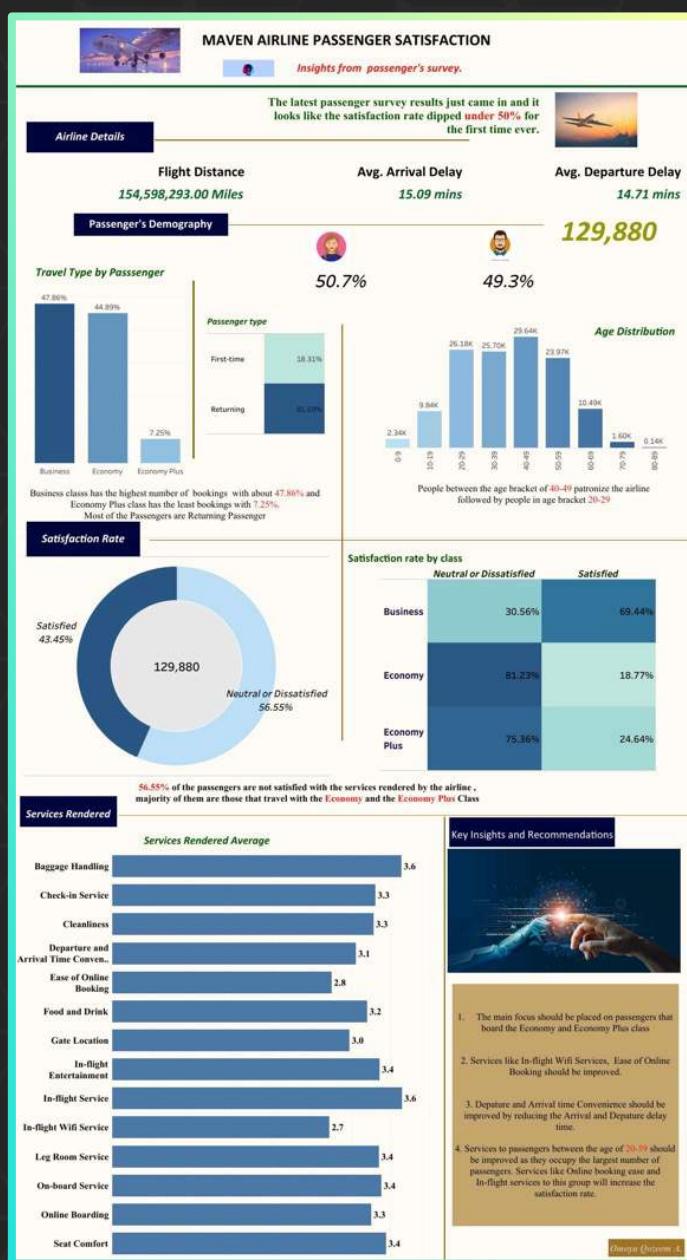
Background courtesy Andrea Piacquadio

Based on the Maven Airlines Challenge

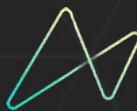
# Stephanie Anderson



# AIRLINES CHALLENGE



# Qozeem Adeyanju Omoya

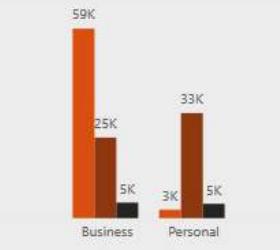
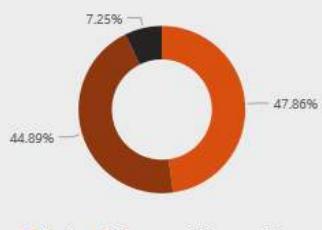


# AIRLINES CHALLENGE

## Maven Airline Passenger Satisfaction Report



### Travel Class



Majority of the Airline's passengers (47.86%) use Business Class. Passengers in **Business Class** are more **satisfied** with the Airline's services compared to those in Economy Class.

First-time passengers traveling for business purposes are less **satisfied** or **neutral** with regards to their flight experience compared to returning passengers for the same purpose. Similar patterns were observed in both male and female passengers.

Total passenger

**130K**

Male

**64.0K**  
49%

Female

**65.9K**  
51%

Satisfied passengers

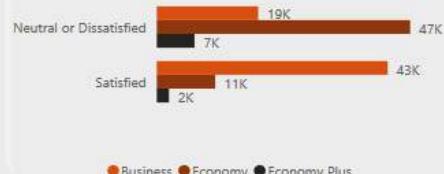
**56.4K**  
43%

### Passenger ratings

Ease of Online Booking	★★★☆☆	2.76/5
Check-In Service	★★★★☆	3.31/5
Cleanliness	★★★★☆	3.29/5
Food and Drink	★★★☆☆	3.20/5
Leg Room Service	★★★★☆	3.35/5

Travel Convenience	★★★☆☆	3.06/5
Food and Drink	★★★☆☆	3.20/5
Leg Room Service	★★★★☆	3.35/5

### Satisfaction by Class



Gender

Female

Customer Type

First-time

Type of Travel

Business

Satisfaction

Neutral or Dissatisfied

Total Passenger

129,880

Female

65,899

Returning

53,056

Business

12,744

Neutral or Dissatisfied

9,809

Male

63,981

First-time

12,843

Personal

99

Satisfied

2,935

Gender

Male

Customer Type

Returning

Type of Travel

Business

Satisfaction

Satisfied

Total Passenger

129,880

Female

65,899

Business

33,064

Satisfied

23,400

Male

63,981

Personal

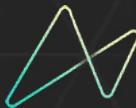
19,980

Neutral or Dissatisfied

9,664

Designed by Barakat Audu | <https://www.linkedin.com/in/barakat-audu>

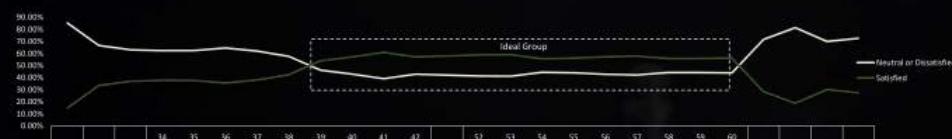
# Barakat Audu



# AIRLINES CHALLENGE

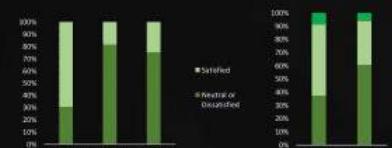
## Maven Airlines Customer Analysis

Ideal Group By Trend



If compared by age we can see travelers aged from 39 to 60 has highest score percentage of satisfied customers. We will consider it our ideal group.

Travel Class



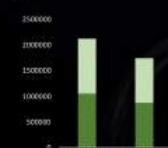
This two charts show us a connection between travel class and our low satisfaction score. Our ideal group mostly travel Business Class and Economy Class is a major driver for the low satisfaction score.

Customer Type



This comparative chart show us two problems. While our first time customer base is small, they are mostly unhappy with our service and 50% of our returning customers are not happy with our service.

Delay



Our ideal group experiences much less Arrival and Departure delay. This can be an indicator of travel class disparity.

Travel Time



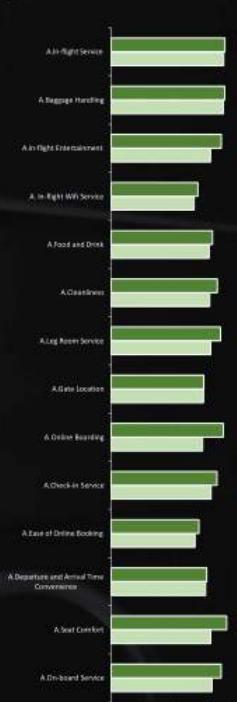
Our ideal group travels much more than the unsatisfied group. Showing effects of satisfaction quality on our business.

Gender



We have reached almost true gender neutrality. Both groups seems to have same percentage of satisfaction.

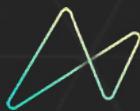
Customer Rating



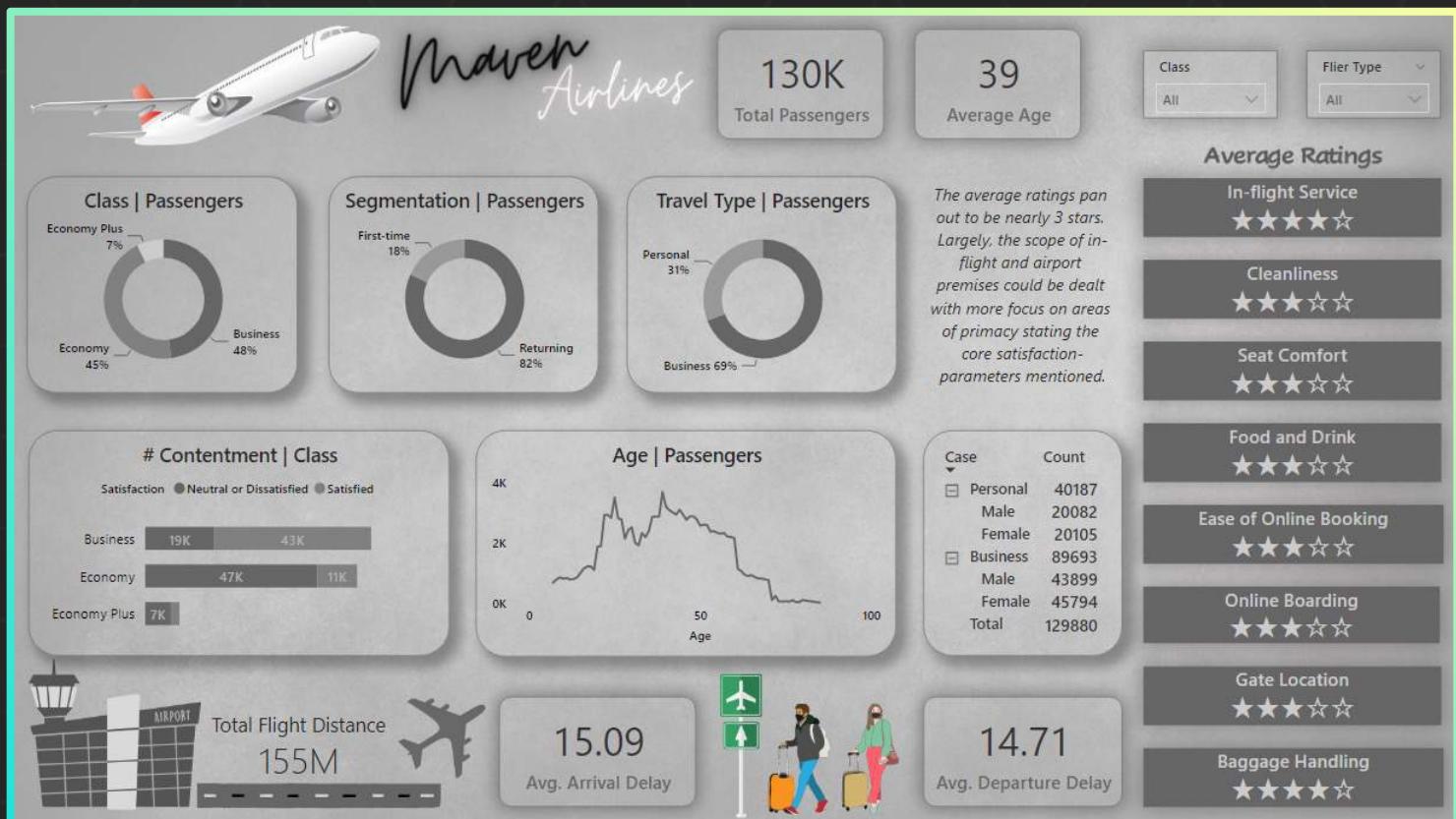
Findings

1. If compared with age, the lowest and highest aged groups having the lowest satisfaction rate shows us we have room for major improvement in this area. Some age specific services are required.
2. The biggest driver for low percentage rate seems to come from our economy class. If we can't improve there, we can't bring our satisfaction rate up.
3. Satisfaction rate in our returning customers seems to be almost the same for ideal and unsatisfied group. Our first time travelers, while being low in numbers seems to be highly unsatisfied with us. Something like newcomer discount can hopefully change that.
4. Our ideal group seems to travel much more than our unsatisfied group so solving unsatisfied groups problems can lead to much more higher revenue.
5. Individual service ratings while predictively being higher in ideal group, don't seem to be much different than each other. We can try improvements on individual services based on our budget.
6. Our ideal group experiences much less arrival and departure delay. Improvement in this area will bring better satisfaction rate from customers.
7. Our satisfaction rate, while being low, atleast is equal among male and females. Can be a good marketable fact if low satisfaction rate is omitted.

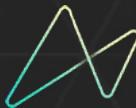
# Shahid R. Khan



# AIRLINES CHALLENGE



**Sarvesh Soni**



# AIRLINES CHALLENGE



## PASSENGER SATISFACTION ANALYSIS

**Maven Airlines**   
Fly Beyond The Limit  
Boston, Massachusetts, US

### Passenger Demographics

58% business travelers and only 10% personal travelers are satisfied.

Travel Type	Business	Personal
45.8K	43.9K	
20.1K	20.1K	

Only 30-60 age group passengers are satisfied more than 50%, but only in business travel class

Age Group	Business	Personal
0-30	21.2K	19.7K
30-60	39.7K	39.3K
More than 60		

**First-time** (23%) passenger satisfaction are less than **Returning** (48%) passengers

Customer Type	Returning	First-time
53.1K	53.0K	

**Male**  **Female** 

### Are Customers Satisfied?

Only 43% feels satisfied with the customer service they receive. 40% Business travelers are satisfied whereas only 3% personal travelers are satisfied.

 Rating: 2.76/3.25	 Rating: 2.98
Ease of Online Booking/ Online Boarding	
Gate location	
 Rating: 3.38	 Rating: 3.63
On-board Service	
 Rating: 3.31	 Rating: 3.44
Baggage	
Check-in Service	
 Rating: 3.29	 Rating: 3.35
Seat Comfort	
 Rating: 3.64	 Rating: 3.44
Cleanliness	
Leg Room Service	
In-flight Service	
 Rating: 3.36	 Rating: 3.20
In-flight Entertainment	
 Rating: 2.73	 Rating: 3.20
Food and Drink	
In-flight Wifi Service	
 129.88K Total Ratings	

### Passenger Preference

Flight Range	Short Haul	Medium haul	Long Haul
31.9K	30.7K		
25.3K	24.7K		

Class	Business	Economy
Economy Plus	31.3K	29.7K
	30.9K	28.6K

### What's the solution?



**First-time Customers**

Satisfying first-time passengers expectation will increase the chance of return to the airline for travel.



**In Flight Wifi**

Improve the Inflight Wi-Fi Service experience through developing better software.



**Ease of Online Booking**

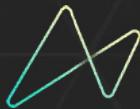
Both Business and personal travelers expect better ease of online booking service.



**Target Millennials**

Target on Millennials (0-30) age group as they are making travel a priority than other generations.

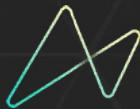
Mona Swarnakar



# AIRLINES CHALLENGE



# Victor de Figueiredo Alves



# AIRLINES CHALLENGE



Customer satisfaction rate has dipped under 50%, WHY?

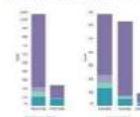


GOAL: Increase customer satisfaction rate.

KEY ACTION: Pay attention to our secondary customers.

Here's why:

1. Data take a look at our customer profile:



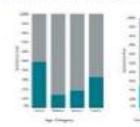
Our Primary Customers are:

Female or Male adult, traveling economy or business class, a returning customer and traveling for business purposes.

All Secondary Customers are:

Female or Male child, youth or senior, traveling economy plus, a first time customer and traveling for personal purposes.

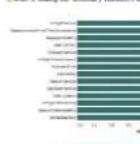
2. We took a look at customer safety and satisfaction rates:



Here we can see that majority of our least satisfactory travel experiences come from our secondary customers, children, seniors, first time travelers, economy/economy plus class travelers traveling for personal purposes.

With our economy class travelers having an unsatisfactory travel experience, with over 80% unsatisfactory rate, we can also assume our returning customers are having difficulties in this area.

3. What is making our secondary customers unsatisfied:



We've asked our customers to rate our flight services on a scale of 1-10 and here's the results for those traveling for business, economy plus, a first time customer and traveling for personal reasons.

These results have shown that they are mostly unsatisfied with our gate location, in-flight meal service, ease of online booking and online boarding.

Areas to focus on include; gate location, in-flight meal service, ease of online booking and online boarding as they recorded an average rating of less than 5.

Over 90% of our secondary customers are unsatisfied with our delay times. This is also an area to focus on.



## MAVEN AIRLINES CUSTOMER SATISFACTION ANALYSIS



What next?



It is understandable that we have been giving all our attention to our primary customers, afterall they make up most of our consumer base. But because of this, we seem to have neglected our secondary customers.

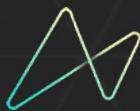
I strongly believe that when we make actionable efforts to improve travel experience for secondary customers, based on the above findings, we would see a significant growth in our satisfaction rate, let's make it GOOD FIRST IMPRESSION.

Additionally, to further increase customer satisfaction, we should improve on the travel experience of our economy travelers.

Our customers want to have a smooth and convenient experience with us when traveling, starting from when they book their tickets until they depart the aircraft.



# Adesola Gbadamosi



# AIRLINES CHALLENGE

## Maven Airlines

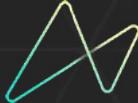
Univariate analysis of the individual reasons for dissatisfaction reveal fragmented story explaining the overall bad customer experience.

Multidimensional analysis connecting the dots to a complete picture, where "In-Flight Service" becomes the prominent factor, regardless the sliced dimensions.

Age Group	Customer Type	Type of Travel	Class	Gender
<18				
18-25				
25-35				
35-45				
45-55				
55-65				
65+				



Einav Farhi



# AIRLINES CHALLENGE

### Maven Airlines customers' satisfaction report

#### ⌚ Our customers and their habits.

Based on a sample of nearly 130.000 customers, with an equal proportion of women and men, 43% of them were satisfied with our services, whereas 57% felt neutral or dissatisfied. Gender doesn't influence customer's satisfaction as satisfaction levels are equal for women and men.

81% of our customers are aged between 20 and 59 years old.

Age Group	Percentage
0-9	2%
10-19	8%
20-29	20%
30-39	23%
40-49	18%
50-59	8%
60-69	1%
70-79	0%
>80	0%

58% of the rated flights were short-distance (<1000 miles).

Distance Range	Percentage
0-499	31%
500-999	27%
1000-1499	12%
1500-1999	10%
2000-2499	7%
2500-2999	5%
3000-3500	4%
>3500	4%

69% of our customers were in **Business travel**.  
48% and 45% were respectively travelling in **Business** and **Economy classes**.  
82% are returning customers.

Travel Class	Percentage
Personal	31%
Business	69%

Status	Percentage
Economy Plus	7%
Economy	45%
Business	48%
First-time	18%
Returning	82%

#### printStats Demographics.

Our customer's satisfaction differs significantly with **age**: satisfaction rate drops below 41% for 0-9 and 60-90 years ranges, but reaches 57% for our customers aged between 40 and 59 years old.

Age Group	Satisfaction Rate (%)
0-9	12%
10-19	20%
20-29	36%
30-39	41%
40-49	58%
50-59	57%
60-69	28%
70-79	22%
80-90	27%

#### ✈ Flight distance.

Satisfaction rate drops below 36% for travels shorter than 1500 miles. Above this distance, more than 58% of our customers were satisfied with our services.

Flight Distance Range	Satisfaction Rate (%)
0-499	34%
500-999	33%
1000-1499	36%
1500-1999	38%
2000-2499	63%
2500-2999	64%
3000-3500	77%
>3500	77%

#### ⌚ Flight departure and arrival delay.

56% of flights were on time, 30% presented a delay of less than 30 minutes and 14% had a delay greater than 31 minutes.

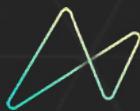
Delay Category	Percentage
0	56%
1-30	30%
31-61	7%
>61	7%

#### ⭐ Service Rating.

In-flight WiFi Service and Ease of Online Booking were the lowest-rated services, with a score below 3. Global service average rating scored 3.24.

Service	Average Rating
In-flight WiFi	2.7
Ease of Online Booking	2.8
Cabin Attendant	3.0
Food and Beverage	3.1
Customer Support	3.2
Check-in Service	3.2
Luggage Handling	3.2
On-board Entertainment	3.3
Comfortable Seats	3.4
Entertainment Options	3.4
On-board Dining	3.6

# Laetitia Vanden Balck



# AIRLINES CHALLENGE

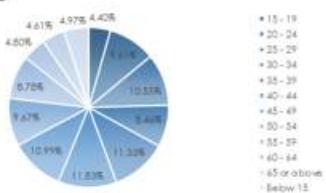
## Maven Airline: Airline Passenger Satisfaction

No. of Responses

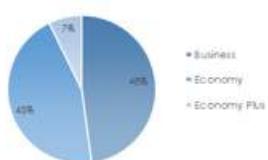
129,800

Overall Satisfaction  
43.45 %

Age Range



Class



Type of Customer

23780

First-time

106,100

Returning

Gender

Female  
Male

Age Group

15 - 19  
20 - 24  
25 - 29  
30 - 34  
35 - 39  
40 - 44  
45 - 49  
50 - 54  
55 - 59  
60 - 64  
65 or above  
Below 15

Overall Satisfaction-Service



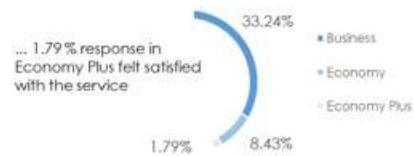
Observation

- Less than half of responses felt satisfied in overall
- The least three satisfaction items were Gate Location, online booking & In-flight WiFi Service

Recommendation

- Improve service gate location by guidance or shuttle bus
- Upgrade online booking system with user-friendly UI & input information
- Enhance the wifi service with faster speed

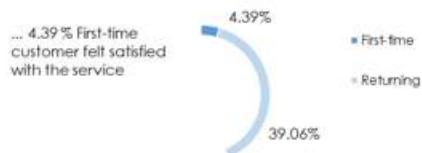
Overall Satisfaction-Service-By Class



Overall Satisfaction-By Flight Distance

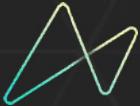


Overall Satisfaction-By Type of Customer

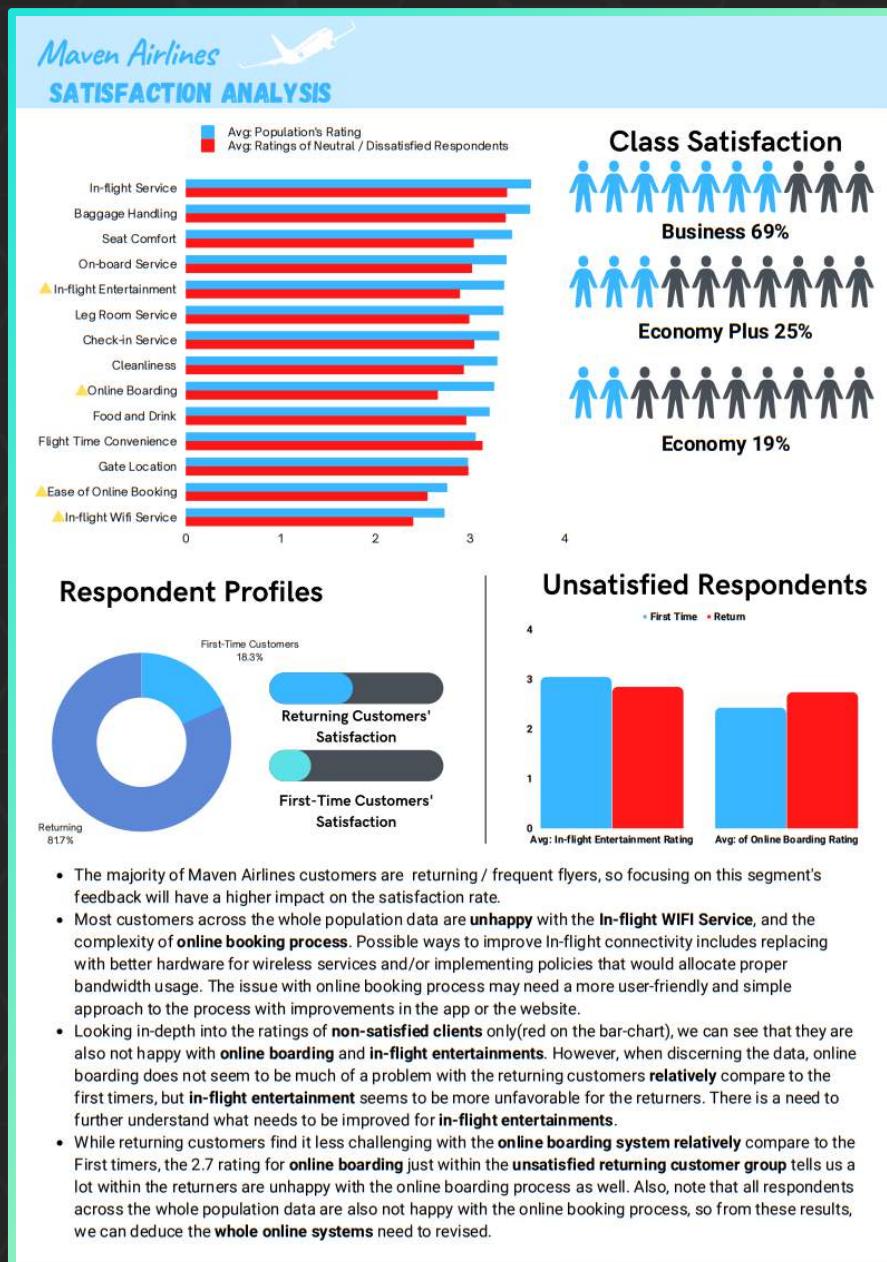


Created By:  
Coco Lam

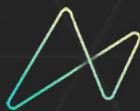
Coco Lam



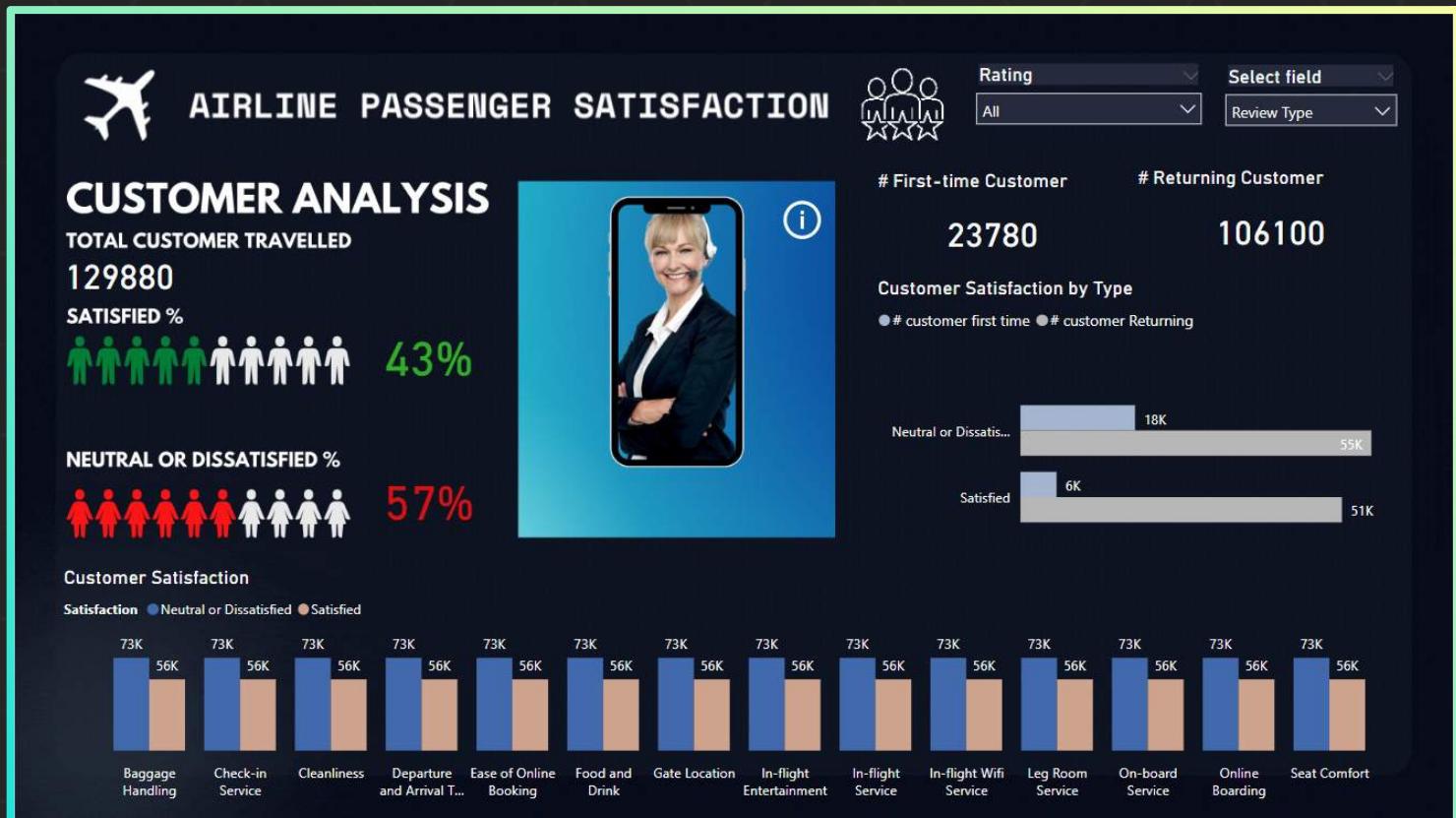
# AIRLINES CHALLENGE



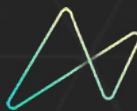
Nyan Htet Lin



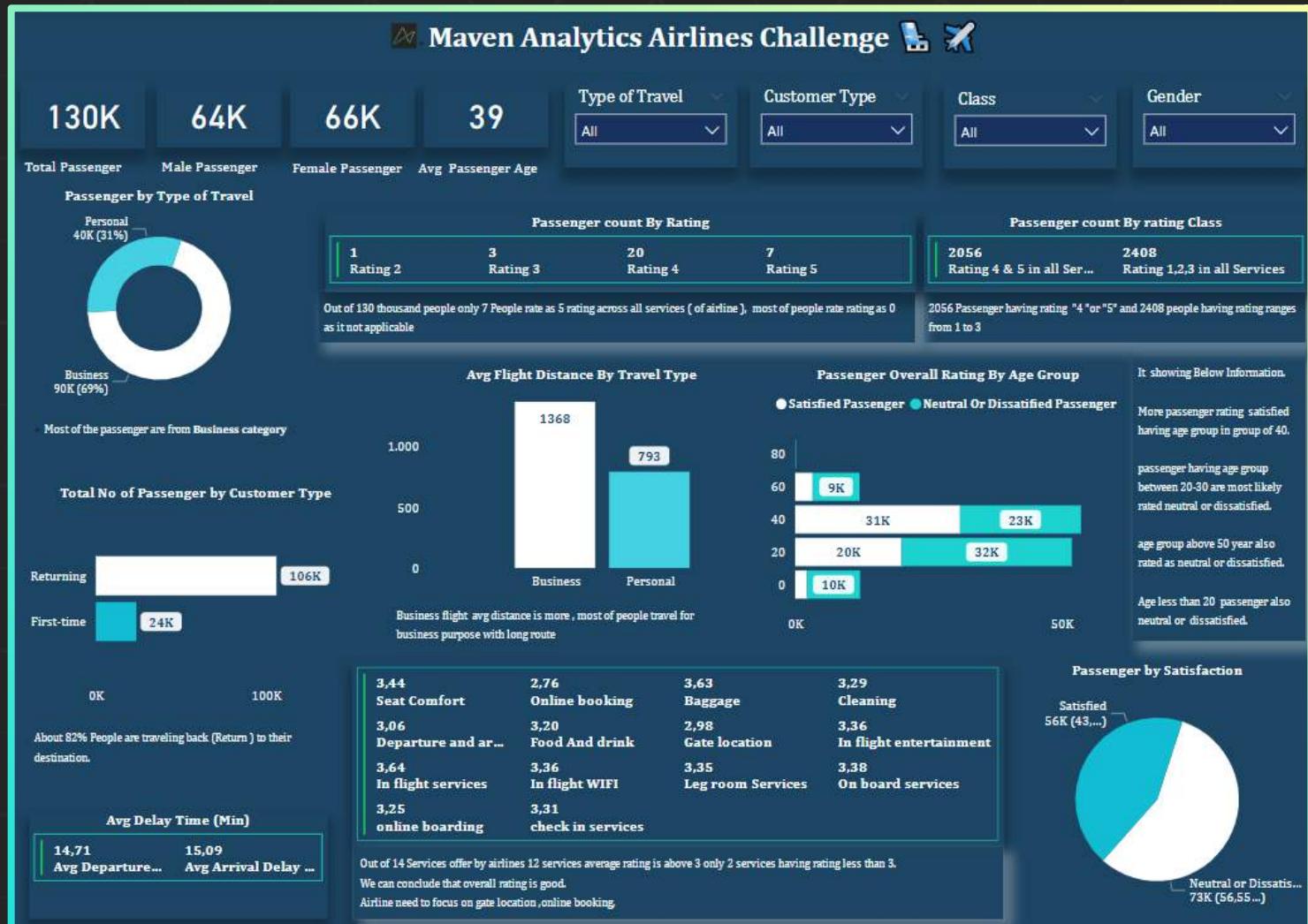
# AIRLINES CHALLENGE



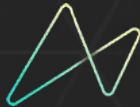
Sunil Patil



# AIRLINES CHALLENGE



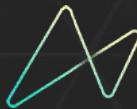
Pankaj Vijay Namekar



# AIRLINES CHALLENGE

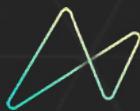


# Said Khabthani



# AIRLINES CHALLENGE



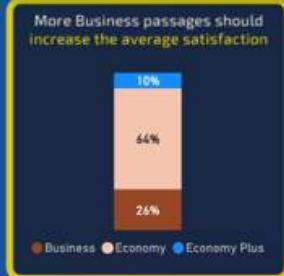


# AIRLINES CHALLENGE

## Possible solutions to a low satisfaction rate



- **Short term:** sell more business class tickets instead of economy class; redefine the passenger's board/unboard method; differentiate between "neutral" and "dissatisfied" in our feedback form.
- **Medium term:** improve at least the 4 critical points; research and experiment with economy class changes; study the delays.
- **Long term:** rethink long-range flights; do a deeper customer survey to verify new results.



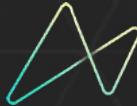
The four categories on the left are the most urgent to be resolved

Satisfaction	In-flight Wifi	Online Booking	Gate Location	Depart and Arrive Time	Food and Drink	Online Boarding	Cleanliness	Check-in	Leg Room	In Enter
Neutral or Dissatisfied	2.40	2.55	2.98	3.13	2.96	2.66	2.93	3.04	2.99	
Satisfied	3.16	3.03	2.97	2.96	3.53	4.03	3.75	3.65	3.82	
Total Average	2.73	2.76	2.98	3.06	3.20	3.25	3.29	3.31	3.35	

Our main public is formed by returning clients between 26 and 55 years old



# Raphael de Taranto



# AIRLINES CHALLENGE

**Maven Airlines - Satisfaction Rate Analysis Report**

Returning Customer	First time Customer	Total Customers	Satisfied Customers	Satisfaction Rate	Unsatisfied Customers	Unsatisfaction Rate
81.69%	18.31%	130K	56K	43.4%	73K	56.6%

Please use the Survey List slicer to compare different Airline Facilities. According to Survey Results the Customer Satisfaction Rate increases with better ratings. You can switch between 2 different measures Total Satisfied Customers and Satisfaction Rate % using the filter placed inside the visual.

**No of Customers and Satisfaction Rate % by Leg Room Service**

There is a clear Positive Correlation between Ratings and Satisfaction Rate %. When the Rating for Airlines facilities tends to increase the Customer Satisfaction Rate % increases.

**Satisfaction Rate % by Gender**

Please use the drill down option in the below visual to check out Average Airline Facilities Ratings by Travel type, Class, Customer Type and Customer Age. You can directly choose Average Ratings for different Airline facilities using the AvgRatings List slicer.

**Satisfaction Rate % by Gender and Leg Room Service**

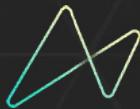
Below Matrix breaks down the Total Number of Customers by type of Travel, Class, Customer type and Age Segmentation. We can then Analyse the Satisfaction and Unsatisfaction rate of each type of Customers. P.S Green Shade under the Satisfaction Rate % denotes the customer is more satisfied, and the Red shade denotes the Satisfaction Rate is below acceptable standards.

Type of Travel	Class	Customer Type	First-time	Returning					
		Age Segmentation	Unsatisfied Customers	Unsatification Rate %	No. of Customers	Total Satisfied Customers	Satisfaction Rate %	Unsatisfied Customers	Unsatification Rate %
Business	Business	Adults	1882	43.2%	5367	4044	50.8%	3963	31.5%
		Middle-Aged	3221	77.2%	26414	21168	40.5%	5248	38.8%
		Senior Citizens	349	64.5%	16579	12289	36.3%	3240	19.8%
		Teenagers	54	21.0%	1169	692	58.0%	477	45.5%
	<b>Total</b>	<b>5556</b>	<b>60.3%</b>	<b>50,269</b>	<b>35.9%</b>	<b>78.6%</b>	<b>10,078</b>	<b>22.0%</b>	
Economy	Economy	Adults	6110	60.9%	1138	537	48.5%	451	54.0%
		Middle-Aged	3432	91.6%	6168	3286	31.6%	3062	48.4%
		Senior Citizens	5300	93.7%	3980	772	41.1%	2256	56.5%
		Teenagers	1311	33.0%	1000	115	90.0%	222	17.3%
	<b>Total</b>	<b>15,117</b>	<b>85.8%</b>	<b>11,654</b>	<b>56.4%</b>	<b>47.6%</b>	<b>5,289</b>	<b>32.4%</b>	
Economy Plus	Adults	336	89.1%	748	331	44.2%	417	55.7%	
		Middle-Aged	356	94.4%	1,485	596	33.8%	919	48.0%
		Senior Citizens	76	95.0%	1,095	467	42.5%	620	57.4%
		Teenagers	71	91.0%	263	68	33.3%	175	66.5%
	<b>Total</b>	<b>838</b>	<b>92.0%</b>	<b>3,951</b>	<b>1,652</b>	<b>46.4%</b>	<b>2,139</b>	<b>53.6%</b>	
<b>Total</b>			<b>17,911</b>	<b>76.0%</b>	<b>48,114</b>	<b>30,688</b>	<b>70.6%</b>	<b>19,628</b>	<b>29.4%</b>

**Conclusion:**

- We need to focus on Returning Customers, as they represent 81.69% of overall Customers, in which majority of the customer travel type is Business.
- Satisfaction Rate is less than 50% for Returning Business type Customers in Economy(47.6%) and Economy Plus class(46.4%). Teenagers, Senior Citizens, and Adults are the major age group here.
- Satisfaction Rate is way below acceptable standard throughout the Returning Personal Type Customers(10.1%).
- Inflight wi-fi, Ease of online booking rating, gate location and online boarding average ratings are poor across customer age groups Teenagers and Adults. We have to improve this facilities to boost the overall Satisfaction rate %.
- When we look at overall scenario of Returning Customers Teenagers, adult, senior citizens are not impressed with the airlines facilities (less than 50% Satisfaction rate). Hence providing better services such as Inflight wi-fi, ease of online booking, gate location, and online boarding to the above mentioned age groups will increase the overall Satisfaction Rate of the Airlines.

# Vivek Natarajan



# AIRLINES CHALLENGE

**PASSENGER FEEDBACK REPORT**

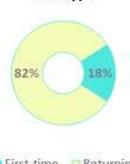
**MAVEN AIRLINES** 

**Pax Count | 129,880** **49% First Timers** **51% Returning Customers**

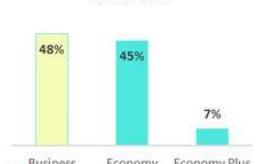
**1** Majority customers/passengers fall into the age group of 33 to 45 | most (82%) are returning customers | 48% book business class tickets | 69% travel for business purposes  
**2** Considerable annoyances highlighted in pre-flight & in-flight services  
**3** Improvement areas identified

Age Group	Percentage
7-19	9%
20-32	25%
33-45	29%
46-58	25%
59-71	10%
72-85	1%

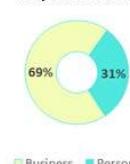
**PAX Type**



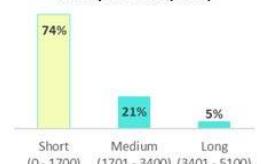
**Travel Class**



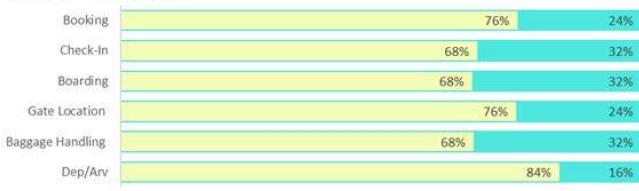
**Purpose of Travel**



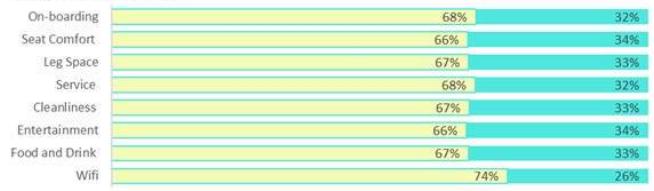
**PAX By Distance (miles)**



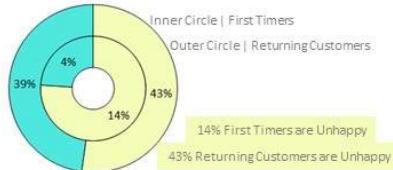
**Pre-Flight Satisfaction Ratio**



**In-Flight Satisfaction Ratio**



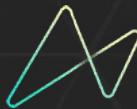
**Overall Satisfaction Ratio**



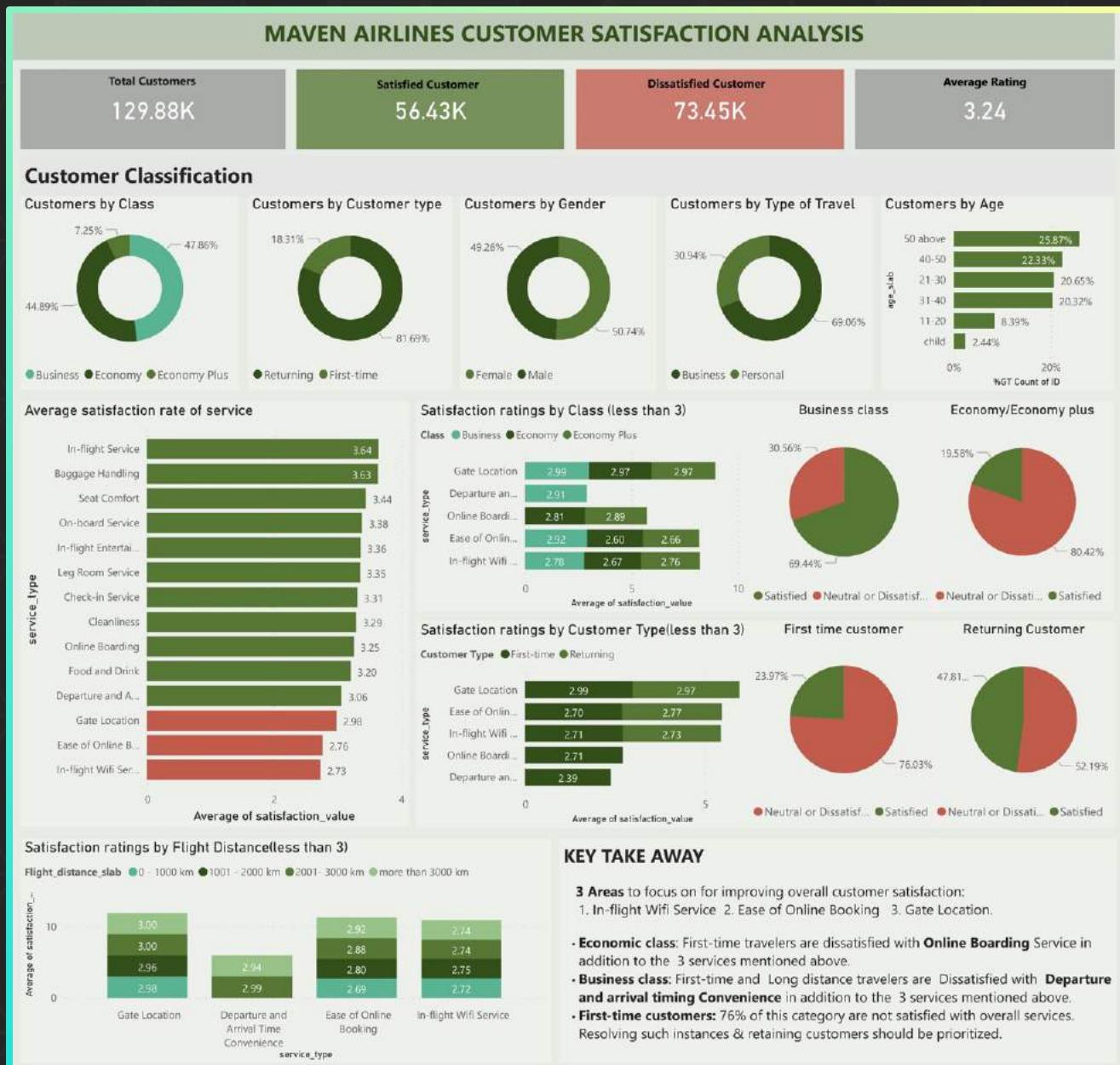
**Action Items:**

1. Absenteeism at check-in counter is suspected. If that is true, and is rectified, it can positively impact Check-in, Boarding & Baggage Handling | [Investigate](#)
2. Passengers taller than 6' would be relatively less in numbers. Advise in-flight staff to accommodate taller passengers in front rows as it has more leg space. This might address their discomfort grievances | [Recommendation](#)
3. Cleaning staff on short distance flights are generally short on time. Identify if additional resources can be allocated | [Investigate](#)
4. When was the Food & Drink menu last changed? If it has been more than a year, discuss with the catering team if it can be upgraded without the cost impact | [Recommendation](#)
5. Take the inventory of headphones on all the flights. Allocate required quantities | [Investigate](#)

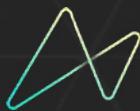
Iqbal Radiowala



# AIRLINES CHALLENGE



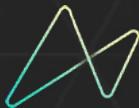
# Thasli Manshad



# AIRLINES CHALLENGE



# Md Parvez Hossain



# AIRLINES CHALLENGE

## Maven Airlines



Airlines were around the first few years of the 20th century, but flying was a risky endeavor not commonplace until 1926. In 2001, the industry dealt with the effects of another economic downturn, as business travel decreased substantially while labor and fuel costs increased. The events of 9/11 greatly magnified the airlines' issues, leading to a sharp decline in customers and significantly higher operating costs. Losses continued for years; the industry as a whole didn't return to profitability until 2006. A relatively stable period followed, although controversies arose over service quality and passenger treatment in terms of flight delays, particularly those involving planes waiting on the runway. A US-based airline headquartered in Boston, Massachusetts found that its latest passenger survey results just came in and it looks like the satisfaction rate dipped under 50% for the first time ever. The leadership team needs to take action fast. Hence this Analytics is to recommend...



Total Passengers

130K



Male Passengers

64K



Female Passengers

66K



Average Age

39



Avg. arrival delay

15.1



Avg. Departure Delay

14.7

### Overall Dissatisfaction Rate



### Dissatisfaction Rate By Class



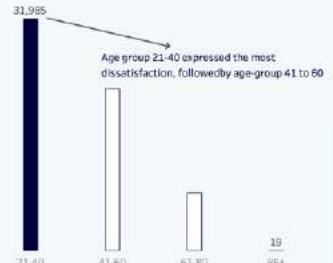
This visualization helps identify the class of customers with the most dissatisfaction rate, which happens to be the Economy class having the biggest share of dissatisfaction.



Avg. Ratings
Baggage 3.6
Cleanliness 3.3
Ease of Online Booking 2.8
Food and Drink 3.2
Gate Location 3.0
In-flight Entertainment 3.4
In-flight Service 3.6
In-flight Wifi Service 2.7
Leg Room Service 3.4
On-board Service 3.4
Seat Comfort 3.4
Online Boarding 3.3



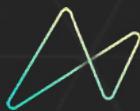
### Dissatisfaction by age group



Satisfaction Rating  
43.4%

Design by Kelvin, the Analyst | Data Source: Maven Analytics

# Kelvin Uzorma Usifoh



# AIRLINES CHALLENGE



**129,880**  
Passengers

**56.55%**  
Dissatisfied

**54.19%**  
Delayed

## PASSENGER SATISFACTION

**CLASS**  
Economy 52%



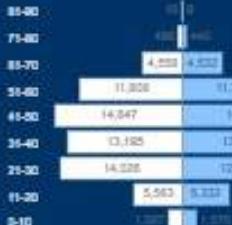
**TRAVEL**  
Business 69%



**CLIENT TYPE**  
Returning 81%



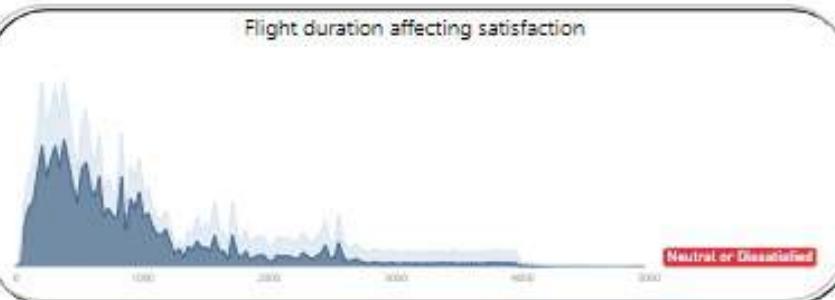
### Female vs Male



### Top services to be improved

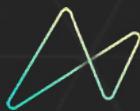


### Flight duration affecting satisfaction



MAVEN  
*Airways*

Tam Nguyen



# AIRLINES CHALLENGE

### Customer Satisfaction report - Maven's Airline

**14.71**  
Avg Departure Delay

**15.09**  
Avg Arrival Delay

**155M**  
Total flight distance

**1.19K**  
Average flight distance

**130K**  
Total Passenger

**39**  
Average Age

Total Passenger by Gender

Gender • Female • Male

Total Passenger by Customer Type

Customer ... • Returning • First-time

Total Passenger by Type of Travel

Type of Tr... • Business • Personal

Gender: All

Customer Type: All

Type of Travel: All

Class: All

Total Passenger by Age and Gender

Gender • Female • Male

Age Group	Female	Male	Total
20	10K	16K	26K
30	16K	20K	36K
40	12K	12K	24K
60	5K	5K	10K
All	41K	59K	100K

Total Passenger by Class

Class • Business • Economy • Economy Plus

Total Passenger by Satisfaction

Satisfaction • Neutral or Dissatisfied • Satisfied

Average Rating

3.9

Baggage Handling: 3.6

Check in service: 3.2

Cleanliness: 3.2

Departure and arrival: 3.1

Ease of online booking: 2.8

Food and drink: 3.2

Gate location: 3.0

In flight entertainment: 3.4

In flight service: 3.2

In flight WiFi service: 3.6

Leg room service: 3.4

On board service: 3.6

Online Boarding: 3.3

Seat Comfort: 3.4

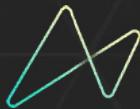
Since most of the customer use airline for business purpose, increase the personal trip rate by giving personal offers and also increase the satisfaction rate by proving onboarding services.

Seems customers are having a poor online booking experience. Website should be optimized for better booking and onboarding experience

Target the marketing efforts more to the age group of 20-30, as they predominantly to be first time users, once they are converted they can be high potential for returning customers.

Prepared by Prasanna K | Dataset by Maven Analytics

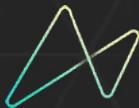
# Prasanna K



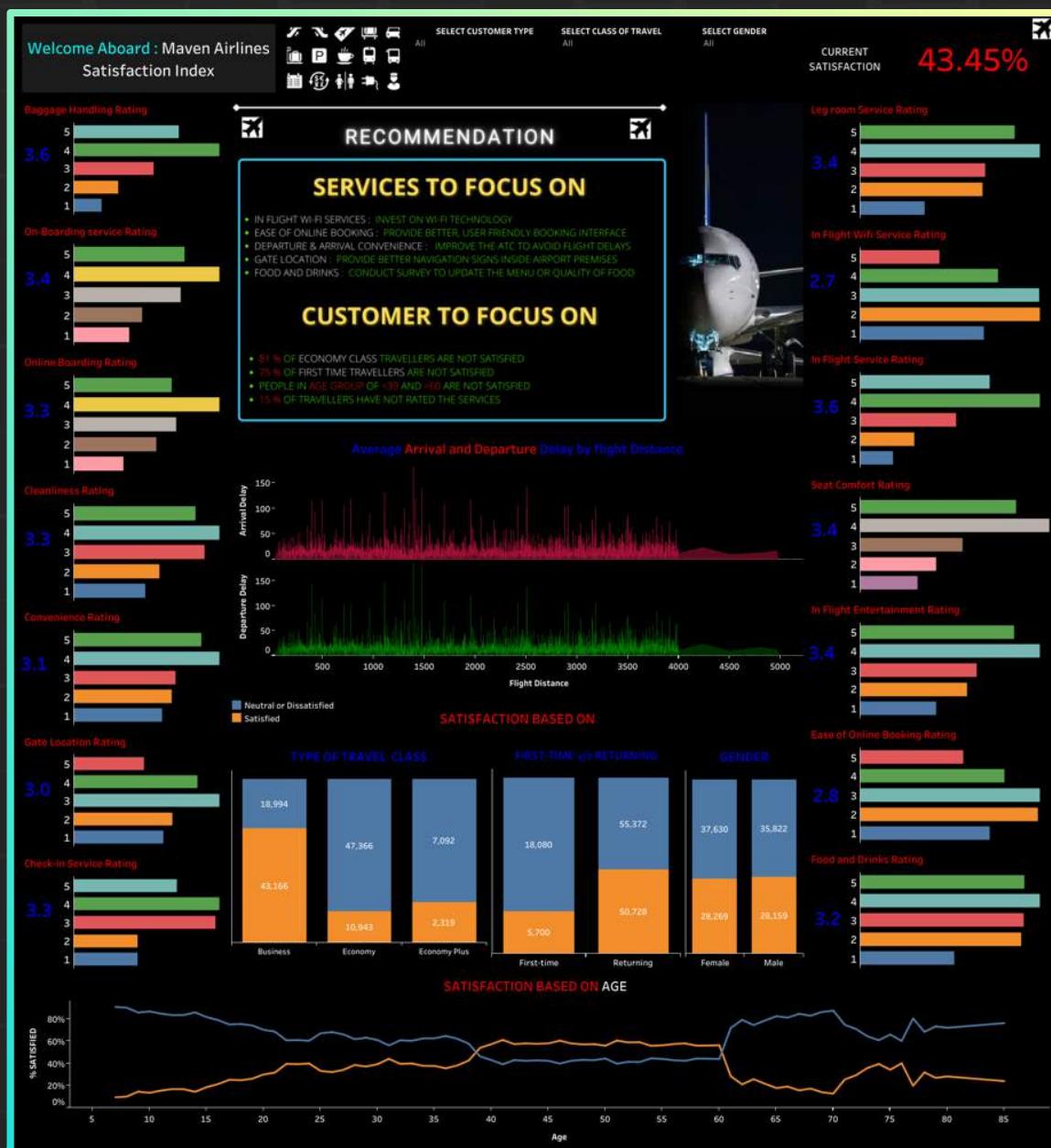
# AIRLINES CHALLENGE



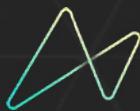
Siddharth Kumar Pathak



# AIRLINES CHALLENGE



# Rahul Prasad Kushwaha



# AIRLINES CHALLENGE

**Maven Airlines**

Average Departure Delay      Average Arrival Delay      Average Flight Distance

14	14	1,676
Minutes	Minutes	Miles

Travel Type      Overall Satisfaction

Business   Personal

Satisfied   Neutral or Dissatisfied

86%	13%
-----	-----

Customer Type

First-time   Returning

Satisfied   Neutral or Dissatisfied

15%	85%
-----	-----

Seat Comfort      In-flight Service      In-flight WiFi Service      Food and Drink

★★★★★ 3.8   ★★★★★ 3.8   ★★★★★ 2.8   ★★★★★ 3.3

G1KL9X      PLEASE BE AT THE GATE 30 MINUTES PRIOR TO BOARDING TIME      G1KL9X

**BOARDING PASS**      BUSINESS CLASS

Passenger: SARAH RIECKE  
From: JACKSONVILLE JAX  
To: MINNEAPOLIS MSP

Flight: NAI234	Date: 28 MAY 22	Time: 07:25
Gate: 10	Boarding: 06:45	Seat: 09A

**BOARDING PASS**      BUSINESS CLASS

**Maven Airlines**

Average Departure Delay      Average Arrival Delay      Average Flight Distance

15	16	744
Minutes	Minutes	Miles

Travel Type      Overall Satisfaction

Business   Personal

Satisfied   Neutral or Dissatisfied

43%	57%
-----	-----

Customer Type

First-time   Returning

Satisfied   Neutral or Dissatisfied

11%	47%	23%	77%
-----	-----	-----	-----

In-Flight Entertainment      In-Flight Service      Cleanliness      Baggage Handling

★★★★★ 3.1   ★★★★★ 3.5   ★★★★★ 3.1   ★★★★★ 3.5

G2KL9Z      PLEASE BE AT THE GATE 30 MINUTES PRIOR TO BOARDING TIME      G2KL9Z

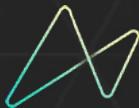
**BOARDING PASS**      ECONOMY

Passenger: JOHN SMITH  
From: JACKSONVILLE JAX  
To: MINNEAPOLIS MSP

Flight: NAI234	Date: 28 MAY 22	Time: 07:25
Gate: 10	Boarding: 06:45	Seat: 23C

**BOARDING PASS**      ECONOMY

# Sarah Riecke, MBA

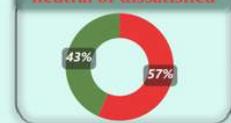


# AIRLINES CHALLENGE

How can Maven Airlines' **satisfaction rate** be improved?

Stefan Kløvning

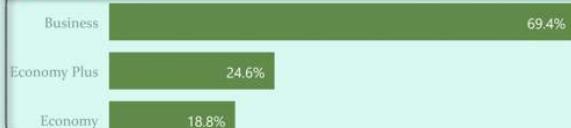
57% of customers are neutral or dissatisfied



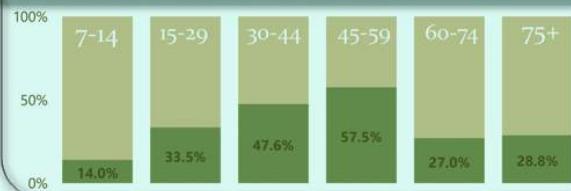
## Debrief

Maven Airlines has received **poor overall feedback** from its over **129k passengers**, and must take active measures to improve the **satisfaction rate** in order to reduce customer churn.

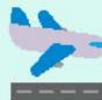
Passengers in **Economy** and **Economy Plus** class are by far the **least satisfied**



Preteens under 15 and seniors over 60 are the **least satisfied**



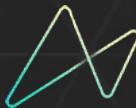
The **lowest rated** factors are in-flight Wi-fi service, ease of online booking and online boarding.



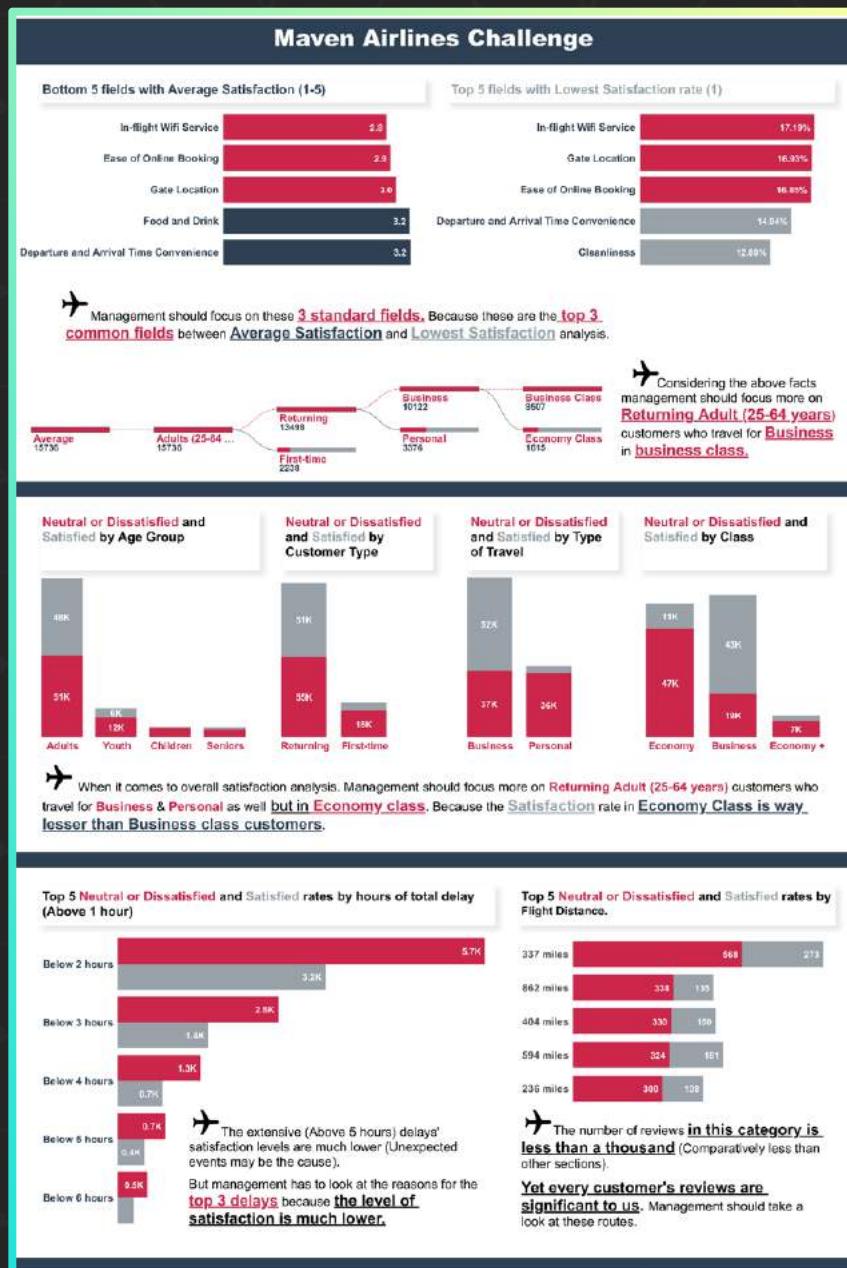
## Recommendations

- Improve in-flight Wi-fi service, especially for economy and economy plus class
- Optimize website to make online booking and boarding easier
- Facilitate better airline experiences for preteens and seniors

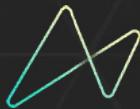
# Stefan Kløvning



# AIRLINES CHALLENGE



# Nilay Mukhopadhyay



# AIRLINES CHALLENGE

## MAVEN AIRLINES | HOW SATISFIED ARE PASSENGERS?

Number of passengers	Travel for Business	Business Class	First-time passengers	Percentage of Women	Avg Passengers Age
129,880	69%	48%	18.3%	50.7%	39.4

**Satisfied Customers**  
43% of all passengers report being satisfied with the airline services

**What proportion of passengers are satisfied by Class?**

Class	Proportion
Business	69%
Economy Plus	25%
Economy	19%

**What are the 5 services passengers enjoy the least?**

Service	Rating
In-flight WiFi Service	2.7
Ease of Online Booking	2.8
Gate Location	3.0
Food and Drink	3.2
Online Boarding	3.3

The rating goes from 1 to 5.  
1 - Lowest satisfaction  
5 - Highest satisfaction

People complain more about the quality of the wifi onboard than anything else.

**Are returning passengers more satisfied than first-time ones?**

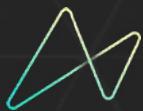
Passenger Type	Satisfied Customers
Returning	48%
First-time	24%

48% of returning customers are satisfied with Maven Airline services. Even though this number is not high enough, it is still 2 times higher than the satisfaction of first-time passengers.

**What can we recommend to improve passengers satisfaction?**

- Improve WiFi services. Investigate the issues and provide fast, reliable and easy access to the internet.
- Review the user experience for online booking. Proceed to A/B Testing to implement the most user-friendly interface possible.
- Provide clearer guidance for gate location. Study the possibility to implement a map to help passengers find their way.
- Provide extra help for first-time passengers. Since they are not familiarized with the airline, equip them with more instructions and get their feedback whenever it's possible.
- Conduct a survey to better understand the complaints about food. Is it quality? Diversity? Do the same for the online boarding experience. Once we get the results, take the appropriate actions.

Franck Binde



# AIRLINES CHALLENGE

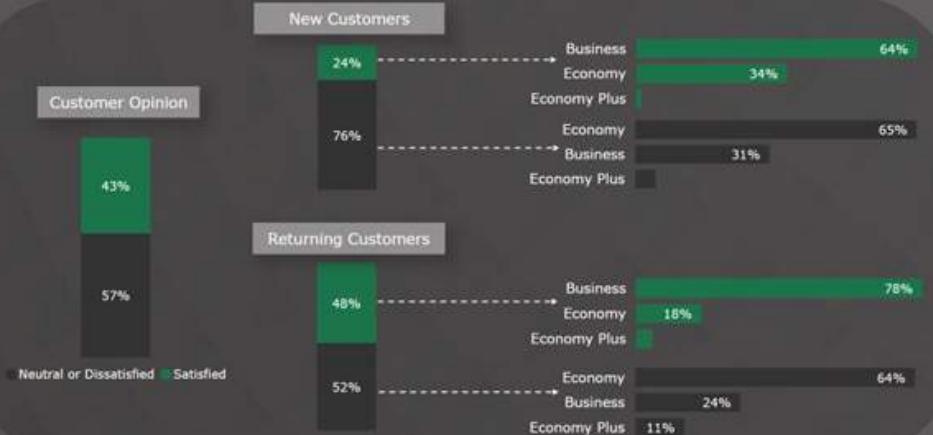
## Maven Airlines



"Customers don't expect you to be perfect. They **do** expect you to fix things when they go wrong." - Donald Porter, VP, Britain Airways

23,780  
New Customers

106,100  
Returning Customers



**Needs Improvement:**  
(Services listed below were rated below 4 stars on average and should be reviewed immediately)

In-Flight WiFi Service



Ease of Online Booking



Gate Location



Best Liked:

Baggage Handling



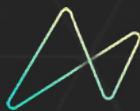
### Notes

- Our goal should be to retain new customers - currently, 76% of our new customers are "neutral or dissatisfied" with our services and are unlikely to return.
- More than half of our returning customers are also dissatisfied and are unlikely to return.
- In-Flight WiFi Service is our lowest rated service (average of 2.73 stars).
- Our most dissatisfied customers were located in Economy class, which typically pays extra for In-Flight WiFi Service.

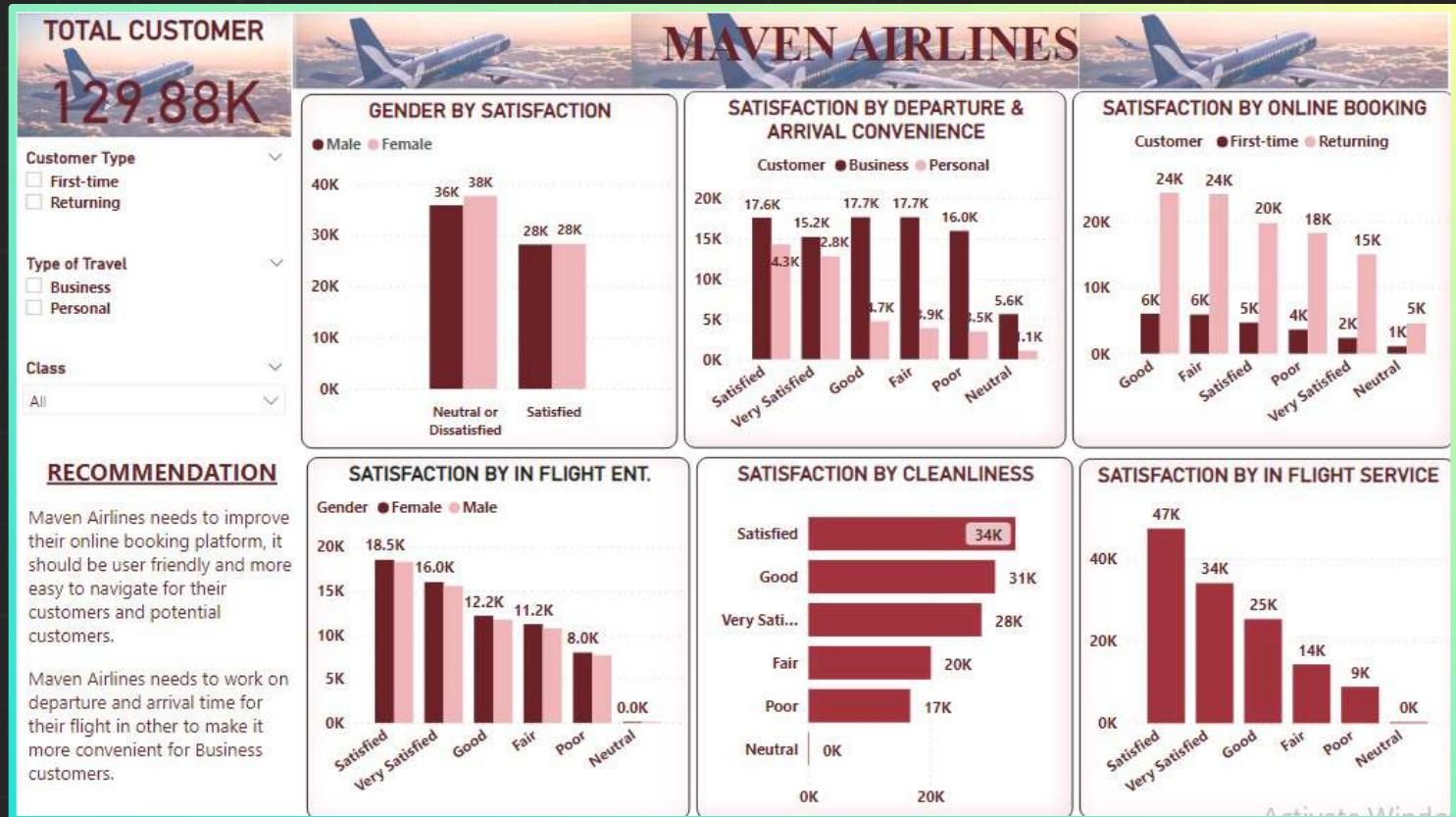
### Plan of Action

- Implement a promotional offer for free In-Flight WiFi Service for all classes to increase traffic and customer satisfaction.

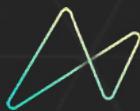
Tina Wilson



# AIRLINES CHALLENGE



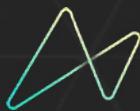
Emmanuel Ore



# AIRLINES CHALLENGE



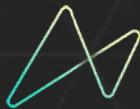
Joshua Dakim



# AIRLINES CHALLENGE



**Syed Asher Ahmed**



# AIRLINES CHALLENGE



## Maven Airlines data-driven strategy to increase the satisfaction rate



**57%** of the passengers are Neutral or Dissatisfied.

**76%** among First time customers.

**90%** when traveling for Personal reasons.

**92%** between First time Economy Plus travelers.



The **in-flight WiFi** should be improved for a better satisfaction rate as it shows the lowest qualification.

Other services that performed poorly are: Ease of Online Booking, and Gate location.

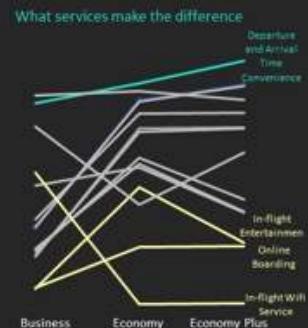


### Data-driven strategy

The **expectations** should be managed, especially among first time Economy Plus passengers. They could receive a virtual brochure explaining what they are receiving.

**Pleasure travelers** may have more anxiety because they invested their own money in a vacation, and they expect it to be outstanding, so every little issue is a set back.

On the other hand, **Business travelers** are not paying for the ticket. What comes for 'free' generates less anxiety and it's more satisfying.



If we focus on the qualification difference between satisfied and dissatisfied passengers by Class, some services stand out.

A negative experience with the Online Boarding, and the In-flight Entertainment affects everyone but especially Business Class.

The poor In-flight WiFi service drops the satisfaction of Economy & Economy Plus travelers.

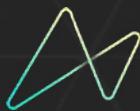
It's interesting that the **Departure and Arrival Time convenience** can be inconvenient for Business but positive for Economy Plus.

Overall average ratings for all services are in range between 2.73 and 3.64. There is a long way ahead to reach 5 out of 5.

The services that should be improved the most are:

- In-flight WiFi
- Online Boarding
- In-flight Entertainment

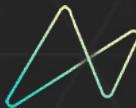
# Lucia Stefanuto



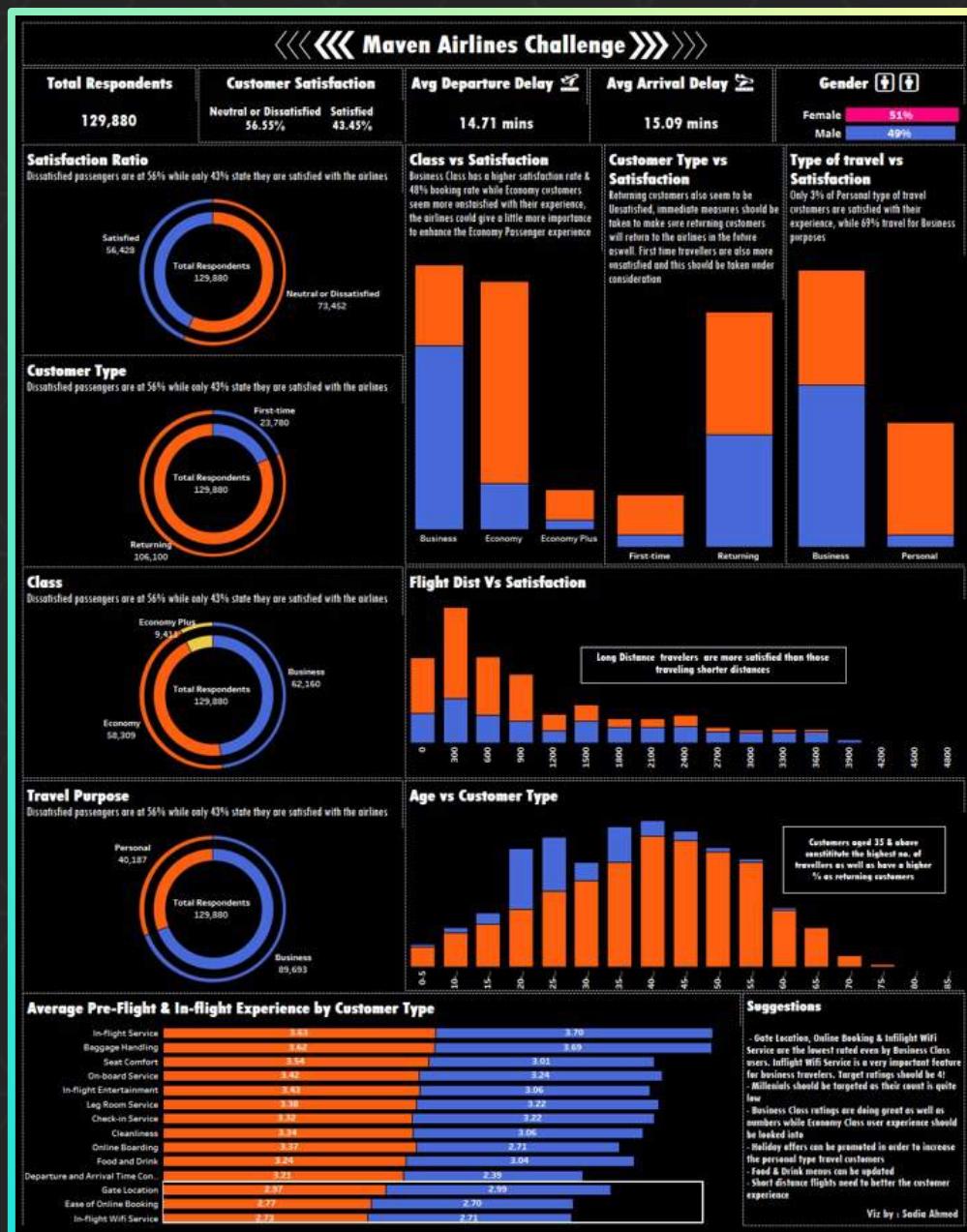
# AIRLINES CHALLENGE



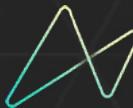
Weronika Garbarz



# AIRLINES CHALLENGE



# Sadia Ahmed



# AIRLINES CHALLENGE

The newest passenger survey results have just been released, and it appears that the satisfaction percentage has dropped below 50% for the first time ever. Hence the goal is to suggest a data-driven strategy for Improving Maven Airlines' customer satisfaction ratings.

## Passengers Information

Maven Airlines received responses from 1,29,880 Passengers out of which only 43.45% of the people seems to be **Satisfied** with the Airline. 56.55% of the people are either **Disatisfied** or have given a **Neutral** response to the Airline. The Airline received 81.69% of the total responses from the people who are **Returning** flyers while from the **First Time** flyers only 18.31% of the responses were received. Maven Airlines is generally preferred for **Business** related travels since 59.06% of the people are flying for **Business** reasons while only 30.94% of the people are flying for **Personal** reasons. 47.88% of the people are preferring to fly on **Business Class** while 44.89% of the people are flying in **Economy Class**. Only 7.25% of the people are preferring **Economy Plus Class**. People of the age group (19-30) should be the prime target as this is the class which is travelling very often with Airline and by improving services they are more likely to recommend the Airline to friends and family.

Passenger Type	Percentage
Returning	81.69%
First Time	18.31%

Class	Percentage
Business	47.88%
Economy	44.89%
Economy Plus	7.25%

Age Group	Percentage
19-30	55.50%
31-40	24.43%
41-50	18.31%
51-60	6.20%
61-70	1.19%
71 & Above	0.06%

## Service Ratings

### Pre Flight Services

Service	Rating
Ease of Online Booking	2.8
Gate Location	3.0
Online Boarding	2.3
Check-in Service	3.2

**Problems and Recommendations:**  
In terms of Pre Flight Services the Airlines need to **Improve** their website or the mobile App in order to Improve their **Online Booking Facility**.  
Passengers are also facing issues with respect to the **Gate Location**, as they need to cover a huge distance on foot in order to board the flight. So the Airline can have boarding gate close to the Security Checks.  
The **Online Boarding Facility** is also an area where the Airline should focus on in order to provide better customer experience. To Improve this the Airline can try replacing the Boarding Scanners installed at the airports to fasten the process of E-Boarding.

### Flight Services

Service	Rating
Lounge Service	3.4
Departure & Arrival Time Convenience	3.3
Seat Comfort	3.4
Cleanliness	3.3
On-Board Service	3.4
Food and Drink	3.2

**Problems and Recommendations:**  
Since Covid is not gone yet, hence the Airline needs to **Improve** the **Cleanliness** and sanitization of the Aircraft as people are not finding that **Satisfactory**. So the Airline can increase the sanitization frequency of the cabin and should appoint highly trained staff to maintain Hygiene.  
With that being said, **Time** once gone is gone forever, hence the Airline needs to **Improve** their **Departure and Arrival time Convenience** as passengers are facing trouble reaching their destination on time.  
Passengers are also not **Liking** the **Food and Drinks** that are being served in the aircraft, hence Airline can think of **replacing** the food items or **adding some extra drinks** to the menu.

### In-Flight Services

Service	Rating
In-Flight WiFi Service	2.7
In-Flight Service	3.0
In-Flight Entertainment	3.4
Baggage Handling	3.2

**Problems and Recommendations:**  
Airline is regularly getting criticized for their poor **Wi-Fi Services**.  
Hence the airline need to either **replace** the **Antennae** fitted beneath the airplanes that receive signals from the towers or should try **replacing** their **Modems** that convert these signals into Wi-Fi Signals.  
Since the **Wi-Fi services** are not proper, hence the **In-Flight Entertainment** is also getting **Impacted** which is not a good sign for the Airline. Passengers are finding it difficult to enjoy their flight without good Entertainment Services.

## Flight Information

On an average Flights are **arriving late** by **15.09 Minutes** which is again causing a dip in the **Satisfaction Rate** and also there is **14.71 Minutes of Departure Delay** of the flights. Though Maven Airline has gathered firms since there are returning customers who are flying on longer routes with the Airline. Mainly there are Business flyers but the Airline needs to reduce its Arrival and Departure Delay because of which passengers are unable to cope up with their on time commitments.

Flight Metric	Value
Average Arrival Delay in Minutes	15.09
Average Departure Delay in Minutes	14.71

**Flight Information Metrics:**

- Average Arrival Delay in Minutes: 15.09
- Average Departure Delay in Minutes: 14.71
- Average Flight Distance In Miles by Class: Business (1762.09), Economy Plus (737.09), Economy (711.09)
- Average Flight Distance In Miles by Travel Type: Business (1666.09), Personal (792.76)
- Average Flight Distance In Miles by Customer Type: Returning (1291.09), Non-Resident (214.32)

## Satisfaction Rate

82.38% young generation and adolescents seems to be **Highly Dissatisfied** with the Airline since they are young generation so the Airline needs to take care of the modern things such as **Wi-Fi** because the young generation is finding it difficult to have a pleasant flight without good Entertainment Services.  
80.12% of the Elderly People between (61-70) years are also **Highly Dissatisfied** since for them the **Cleanliness** matters a lot and the Airline is not maintaining proper Hygiene of the Aircraft and also the **Gate Location** to board their flight is a challenge.  
81.23% of the people flying in **Economy Class** are **Disatisfied** while 75.36% of the people flying in **Economy Plus Class** are not satisfied. People who are travelling for **Personal** reasons are highly **Dissatisfied** since they are finding it difficult to fly without good **Entertainment Services** in the Aircraft.  
76.03% of the first time flyers are either **Neutral** or **Disatisfied** and they may even not recommend Maven Airline to their friends and family. Only 52.19% of the returning customers are again facing the challenges and are again not **Satisfied** with the Airline Services.

Demographic	Percentage
19-30	82.38%
31-40	80.12%
41-50	81.23%
51-60	75.36%
61-70	76.03%
71 & Above	52.19%

Class	Percentage
Business	82.38%
Economy Plus	75.36%
Economy	81.23%

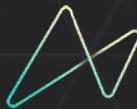
Type of Travel	Percentage
Business	82.38%
Personal	76.03%

Customer Type	Percentage
Returning	80.12%
First-time	19.88%

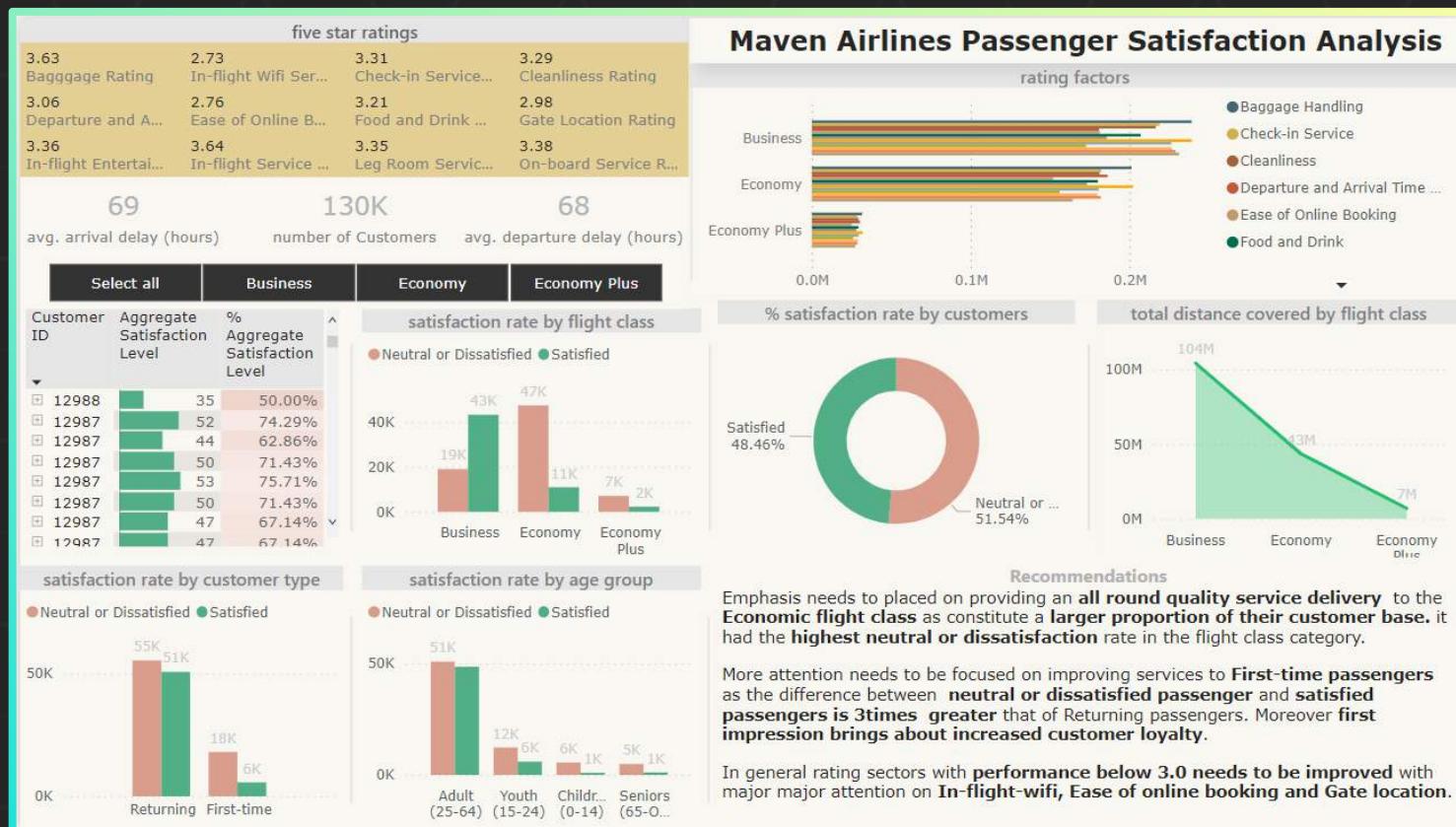
Gender	Percentage
Female	82.38%
Male	76.03%

Satisfaction	Percentage
Neutral or Disatisfied	76.03%
Satisfied	52.19%

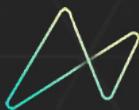
Vipul Goel



# AIRLINES CHALLENGE



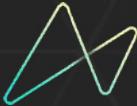
# Amole Adeyemi



# AIRLINES CHALLENGE



Sanket Saraf



# AIRLINES CHALLENGE



## MAVEN AIRLINES CUSTOMER SATISFACTION REPORT

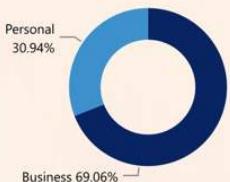


**56.55%**

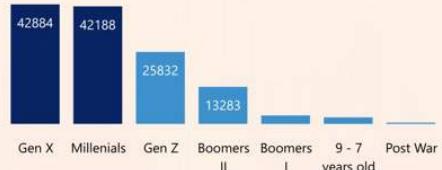
Dissatisfaction Rate

The airline satisfaction scores from **129,880** passengers about the pre-flight and flight services that are offered by Maven Airlines return a **dissatisfaction rating of more than 50%**.

Passengers per Type of Travel



Customer per Age

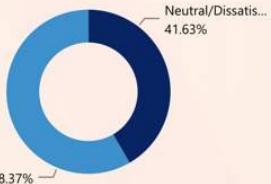


**65.50%** of the passengers belong to **Generation X** (42 - 57 years old) and **Millenials** (26 - 41 years old) and these are both considered the working generation that's why **69.06%** of flights were **business trips**.

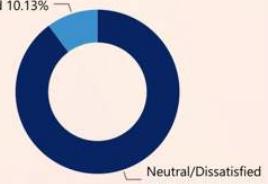
- Even though most of the flights are accounted for business purposes they receive a high satisfaction rating of 58.37%, however, we cannot disregard the **37,337 dissatisfied customers**.

- Out of **40,187** personal flights, **89.87%** of the passengers are **not satisfied** with the services being offered by Maven Airlines.

Satisfaction Rate for Business Travel Type



Satisfaction Rate for Personal Travel Type



Average of Ratings by Service

In-flight Wifi Service	2.7
Ease of Online Booking	2.8
Gate Location	3.0
Departure and Arrival Time Convenience	3.1
Food and Drink	3.2
Online Boarding	3.3
Cleanliness	3.3
Check-in Service	3.3
Leg Room Service	3.4
In-flight Entertainment	3.4
On-board Service	3.4
Seat Comfort	3.4
Baggage Handling	3.6
In-flight Service	3.6

**14.71 mins**

Average Departure Delay

**15.09 mins**

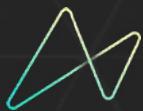
Average Arrival Delay

- Since **In-flight Wifi Service** has the lowest average rating of 2.7, this should be a **top priority** for Maven Airlines if we want to boost our customer satisfaction score. Having access to a good internet service can make up for the **15-minute average arrival delay**.

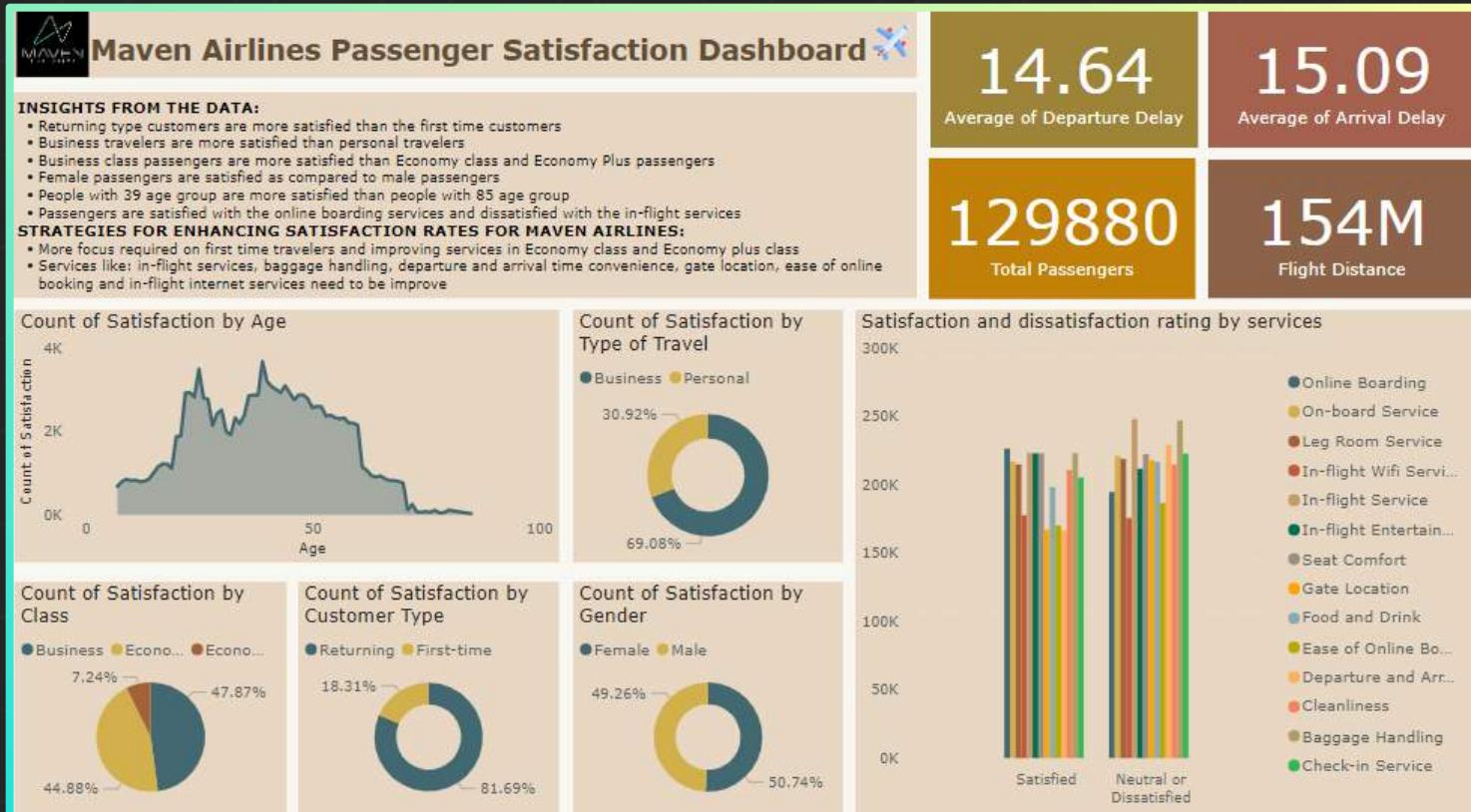
- Maven Airlines should also **improve the process of online booking**. We should have a user-friendly website as well as the reduction of unnecessary requirements for fast and efficient transactions.

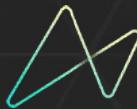
- The **difficulty in locating the gate number at the airport should also be addressed**. Placing virtual maps or airline staff in strategic locations would be a great help for the passengers.

# Lance Arante



# AIRLINES CHALLENGE





# AIRLINES CHALLENGE

EMAIL ADDRESS: Biluor1@gmail.com
LINKEDIN: linkedin.com/in/biluor

## AIRLINE PASSENGER SATISFACTION

**Filters**

**Class**

- Business
- Economy
- Economy Plus

**Travel Type**

- Business
- Personal

**Customer Type**

- First-time
- Returning

**Customer Satisfaction**

- Neutral or Dissatisfied
- Satisfied

**Flight Delay**

44%

Departure Delay %

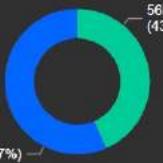
44%

Arrival Delay %

33%

Arrival & Departure Delay %

**Customers Satisfaction**

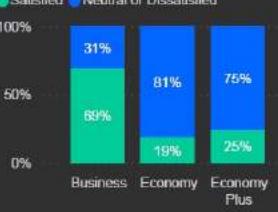


56K (43%)

73K (57%)

Satisfied (green)    Neutral or Dissatisfied (blue)

**Satisfaction by Class**



Class	Satisfied (%)	Neutral or Dissatisfied (%)
Business	69%	31%
Economy	19%	81%
Economy Plus	25%	75%

**Total Customers**

129.88K

**Average Services**

Service	Avg.
WiFi	2.7
Online Booking	3.3
Online Boarding	2.8
Leg Room	3.4
Entertainment	3.0
Food & Drink	3.4
Cleanliness	3.4
Gate Location	3.6

**FOCUS ON NEUTRAL OR DISSATISFIED:**

- Main Product** - Economy class - 64%.
- Main Customers** - aged 20-40 - 56%.
- Main Flight Distance** - Under 1K miles - 68%.
- Low-rated services**: (Below the average of 3 points)
  - WiFi
  - Online Booking
  - Online Boarding
  - Leg room
  - Entertainment
  - Food & Drink
  - Cleanliness
  - Gate location

**KEY FACTORS :**

**Short Range**

- **Technological improvement** - WiFi, Online Booking, Online Boarding.
- **Operation improvement** - Cleanliness, Food & Drink, Entertainment.
- **Customer expectations** - the main flights are short range (under 1K) need to check and meet customer expectation before and during the flight.

**Long Range**

- **Business strategic** - Gate location, Newer airplanes, Marketing & customization to target audience.
- **Delay** - Analyze the reasons and take actions to reduce.

**MAIN CUSTOMER BASE :**

First-time - 73% are customers aged 20-40.

Returning - 47% are customers aged 40-60.

Identifying key customers will help understand customer expectations.

**COMPANY PRODUCTS :**

Business - 48%, 69% Satisfied.

Economy - 45%, 19% Satisfied.

Economy Plus - 7%, 25% Satisfied.

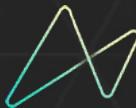
**DELAY FLIGHTS :**

Arrival & Departure delay on the same flight - 33 %.

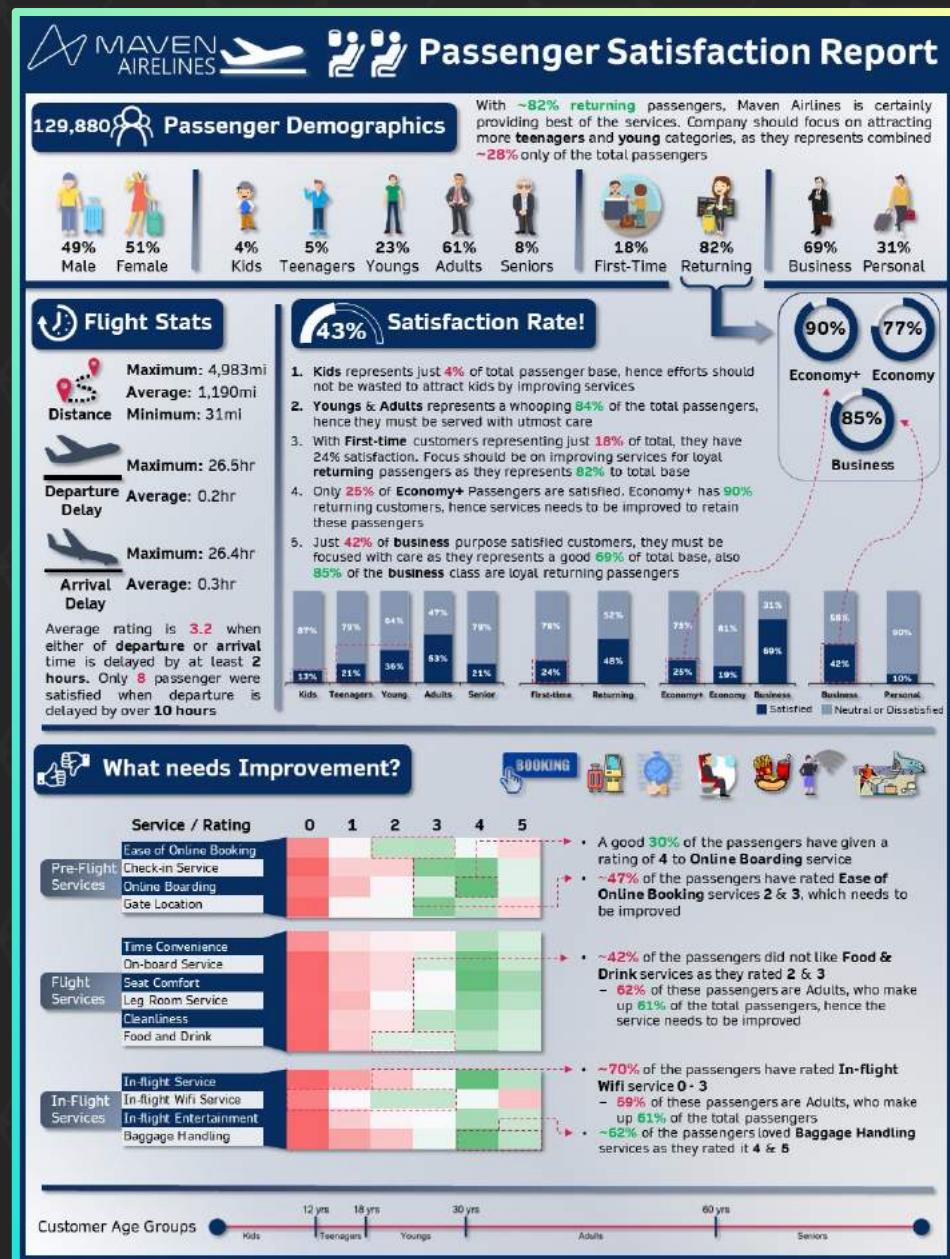
Arrival / Departure delay - 44%.

Main delay records are from Business class.

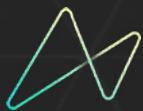
Or Bilu



# AIRLINES CHALLENGE



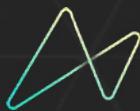
Pankaj Goyal



# AIRLINES CHALLENGE



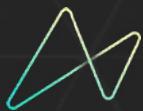
Hauwa Yusuf



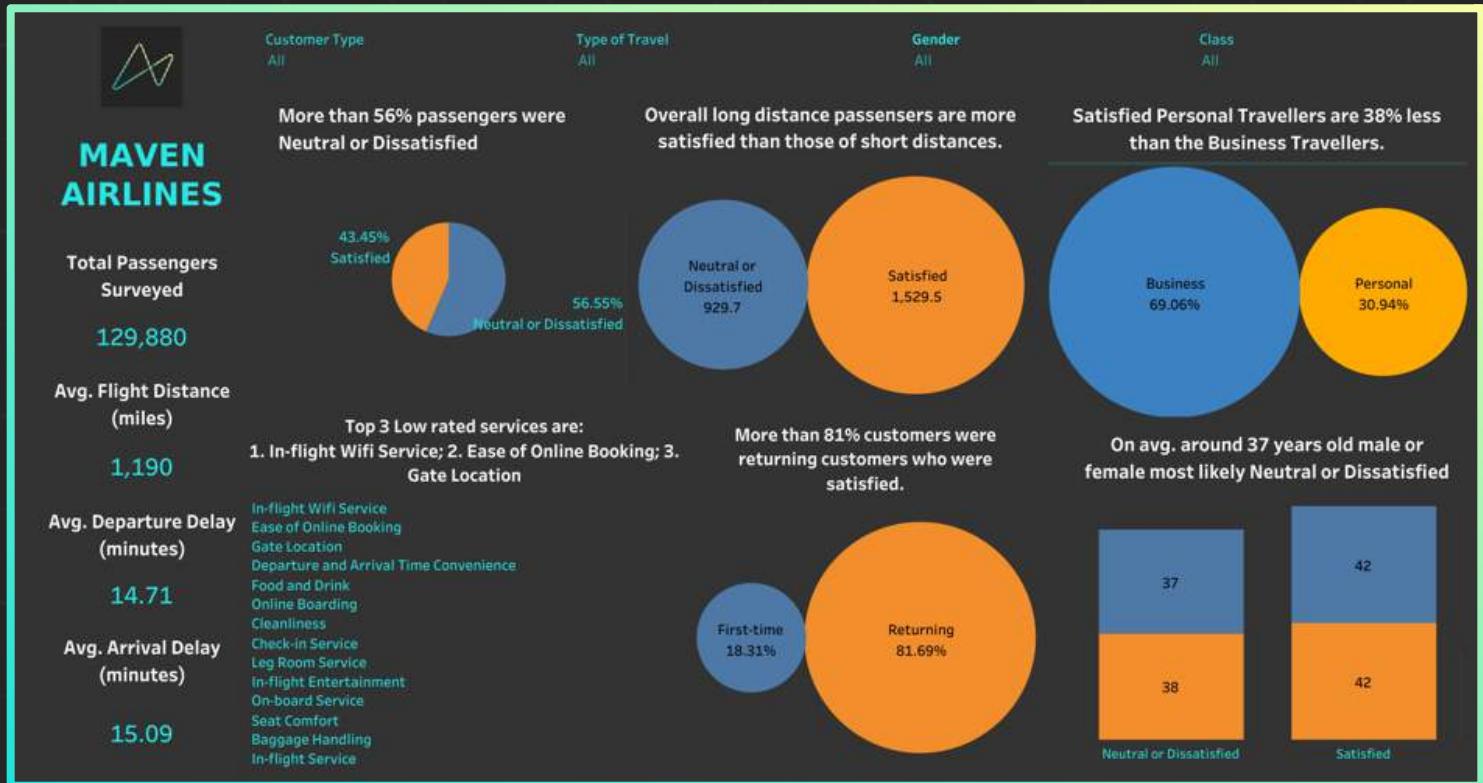
# AIRLINES CHALLENGE



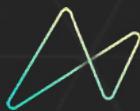
Shikha Tiwari



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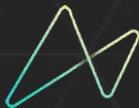
Abu Salehin



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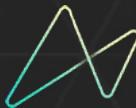
Rafael Marangoni Panegassi



# AIRLINES CHALLENGE



Ritika Aggarwal



# AIRLINES CHALLENGE

**MAVEN ANALYTICS**

**CUSTOMER SATISFACTION REPORT**

**MAVEN AIRLINES**

The newest passenger survey results have just been released, and it appears that the satisfaction percentage has dropped below 50% for the first time ever. As a result, the goal of this report is to suggest a data-driven strategy for improving Maven Airlines' customer satisfaction rating.

---

**What is the overall level of satisfaction?**  
73452 customers (56.55%) are neutral or dissatisfied, while 56428 customers (43.45%) are satisfied out of 129880 responses.

Neutral or Dissatisfied	56.55%
Satisfied	43.45%

**What is the most popular flight class?**  
With only 941 passengers, Economy Plus is the least popular class (7%). With 62160 (48%) customers, the business class is the most popular, then Economy class with 58309 (45%) customers.

Business	47.86%
Economy	44.89%
Economy Plus	7.25%

**What is the overview of our customer type?**  
Over 80% of the respondents said they were returning passengers (106100). Only 23780 respondents are first-time passengers and this represent about 18% of the total response.

Returning	81.69%
First-time	18.31%

**What is the satisfaction level by gender?**  
65899 (50.74%) of the 129880 replies are female, while 63981 (49.26%) are male. 21.77% of female respondents said they are satisfied, with 28.97% saying they are not satisfied or neutral. 21.68% of men said they are satisfied, with 27.58% saying they are not satisfied or neutral.

Female	28.97%	21.77%
Male	27.58%	21.68%

**What is the level of satisfaction by class?**  
The majority of business class passengers were satisfied with their service, with 43166 (33.24%) stating they were, and 18994 (14.62%) indicating they were not. Only 10943 (8.43%) of economy class respondents indicated they are satisfied, while 47366 (36.47%) stated they are not.

Business	75%	33%
Economy	36%	8%
Economy Plus	1	1

**How do departure and arrival delays affect customer satisfaction?**  
On the average, when there is a 13-minute delay in arrival and/or departure time, a traveler is likely to be satisfied. A 16-minute delay in departure and/or a 17-minute delay in arrival, on the other hand, is likely to leave a passenger dissatisfied or neutral.

**Arrival Delay by Satisfaction**

Neutral or Dissatisfied	17
Satisfied	13

**Departure Delay by Satisfaction**

Neutral or Dissatisfied	16
Satisfied	13

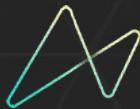
**Recommendations**

- The areas that require immediate improvement are in-flight wifi, ease of online booking, and gate position.
- Because the majority of economy and economy-plus passengers appear unsatisfied, special attention should be paid to them.
- Finally, the arrival and departure delays should not exceed 13 minutes.

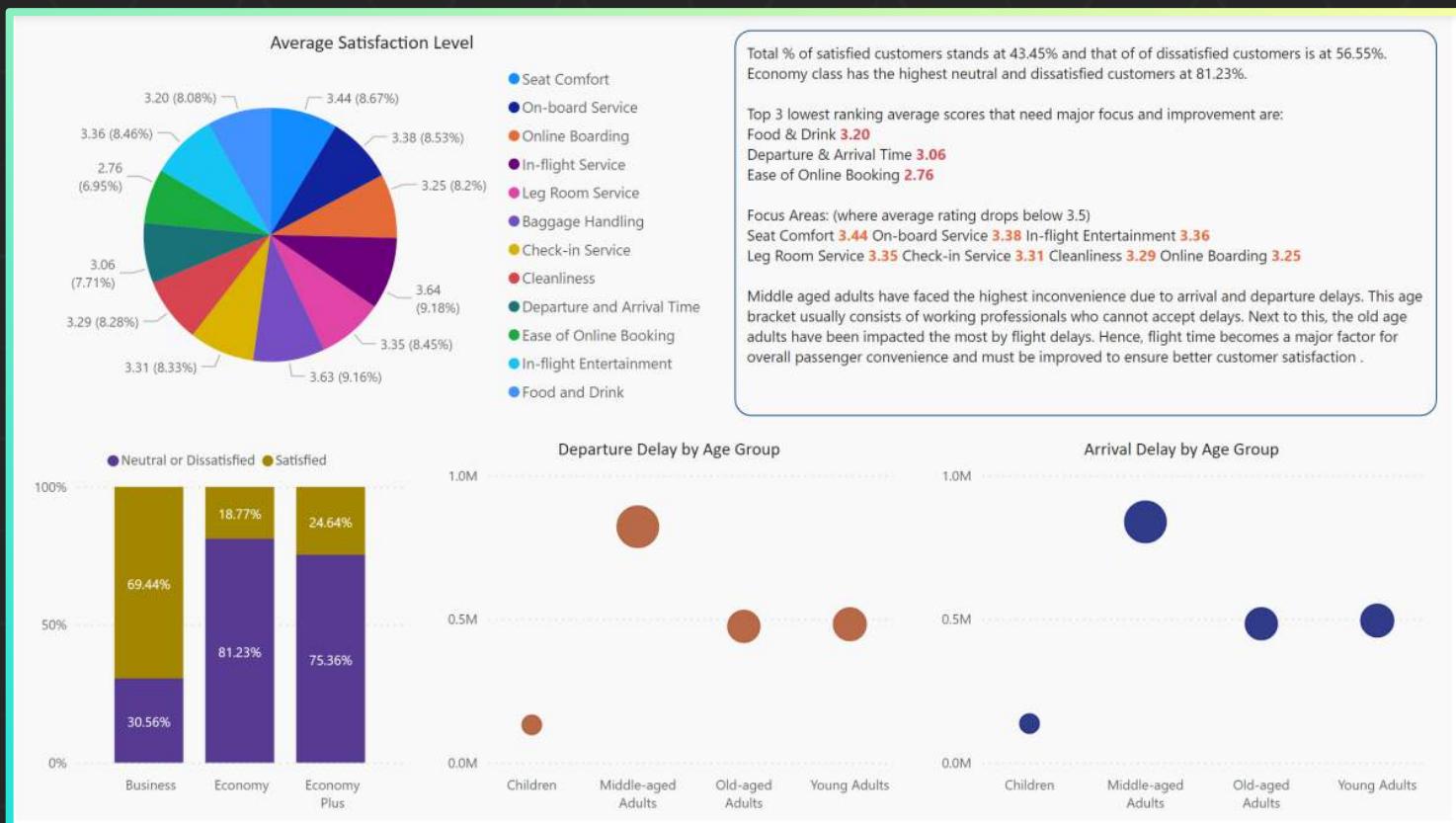
**Source:** Maven Analytics Data Playground - Airline Passenger Satisfaction  
<https://www.mavenanalytics.io/data-playground>

**Created by:** Fuseini Mohammed      **LinkedIn:** <https://www.linkedin.com/in/fuseini/>

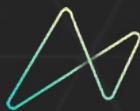
# Fuseini Mohammed



# AIRLINES CHALLENGE



Devika Jethwa



# AIRLINES CHALLENGE

## Maven Airline Customer Satisfaction Report

Gender

- Female
- Male

Customer Type

- First-time
- Returning

Class

- Business
- Economy
- Economy Plus

Type of Travel

- Business
- Personal

Satisfaction

- Neutral or Dissatisfied
- Satisfied

Total Customers **130K**

Total Flight Distance **155M**

Average Age **39.43**

Satisfaction level **0.00K** **129.88K** **259.76K**

Gender

Types Of Class

Class	Percentage
Business	47.86%
Economy	44.89%
Economy Plus	7.25%

Online Boarding By Class

Class	Online Boarding
Business	~0.18M
Economy	~0.18M
Economy Plus	~0.05M

Ease of Online Booking by Class and Satisfaction

Class	Satisfaction	Count
Business	Neutral or Dissatisfied	~187,258
	Satisfied	~170,805
Economy	Neutral or Dissatisfied	~187,258
	Satisfied	~170,805
Economy Plus	Neutral or Dissatisfied	~187,258
	Satisfied	~170,805

**KEY INSIGHTS**

The total number of customers the airline has is around 130k with an overall flight distance covered to be around 155m km with the average age of customers to be around 39.43.

Total Ease of Online Booking was higher for Neutral or Dissatisfied (187258) than Satisfied (170805).

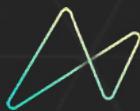
The Business class seems to have more satisfied customers compared to the Economy and Economy Plus respectively.

The Online Boarding visual tile show us that the difference between the Business and Economic class in terms of cleanliness is not so much compared to the Economy Plus class.

Count of Gender for Female (65,899) was higher than Male (63,981).

Female accounted for 50.74% of Count of Gender.

Fagbayibo Kehinde



# AIRLINES CHALLENGE

## Maven Airlines Customer Satisfaction Analysis



Customer Type	Neutral or Dissatisfied	Satisfied
First-time	76.03%	23.97%
Returning	52.19%	47.81%

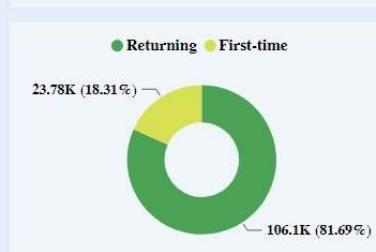
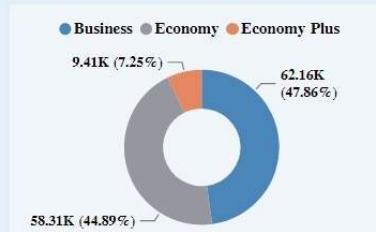
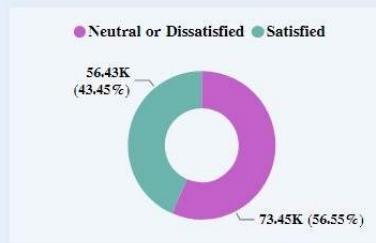
### ► Brand Loyalty & New Customers

More dissatisfied returning customers will result in a loss of brand loyalty and on the other hand lower satisfaction amongst first-time customer will mean that Maven Airlines will not be able to expand its customer base and acquire new customers

Class	Neutral or Dissatisfied	Satisfied
Business	30.56%	69.44%
Economy	81.23%	18.77%
Economy Plus	75.36%	24.64%

### ► Business vs Economy Classes

Maven Airlines may be focusing more on the Business class at the expense of Economy class so there's a need to focus on Economy and Economy Plus as well



### Average Ratings

3.6	Baggage Handling	3.3	Check-In Service
3.3	Cleanliness	3.1	Departure and Arrival Time...
2.8	Ease of Online Booking	3.2	Food and Drink
3.4	In-Flight Entertainment	3.6	In-Flight Service
2.7	In-Flight Wi-Fi Service	3.4	Leg Room Service
3.4	On-board Service	3.3	Online Boarding
3.4	Seat Comfort		

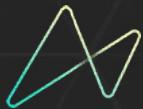
### ► The Strategy

Maven Airlines needs to improve its online booking portal (website or mobile app) significantly because if customers are unable to book flights they will turn to other airlines. So, ease of online booking is a crucial factor in winning business

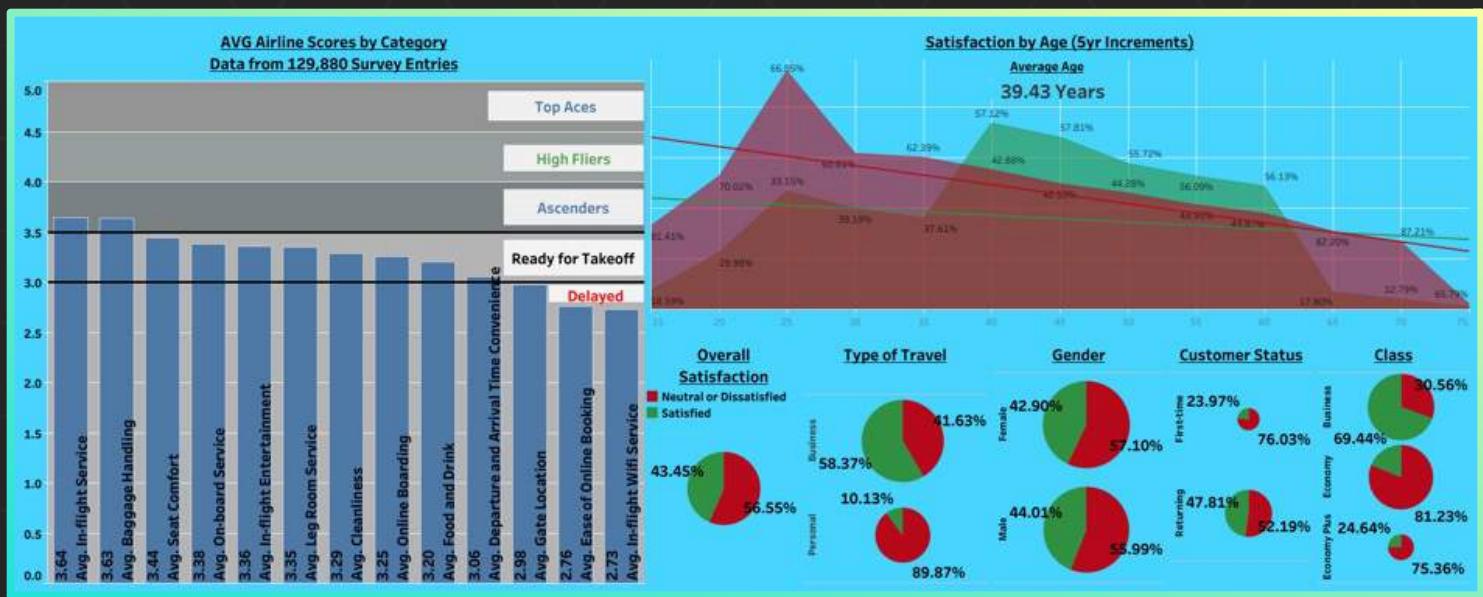
Maven Airlines should also consider outsourcing some of the in-flight services to specialized firms who may be able to provide better service

In order to maintain customer loyalty; incentives need to be offered to returning customers like special offers or discounts

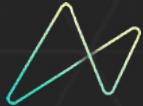
# Moid Ahmed Siddiqui



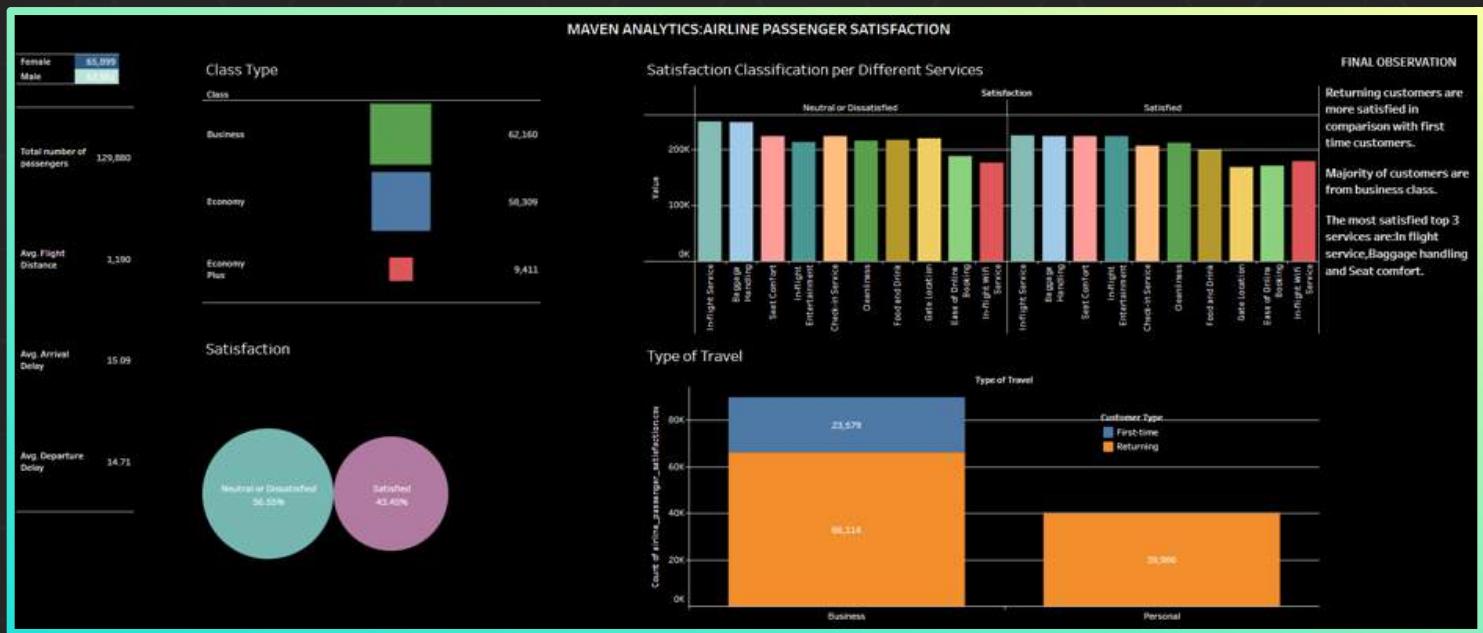
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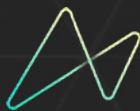
Adam Saltzman



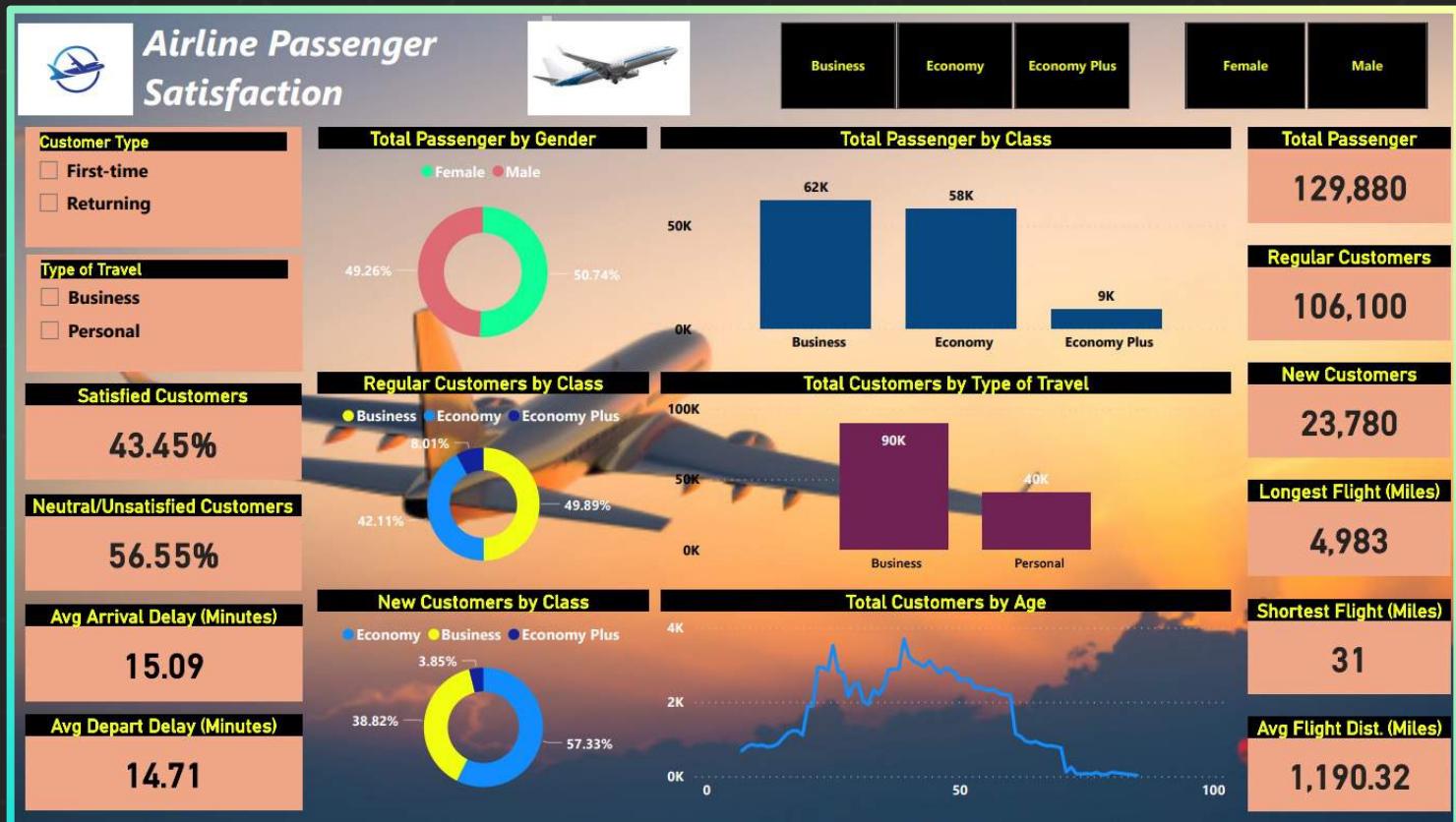
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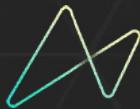
Gunel Mastaliyeva



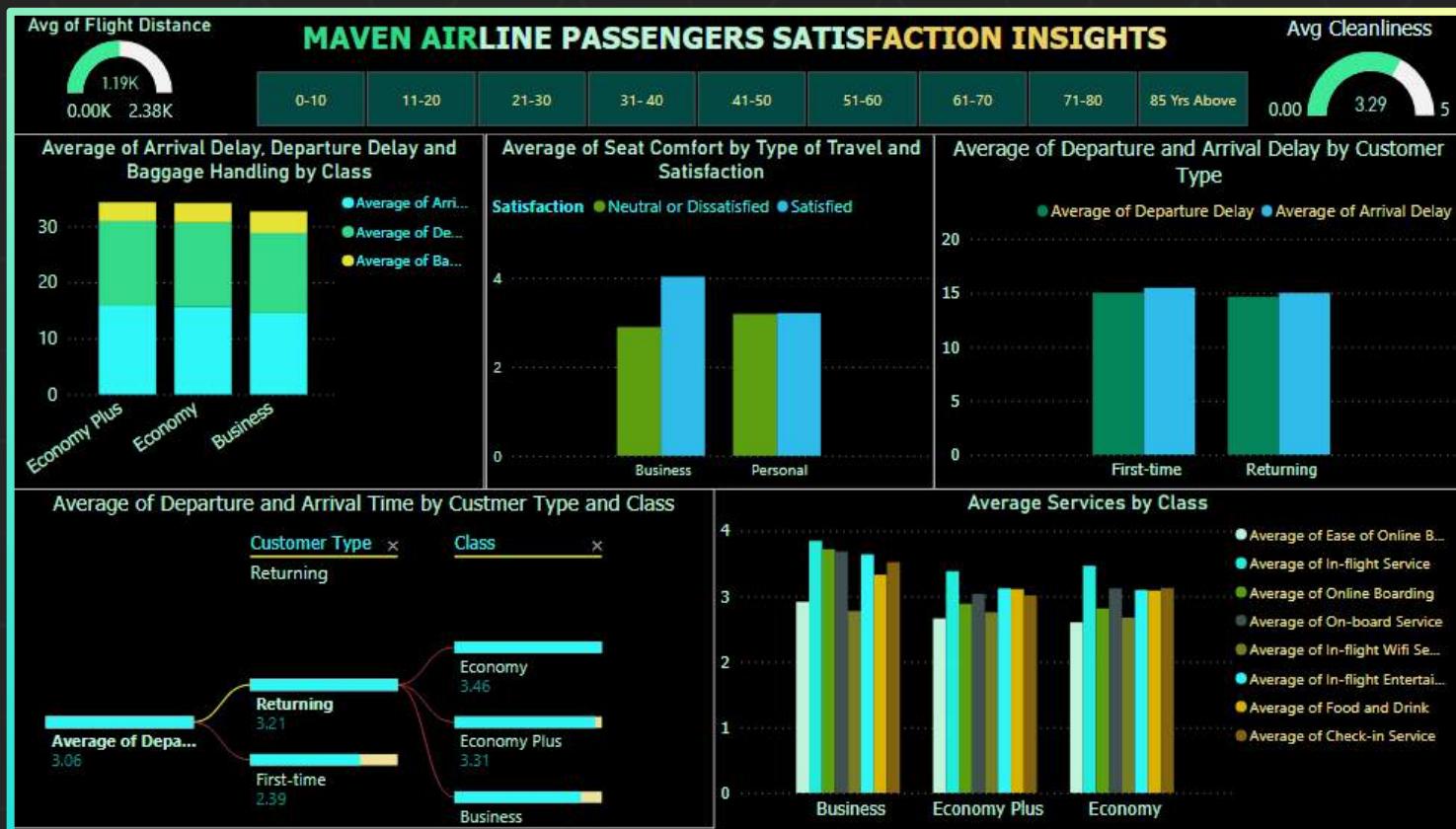
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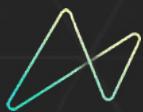
Tauhid Hussain



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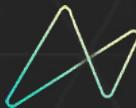


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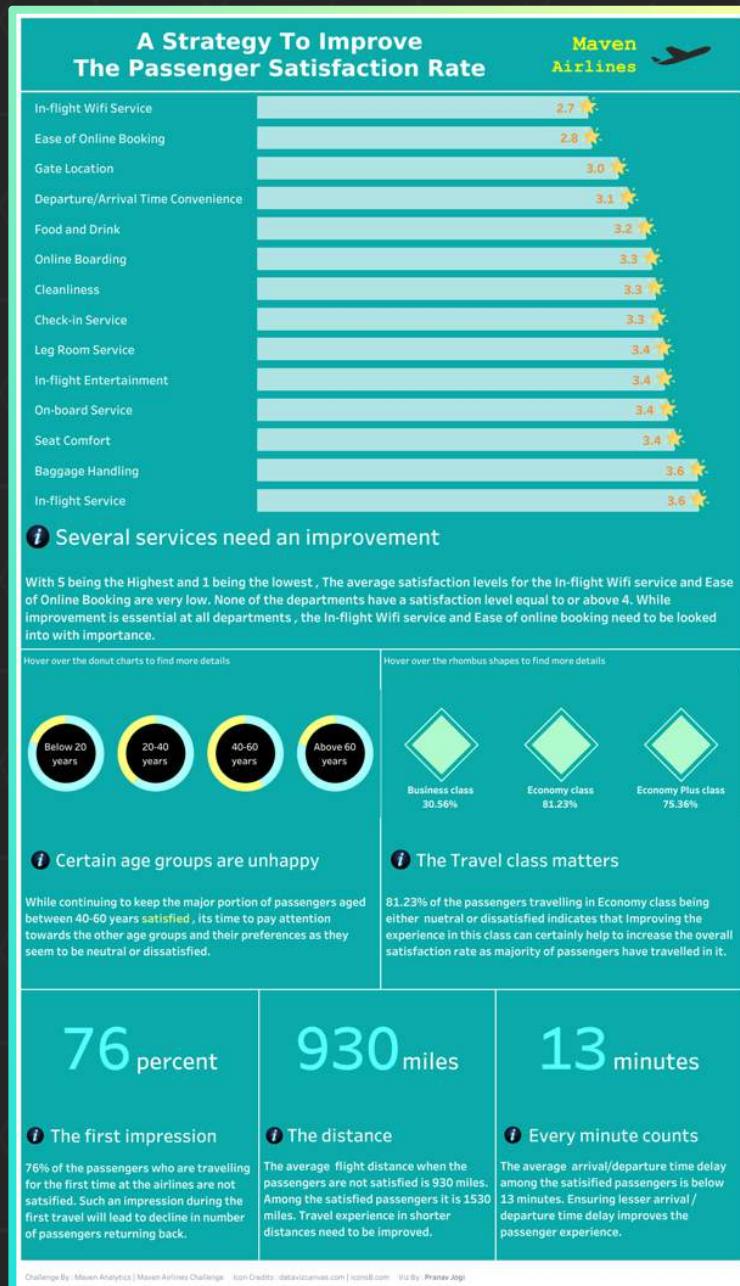


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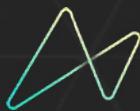




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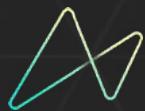
Pranav Jogi



# AIRLINES CHALLENGE



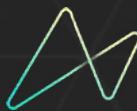
Iswarya K



# AIRLINES CHALLENGE



Charles Onyebuchi



# AIRLINES CHALLENGE

**From** ... Maven Airlines received

**129,880** passengers... **43%** satisfaction rate.

First impression matters and yet only 24% first time passengers were impressed with Maven Airlines' service. Also, only less than half of the returning passengers were impressed. This indicates that the airline's service is not as good as it used to be.

● Returning ● First-time

23,780 (18%) Returning  
106,100 (82%) First-time

**70,382** passengers faced delay

● Long ● Medium ● Short

20.57% Long  
77.41% Medium  
33% Short

...and most of them were passengers with short flight distance (<1,880 miles). Two-thirds of these people were not happy with the delay issue. There should be an investigation of the causes of the delay of short distance flight to minimize this issue in the future.

**Maven Airlines Satisfaction Review**

The airline paid more attention to passengers in Business class than those in Economy and Economy Plus classes as seen in the satisfaction rates, as well as the ratings in the following factors. The number of passengers in Economy class was almost equal to the number of passengers in Business class. The airline should focus more on improving the convenience of passengers in Economy class.

Class	Passengers	Satisfaction Rate
Business	62,160	69%
Economy	58,309	19%
Economy Plus	9,411	25%

Majority of Maven Airlines' passengers were adults (26-44 years old) and middle-aged people (45-59 years old) with 50% satisfaction rate weighted average. These age groups accounted 69.1% to total passengers, yet half of them were not satisfied with the airline's service. So, the airline should prioritize on improvement of the service towards adult and middle-aged passengers and find out which service areas which are still weak for them.

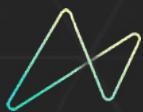
Purpose	Passenger Count	Satisfaction Rate
Business	89,693	58%
Personal	40,167	10%

Most of the passengers were travellers with business purpose with 58% satisfaction rate. Judging by the number of passengers and satisfaction rate, the airline seemed like less friendly towards travellers in the same age group with personal purpose. In order to attract more passengers, it should try to maximize its satisfaction rate towards business travellers and heavily improve its service towards personal-purposed travellers.

	Business	Economy	Economy Plus	Total
Dep. & Arr. Time Conv.	2.91	3.19	3.21	3.06
Ease of Online Booking	2.92	2.60	2.66	2.76
Online Boarding	3.72	2.81	2.89	3.25
Check-in Service	3.52	3.12	3.01	3.31
Gate Location	2.99	2.97	2.97	2.98
Baggage Handling	3.84	3.45	3.35	3.63
On-board Service	3.68	3.12	3.04	3.38
Seat Comfort	3.76	3.14	3.17	3.44
Leg Room Service	3.65	3.08	3.06	3.35
Cleanliness	3.48	3.10	3.12	3.29
Food and Drink	3.33	3.09	3.11	3.20
In-flight Service	3.85	3.47	3.38	3.64
In-flight Wifi Service	2.78	2.67	2.76	2.73
In-flight Entertainment	3.64	3.10	3.12	3.36

The airline should improve its quality of online booking, gate location and in-flight wifi service for all classes. Moreover, it should improve its quality of online boarding for Economy class.

# Natalia Jennifer Surjono



# AIRLINES CHALLENGE

**Key influencer** → segments

What influences % Neutral or Dissatisfied Customers to

When... → ...the average of % Neutral or Dissatisfied Customers increases by

Class is Economy → 11.84%

Travel Type is Personal → 23.99%

Customer Type is First-time → 14.08%

**Satisfaction by Age Group**

Age Group	% Satisfied Customers	% Neutral or Dissatisfied Customers
Middle Age Adult	46.33%	53.67%
Young Adult	57.32%	42.68%
Senior	81.49%	18.51%
Minor	82.38%	17.62%

**% Neutral or Dissatisfied Customers by Flight Range**

Flight Range	% Neutral or Dissatisfied Customers
Short	34.3%
Medium	19.64%
Long	11.71%
Very Long	34.3%

**Customer Satisfaction by Travel Type**

Travel Type	% Satisfied Customers	% Neutral or Dissatisfied Customers
Personal	89.87%	10.13%
Business	41.63%	58.37%

**Customers Satisfaction by Gender**

Gender	% Satisfied Customers	% Neutral or Dissatisfied Customers
Male	44.01%	55.99%
Female	42.90%	57.10%

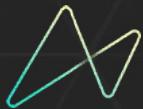
**Customer Satisfaction by Customer Type and Class**

Customer Type	% Neutral or Dissatisfied Customers	% Satisfied Customers
First-time	76,03%	23,97%
Economy Plus	92,02%	7,98%
Economy	85,59%	14,41%
Business	60,33%	39,67%
Returning	52,19%	47,81%
Economy	79,90%	20,10%
Economy Plus	73,56%	26,44%
Business	25,36%	74,64%
Total	56,55%	43,45%

**Customer Rating**

Rating Factors	0	1	2	3	4	5	Total
Seat Comfort	100,00%	77,67%	77,40%	78,59%	43,97%	34,87%	56,55%
Online Boarding	43,54%	86,22%	88,55%	86,24%	37,70%	12,94%	56,55%
On-board Service	100,00%	80,33%	74,45%	68,19%	46,54%	35,36%	56,55%
Leg Room Service	65,55%	79,59%	72,47%	72,39%	41,69%	38,54%	56,55%
In-flight Wifi Service	0,26%	67,18%	75,28%	74,82%	39,92%	0,98%	56,55%
In-flight Service	100,00%	70,80%	69,91%	75,97%	52,18%	38,88%	56,55%
In-flight Entertainment	100,00%	85,81%	78,73%	72,68%	38,89%	34,94%	56,55%
Gate Location	50,11%	53,62%	65,29%	60,93%	43,20%	36,55%	56,55%
Food and Drink	58,33%	80,04%	61,10%	60,26%	47,42%	44,91%	56,55%
Ease of Online Booking	33,44%	62,05%	69,65%	68,99%	46,84%	26,53%	56,55%
Departure and Arrival Time Convenience	51,89%	50,96%	55,53%	56,03%	61,14%	57,53%	56,55%
Total	47,66%	67,85%	64,37%	60,21%	55,89%	47,60%	56,55%

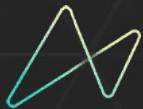
## Dejenu Feleke



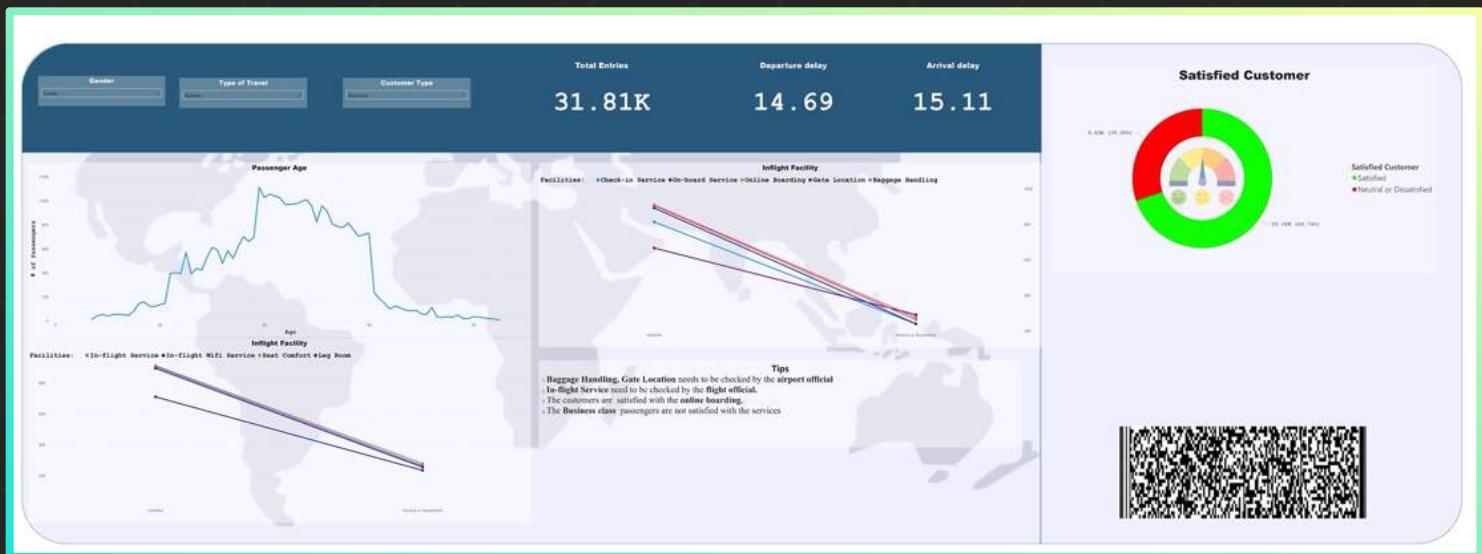
# AIRLINES CHALLENGE



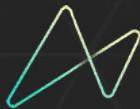
Deepika Jangeti



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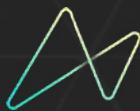
# Shivam Chowdhury



# AIRLINES CHALLENGE



# Moirengjam Lakshmikanta Singh



# AIRLINES CHALLENGE

**Maven Airlines**

Total Surveyed  
**129.88K**

Satisfied Customers  
**43.45%**

Dissatisfied Customers  
**56.55%**

Max Departure Delay  
**1592 Min**

Avg Departure Delay  
**14.71 Min**

Max Arrival Delay  
**1584 Min**

Avg Arrival Delay  
**15.09 Min**

**Customer Type by Class**

Class	Percentage
Business	85.15%
Economy	76.62%
Economy...	23.38%

**Travelling by Gender**

Gender	Count	Percentage
Female	63.98K	(49.26%)
Male	65.9K	(50.74%)

**Satisfaction by Cust Class**

Class	Percentage
Business	69.44%
Economy	81.23%
Economy...	24.64%

**Least Rated Services**

- In-flight Wifi Services: ★★★★☆
- Ease of Online Booking: ★★★★☆
- Gate Location: ★★★★☆
- Dep & Arr Time Conv: ★★★★☆
- Food and Drink: ★★★★☆

**Satisfied by Customer Type**

Type	Percentage
First-time	47.81%
Returning	52.19%

**Satisfaction by Age Group**

Age Group	Neutral or Dissatisfied	Satisfied
01 - 10	87.92%	12.08%
11 - 20	77.78%	22.22%
21 - 30	63.57%	36.43%
31 - 40	56.59%	43.41%
41 - 50	42.07%	57.93%
51 - 60	42.67%	57.33%
61 - 70	80.12%	19.88%
71 - 80	70.18%	29.82%
81 - 90	76.00%	24.00%

**Distance by Travel Type**

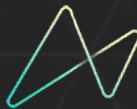
Type	Distance
Business	122740K
Personal	31859K

**Avg Rating of Services offered**

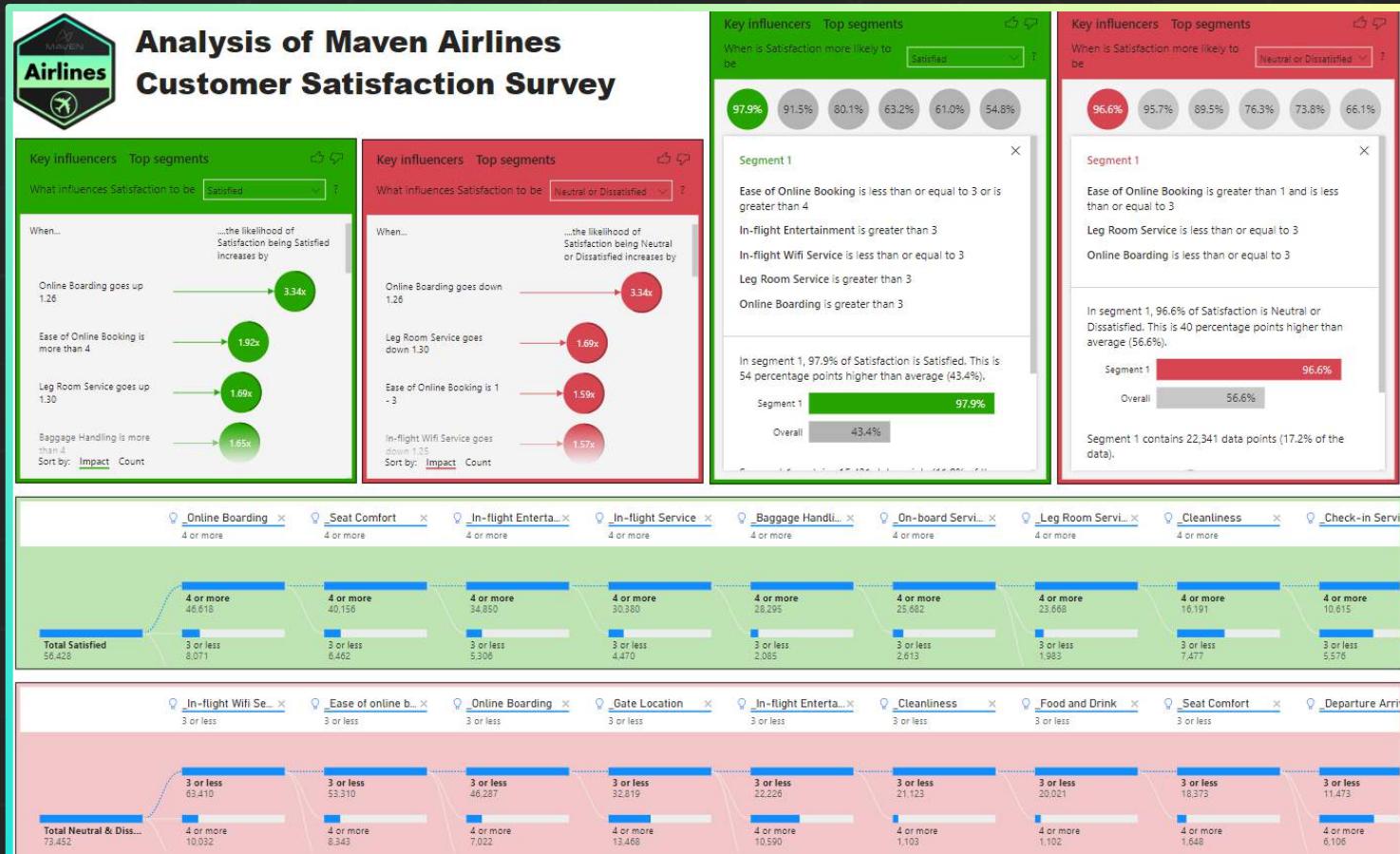
Service	Avg Rating
In-flight Wifi ...	2.73
Ease of Online...	2.76
Gate Location	2.98
Departure and A...	3.06
Food and Drink	3.20
Online Boardi...	3.25
Cleanliness	3.29
Check-in Service	3.31
Lea Room Ser...	3.35
In-flight Enter...	3.36
On-board Ser...	3.38
Seat Comfort	3.44

People Travelling on Business are travelling 26% more distance than Personal Trip  
Need to improve inflight wifi services as we observe more people travel in for Business purpose.  
We observe customers are not satisfied with Online Booking serves, need to improve online services.  
We observe Most Returning customers are above 60 and they wish location to be ease to onboard and offboard.  
Need to concentrate on Returning Customers as 52% dissatisfied with the services provided. 76% New customers are dissatisfied.  
Of all the services provided rating given is less than 4 . Highest 3.64 (inflight services) and lowest 2.73(inflight wifi services).  
Customers in the age group 41 to 50 are more satisfied . Customers in the age group 61to 70 are not satisfied.

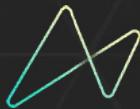
**Sreenivas Bhagirathi**



# AIRLINES CHALLENGE

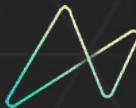


Amr Ibrahim



# AIRLINES CHALLENGE





# AIRLINES CHALLENGE



Leave the rest at the gate, fly in style with **Maven Airlines!**

## THE PROBLEM AS IS:

Overall Satisfaction Level:

**43.4%**

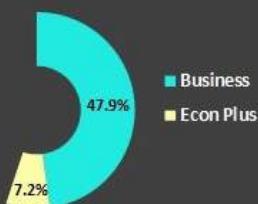
### Satisfaction Level by Travel Class:

- Business clients are happier and pay more!
- Economy clients churn more and are less profitable
- Up to 75% of our revenues come from business class\*



### Customers by Travel Class: upgrade E-plus!

- 47.9% of our customer already fly business class
- Promote an additional 7% to business with special rates
- Reduce economy class and gain more business seats



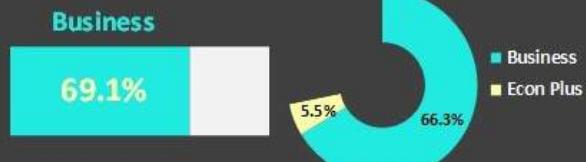
## THE OPPORTUNITY TO BUILD

We need to be bold and make ambitious plans, to turn the situation at our advantage:

1. **Maven Airlines** should focus on becoming #1 airline on MID-TO-LONG range flights
2. Focus on **Business Travellers** and **Business Class services** to become an elite airline
3. Boost our services offering, especially **Wi-Fi** and **Time convenience** of our flight schedule

### Customers by Type of Travel: focus on businesses!

- almost 70% of our customer fly for business purposes
- 66.3% of these customers already fly business class
- 5.5% travel Econ Plus -> additional revenue opportunity



### Business Customers by Flight Distance:

- the longer the flight, the happier the clients
- Room to improve on short haul flights

### The Good and The Ugly: business rate services by Flight Distance

- Wi-Fi is not good, as is Time Convenience.
- Our ground and air staff are doing well on baggage handling and overall service

Flight Distance (mi)	Dissatisfied	Satisfied	Time Conven.	In-flight WiFi	In-flight Service	Baggage Hand.
0-499	■	■■■■■	2.79	2.66	3.75	3.78
500-999	■■	■■■■■	2.82	2.94	3.89	3.85
1000-1499	■■	■■■■■	2.83	3.09	4.00	3.98
1500-1999	■■	■■■■■	2.91	2.76	3.82	3.81
2000-2499	■■	■■■■■	2.95	2.76	3.82	3.82
2500-2999	■■	■■■■■	2.94	2.73	3.77	3.78
3000-3499	■■	■■■■■	2.94	2.73	3.79	3.79
3500-3999	■■	■■■■■	2.93	2.74	3.80	3.79

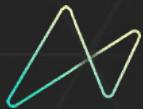
### Maven Airlines makes client happy!

- Returning users are happier with our service.
- By improving accessibility, we will gain more clients: see increase on e-boarding, e-booking and in-flight entertain

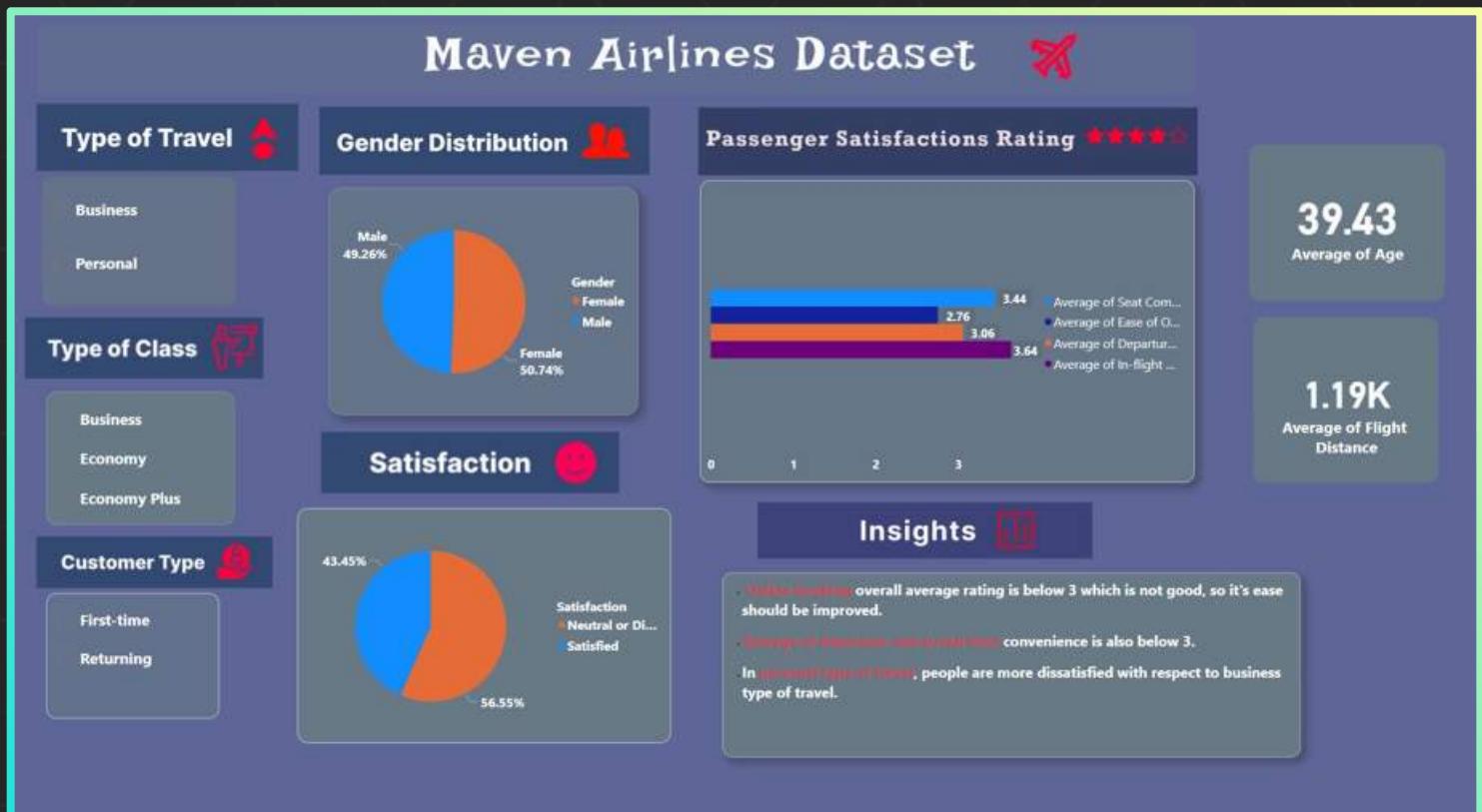
Business Clients	First-time	Returning
Time Convenience	<b>2.38</b>	<b>2.94</b>
Ease of E-booking	2.71	2.95
Check-in	3.22	3.32
e-Boarding	<b>2.71</b>	<b>3.72</b>
On-Board Service	3.23	3.51
Seat Comfort	<b>3.01</b>	<b>3.75</b>
Leg Room	3.22	3.56
Cleanliness	3.06	3.47
Food & Drinks	3.04	3.35
In-Flight Ent	<b>3.06</b>	<b>3.65</b>

\*Source: <http://www.investopedia.com/articles/04/0315/how-much-more-do-those-in-the-business-class-travel-compared-to-economy.aspx>

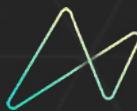
# Marco Michelini



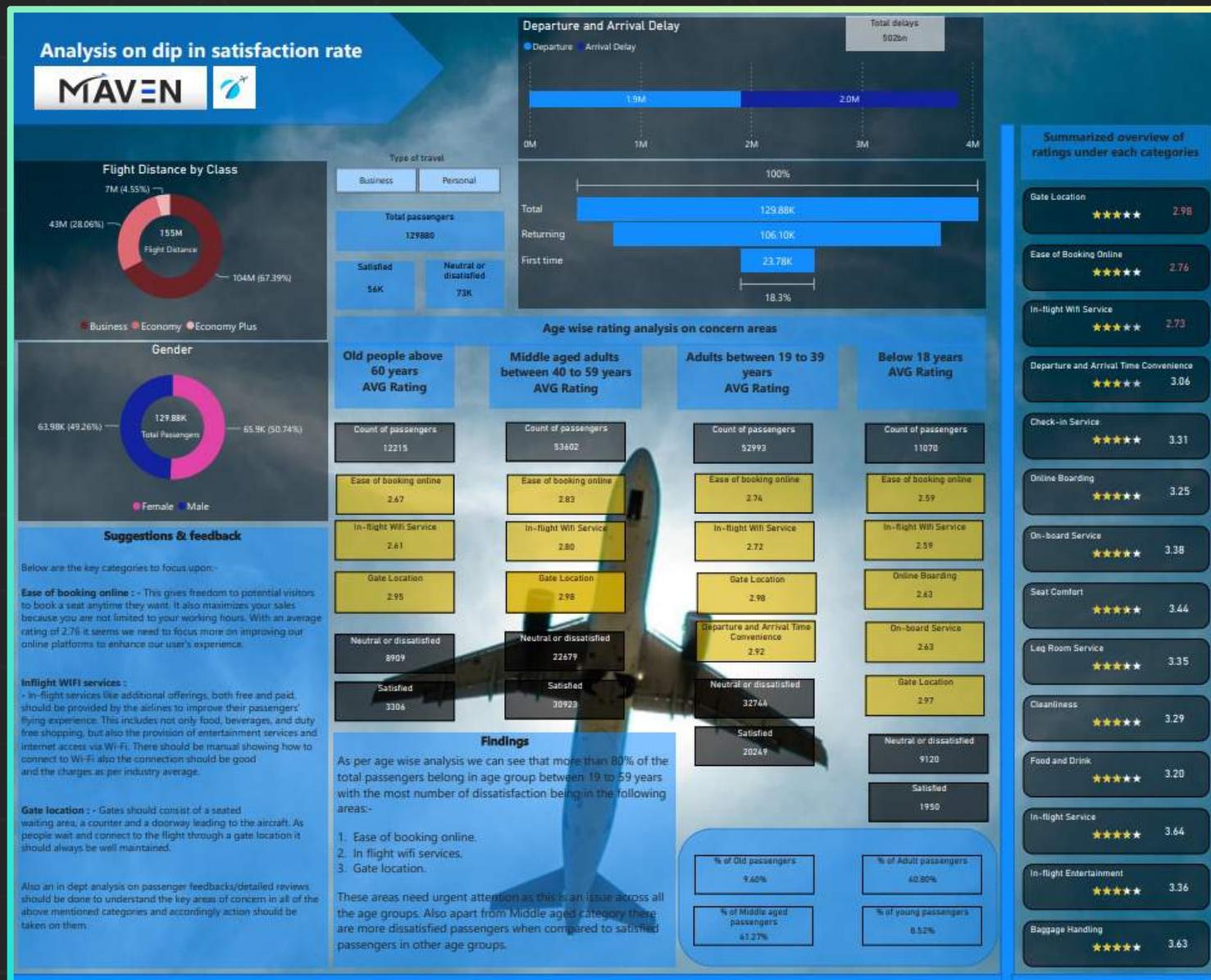
# AIRLINES CHALLENGE



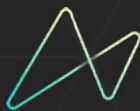
**Aman Kumar Singh**



# AIRLINES CHALLENGE



# Bhavesh Rawat



# AIRLINES CHALLENGE

**Maven Airlines**  
CUSTOMER SATISFACTION REPORT

**155M**  
Total Flight Distance

**130K**  
Total Passengers

**Segmentation Of Passengers**

Average Arrival Delay **15.09**

Average Departure Delay **14.71**

**Total Passengers by Age**

Age Group	Passenger Count
7	14058
20	33091
33	37984
46	32532
59	11614
72	601

**Passengers ! Class Type**

Class Type	Passenger Count
Economy Plus	7.25%
Economy	44.89%
Business	47.86%

**Passengers ! Travel Type**

Travel Type	Passenger Count
Personal	30.94%
Business	69.06%

**Gender**

Select all   Female   Male

**Check-in Service** 66.13% ★★★★☆ 3.31/5

**Cleanliness** 64.16% ★★★★☆ 3.21/5

**Gate Location** 59.54% ★★★★☆ 2.98/5

**Food & Drink** 65.73% ★★★★☆ 3.29/5

**In-Flight Service** 72.85% ★★★★★ 3.64/5

**Leg room Service** 67.33% ★★★★☆ 3.37/5

**Onboard Service** 67.66% ★★★★☆ 3.38/5

**Time Convenience** 72.85% ★★★★☆ 3.64/5

**Seat Comfort** 68.83% ★★★★☆ 3.44/5

**Entertainment Service** 72.85% ★★★★★ 3.64/5

**Baggage Handling** 72.85% ★★★★★ 3.64/5

**Online Boarding** 66.63% ★★★★☆ 3.33/5

**In flight Wifi Service** 56.27% ★★★★☆ 2.81/5

**57%**

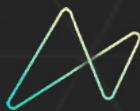
**43%**

**Average Ratings**

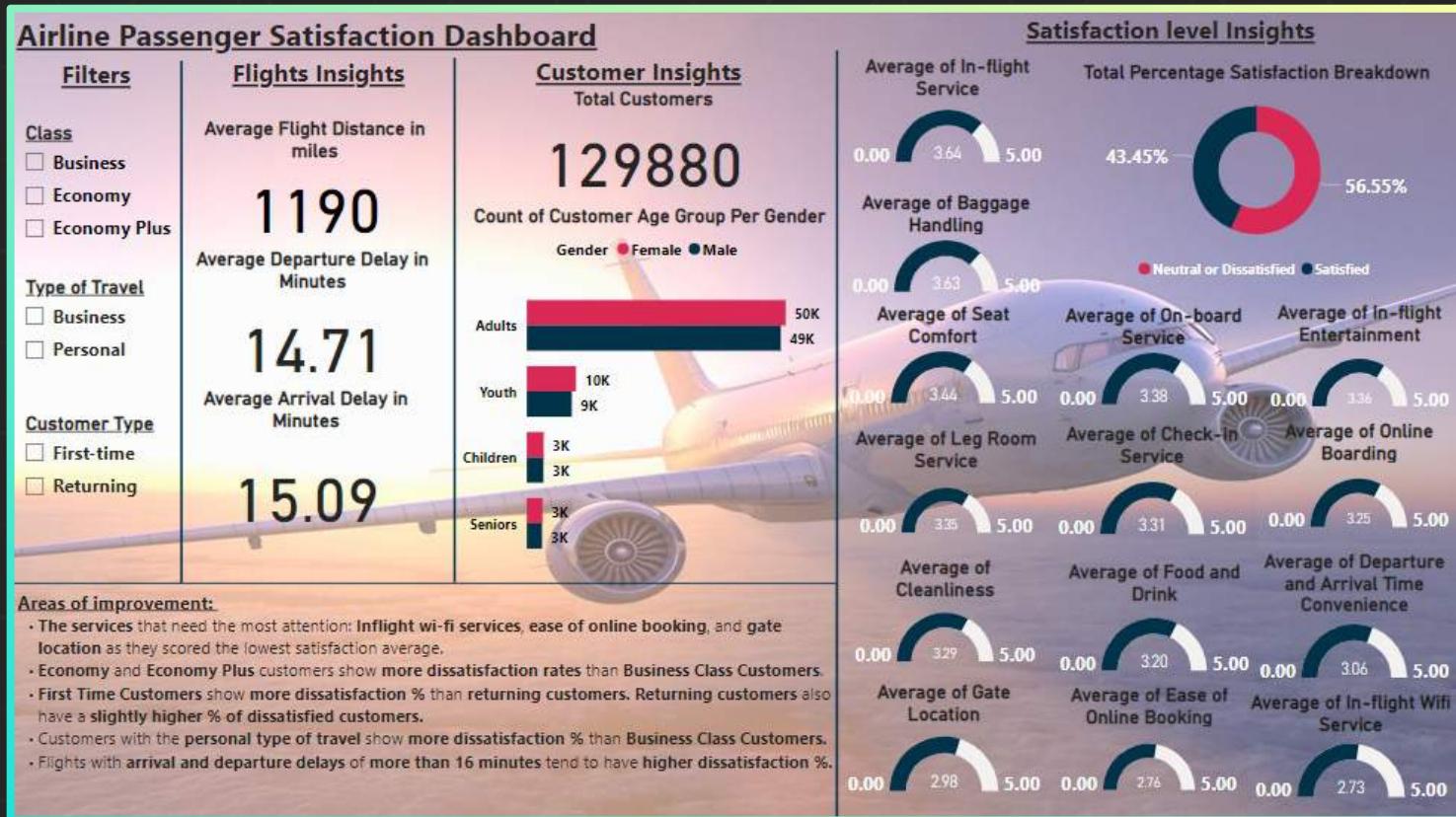
Neutral Or Dissatisfied

Satisfied

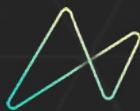
Dillip Baidya



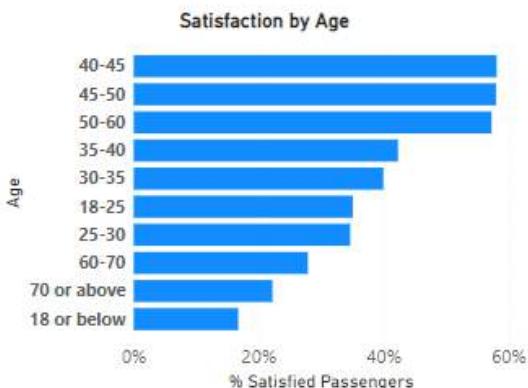
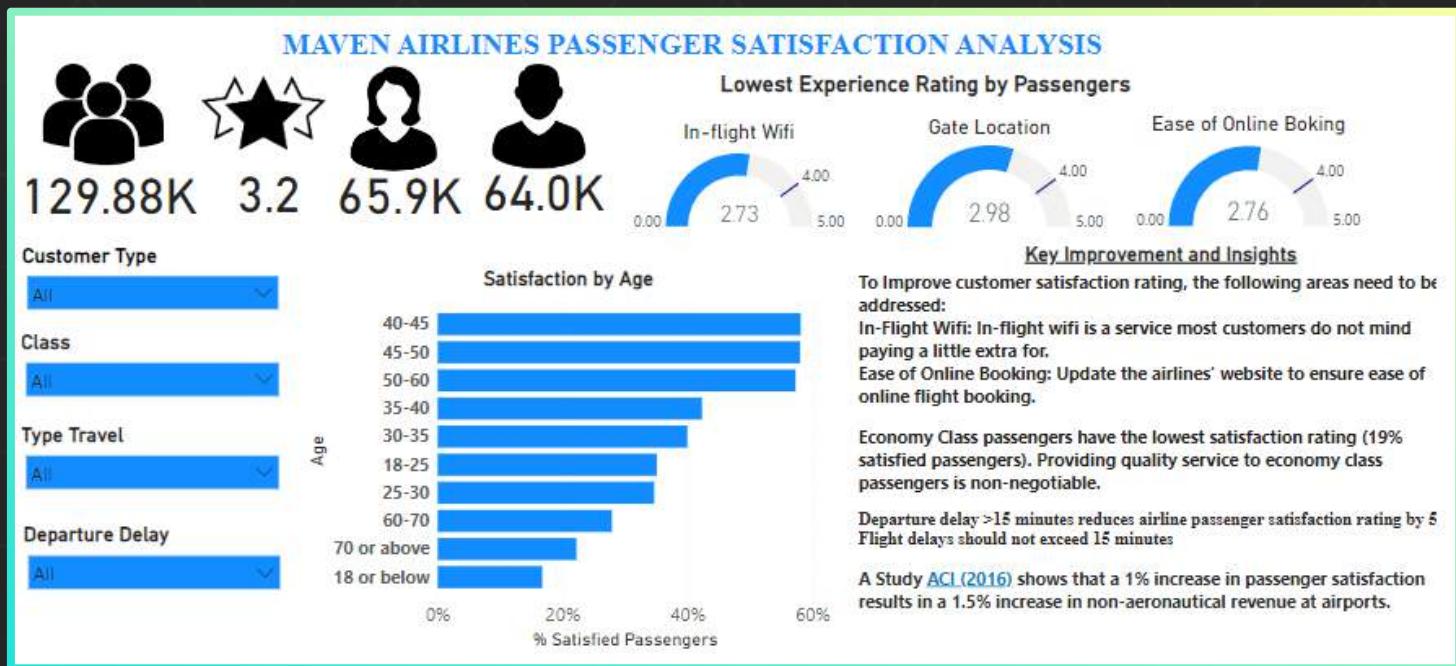
# AIRLINES CHALLENGE



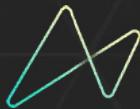
Menna Saleh



# AIRLINES CHALLENGE

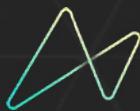


# Kofi Eloho Oghenebrume

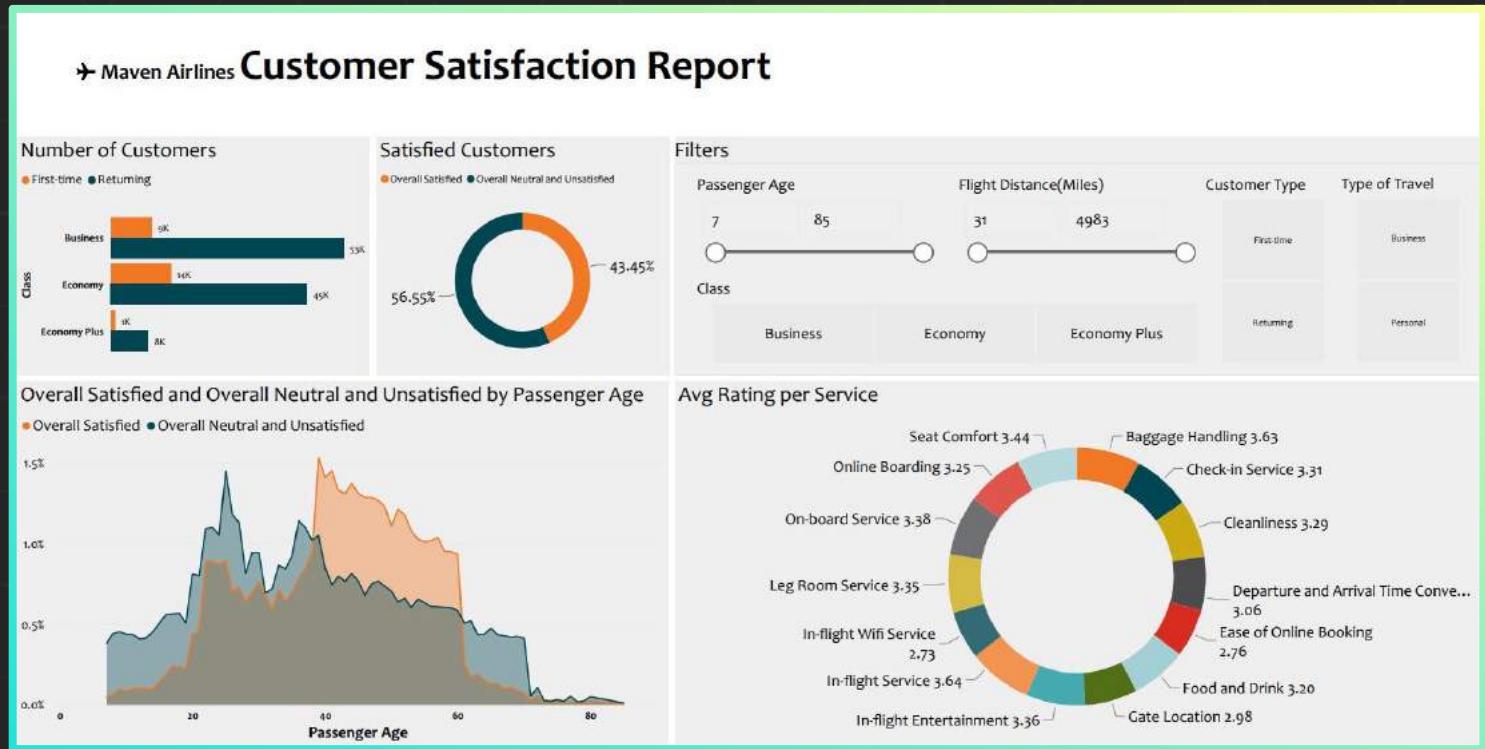


# AIRLINES CHALLENGE

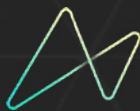




# AIRLINES CHALLENGE



Abhinav Sharma



# AIRLINES CHALLENGE

**Airlines Passenger's Satisfaction Report**

Total Passengers	129.88K
Avg Arrival Delay( in Min)	15.09
Avg Departure Delay( in Min)	14.71
Total Flight Distance( in Miles)	155M

**Satisfaction Ratio**

43.45%  
56.55%

**Flight Class**

Business	62K
Economy	58K
Economy Plus	9K

**Travel Purpose**

Business	90K
Personal	40K

**Passenger's Age Group**

18 - 30	31K
41 - 50	29K
31 - 40	26K
51 - 60	24K
Over 60	5K
Less than 18	10K

Business class passengers seems to be more satisfied than economy and plus class passengers. Whereas It can be seen that passengers are almost equal in economy & business class both. The Airline must improve facilities in Economy class.

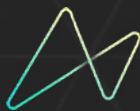
The Airlines must focus on the low rated services in different classes. It looks like, In Flight Wifi servies, Ease of online booking and Gate Location for all classes needs immediate attention to maintain passengers interest. Whereas Online boarding services need to be improved for Economy & Economy class plus as well.

**Passenger's Satisfaction Analysis**

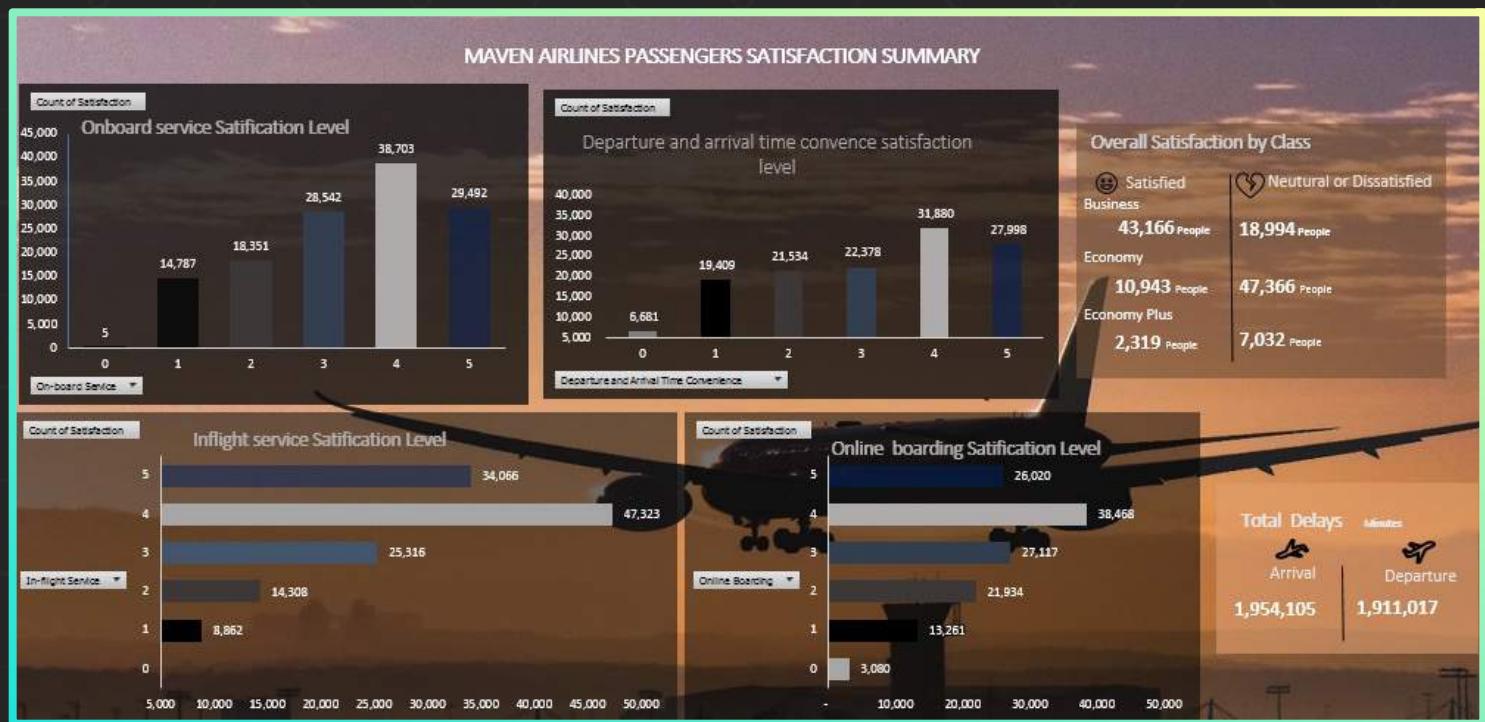
Satisfaction		Class		Customer Type	
Count of ID	129880	Business	43166	Returning	39504
Neutral or Dissatisfied	73452	Economy	10943	First-time	3662
Satisfied	56428	Economy Plus	2319		

Attribute	Business	Economy	Economy Plus	Total
In-flight Wifi Service	2.78	2.67	2.75	<b>2.73</b>
Ease of Online Booking	2.92	2.60	2.66	<b>2.76</b>
Gate Location	2.99	2.97	2.97	<b>2.98</b>
Departure and Arrival Time Convenience	2.91	3.19	3.21	<b>3.06</b>
Food and Drink	3.33	3.09	3.11	<b>3.20</b>
Online Boarding	3.72	2.81	2.89	<b>3.25</b>
Cleanliness	3.48	3.10	3.12	<b>3.29</b>
Check-in Services	3.52	3.12	3.01	<b>3.21</b>
<b>Total</b>	<b>3.43</b>	<b>3.07</b>	<b>3.06</b>	<b>3.24</b>

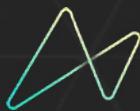
**Vikas Shahi**



# AIRLINES CHALLENGE



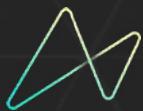
## Marvellous Oluwaseyi Alaka



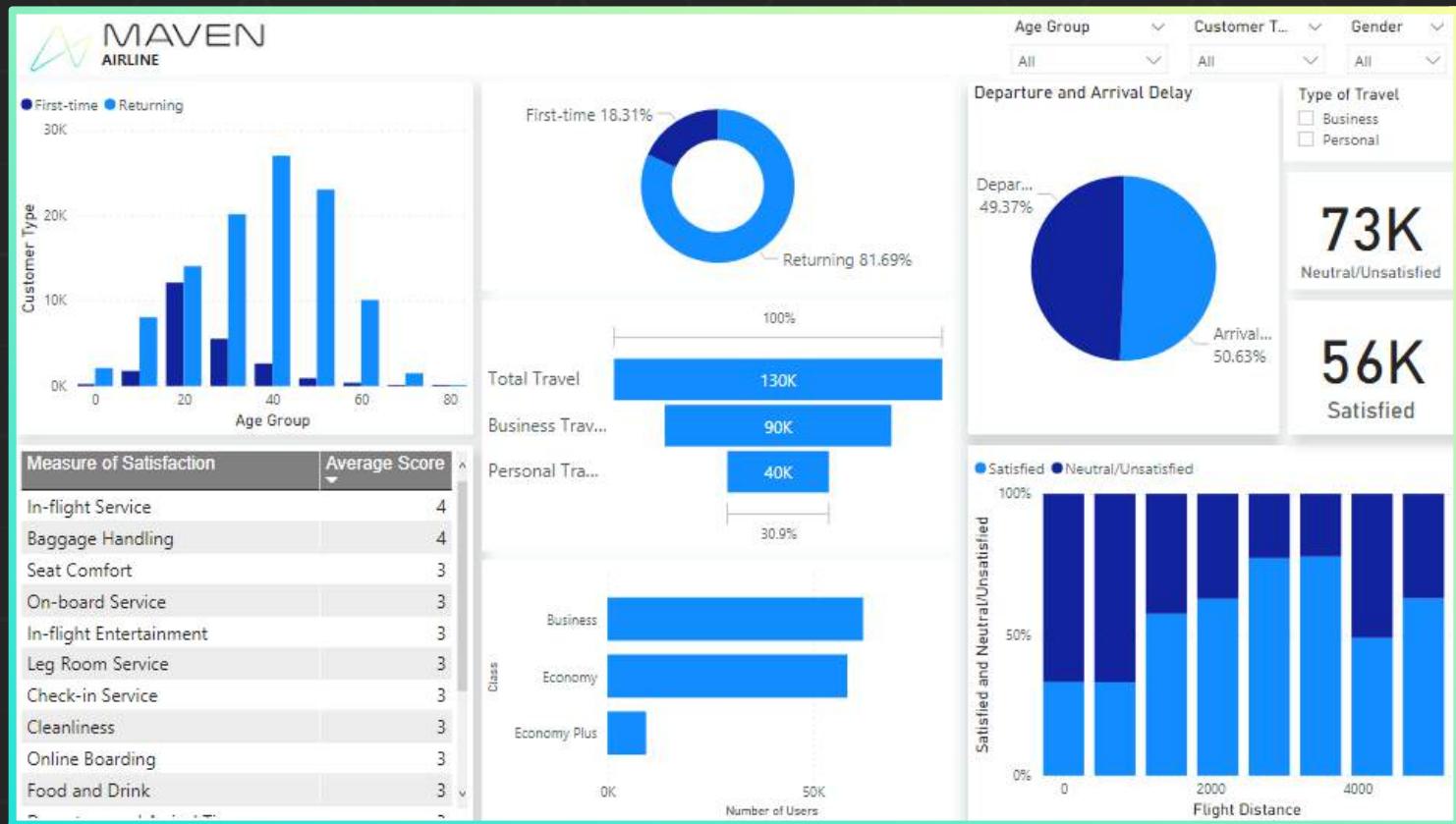
# AIRLINES CHALLENGE



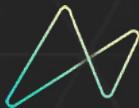
Amabibi Desire



# AIRLINES CHALLENGE

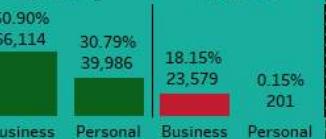
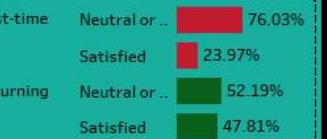
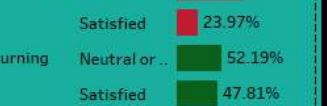


David Olubo

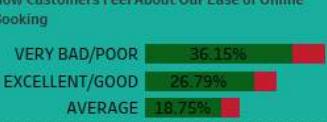
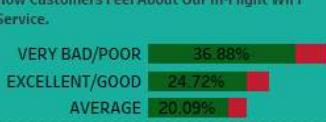
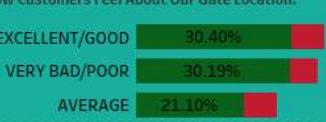


# AIRLINES CHALLENGE

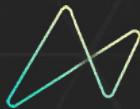
 MAVEN AIRLINES' CUSTOMER SATISFACTION DASHBOARD 

Average arrival delay time	Average Departure delay time	No of Respondents	Average age of Respondents												
<b>15 MINS</b>  What are our customer composition?  <table border="1"><tr><td>81.69% Of Customers are Returning Customers</td><td>18.31% Of Customers are First-time Customers</td></tr></table>	81.69% Of Customers are Returning Customers	18.31% Of Customers are First-time Customers	<b>15 MINS</b>  What are our customer composition?  <table border="1"><tr><td>30.94% of Customers Travel for Personal</td><td>69.06% of Customers Travel for Business</td></tr></table>	30.94% of Customers Travel for Personal	69.06% of Customers Travel for Business	<b>129,880</b>  What are our customer composition?  <table border="1"><tr><td>Returning 50.90% 66,114</td><td>Personal 30.79% 39,986</td><td>Business 18.15% 23,579</td><td>First-time 0.15% 201</td></tr></table>	Returning 50.90% 66,114	Personal 30.79% 39,986	Business 18.15% 23,579	First-time 0.15% 201	<b>39</b>  Are Customers Satisfied With our Overall Services?  <table border="1"><tr><td>First-time Neutral or... 76.03%</td><td>Satisfied 23.97%</td></tr></table>  <table border="1"><tr><td>Returning Neutral or... 52.19%</td><td>Satisfied 47.81%</td></tr></table>	First-time Neutral or... 76.03%	Satisfied 23.97%	Returning Neutral or... 52.19%	Satisfied 47.81%
81.69% Of Customers are Returning Customers	18.31% Of Customers are First-time Customers														
30.94% of Customers Travel for Personal	69.06% of Customers Travel for Business														
Returning 50.90% 66,114	Personal 30.79% 39,986	Business 18.15% 23,579	First-time 0.15% 201												
First-time Neutral or... 76.03%	Satisfied 23.97%														
Returning Neutral or... 52.19%	Satisfied 47.81%														

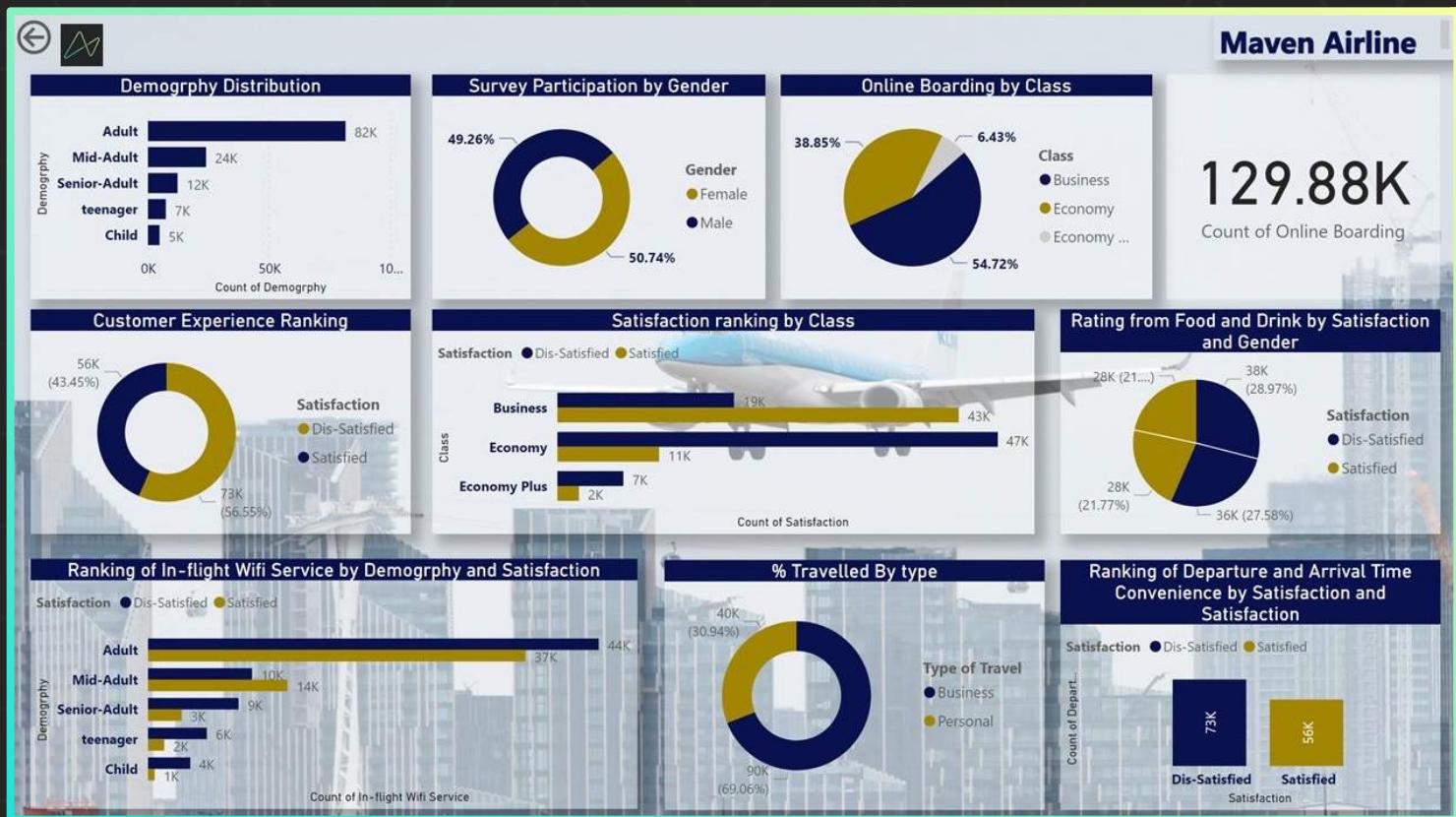
\* The importance of repeat customers can not be overstated. A large percentage of our customers are repeat customers and Loyalty programs should be mapped out as incentive.  
\* Customer experience must be made a top priority. The Information and Technology department have to set in motion ways to ensure customers do not experience any glitches when booking online.  
\* It is imperative that we offer sterling inflight WiFi. This is a key driver in forming customer loyalty and satisfaction. Customers are more likely to rebook if high-quality inflight WiFi is offered.  
\* Prime meal must be served to passengers. Inflight food and drink not only contributes to passengers' level of satisfaction it also influences their flying intention.  
\* 69 % of our customers are Business travellers, in order to keep them satisfied we must improve on connectivity, privacy and space, convenience, efficiency, comfort, and reliability.

RECOMMENDATIONS							
How Customers Feel About Our Ease of Online Booking	How Customers Feel About Our In-Flight WiFi Service						
 <table border="1"><tr><td>VERY BAD/POOR 36.15%</td><td>EXCELLENT/GOOD 26.79%</td><td>AVERAGE 18.75%</td></tr></table>	VERY BAD/POOR 36.15%	EXCELLENT/GOOD 26.79%	AVERAGE 18.75%	 <table border="1"><tr><td>VERY BAD/POOR 36.88%</td><td>EXCELLENT/GOOD 24.72%</td><td>AVERAGE 20.09%</td></tr></table>	VERY BAD/POOR 36.88%	EXCELLENT/GOOD 24.72%	AVERAGE 20.09%
VERY BAD/POOR 36.15%	EXCELLENT/GOOD 26.79%	AVERAGE 18.75%					
VERY BAD/POOR 36.88%	EXCELLENT/GOOD 24.72%	AVERAGE 20.09%					
How Customers Feel About Our Gate Location,	How Customers Feel About Our Food and Drink.						
 <table border="1"><tr><td>EXCELLENT/GOOD 30.40%</td><td>VERY BAD/POOR 30.19%</td><td>AVERAGE 21.10%</td></tr></table>	EXCELLENT/GOOD 30.40%	VERY BAD/POOR 30.19%	AVERAGE 21.10%	 <table border="1"><tr><td>EXCELLENT/GOOD 37.57%</td><td>VERY BAD/POOR 26.53%</td><td>AVERAGE 17.59%</td></tr></table>	EXCELLENT/GOOD 37.57%	VERY BAD/POOR 26.53%	AVERAGE 17.59%
EXCELLENT/GOOD 30.40%	VERY BAD/POOR 30.19%	AVERAGE 21.10%					
EXCELLENT/GOOD 37.57%	VERY BAD/POOR 26.53%	AVERAGE 17.59%					

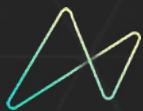
Afolashade Allinson



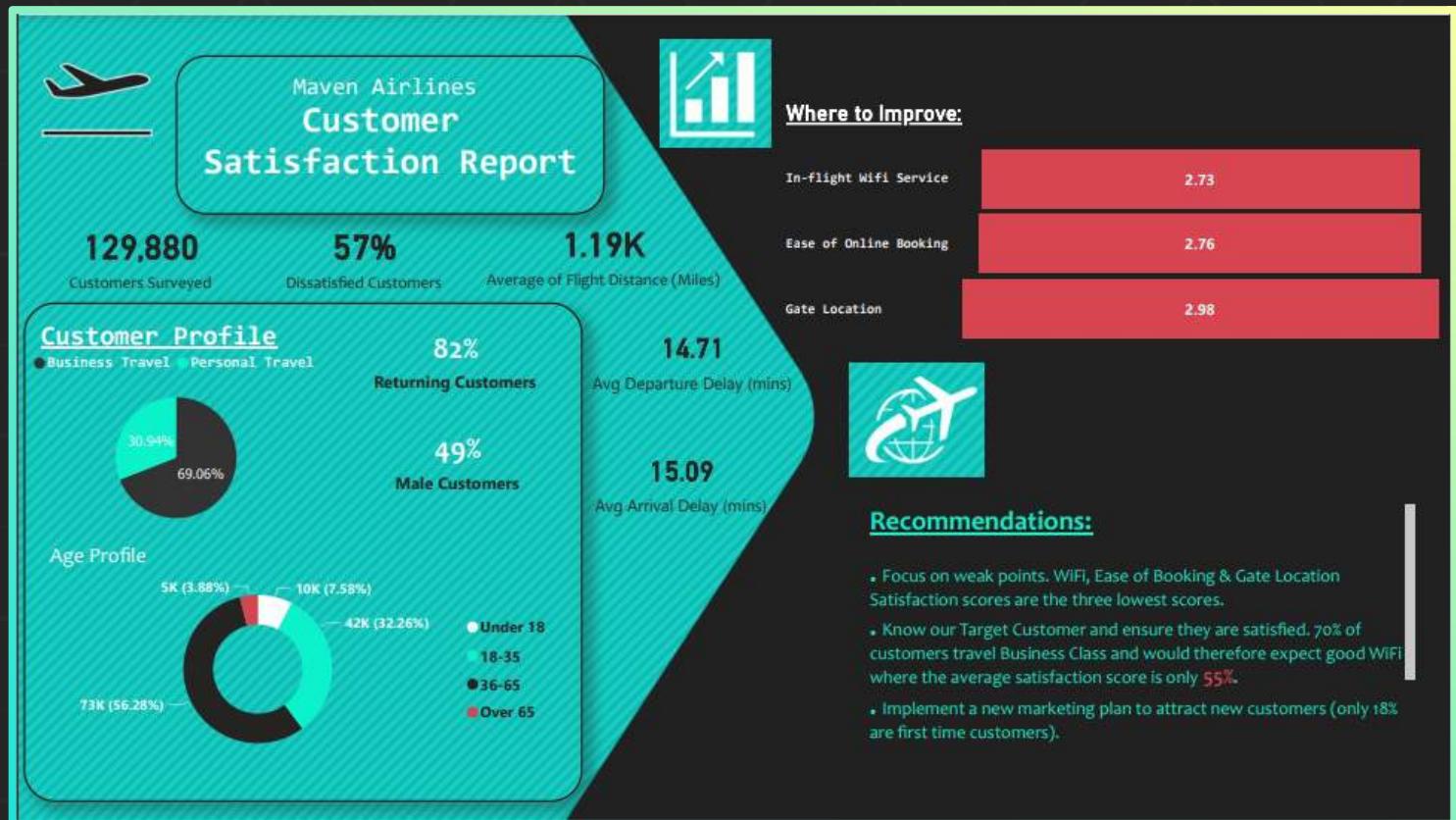
# AIRLINES CHALLENGE



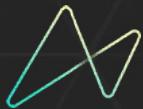
Gerald Osuji



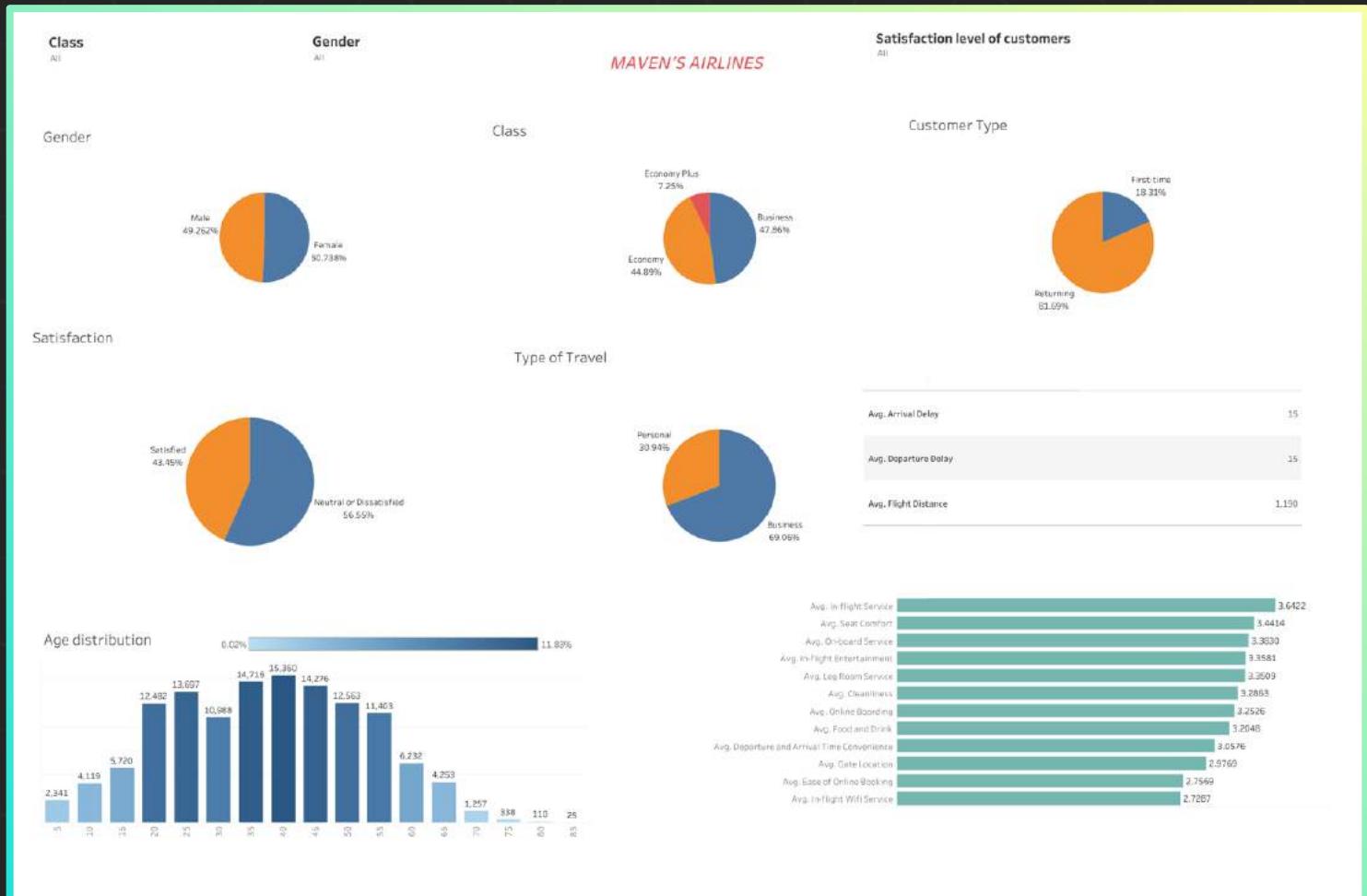
# AIRLINES CHALLENGE



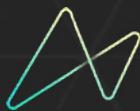
**Shaun Buckley**



# AIRLINES CHALLENGE



Kumar Gaurav Sinha



# AIRLINES CHALLENGE

## Airline Passenger Satisfaction

**Travel Class**

**Customer Type**

**Gender**

**Type of Travel**

**Age**

**Satisfaction level Check-In Service**  
★★★★★ 3.31/5

**Satisfaction level with Cleanliness Service**  
★★★★★ 3.29/5

**Satisfaction of Baggage Handling**  
★★★★★ 3.63/5

**Satisfaction of Gate location**  
★★★★★ 2.88/5

**Satisfaction of In-flight Service**  
★★★★★ 3.64/5

**Satisfaction of online boarding experience**  
★★★★★ 3.25/5

**Satisfaction of Online booking**  
★★★★★ 2.76/5

**Satisfaction level with Cleanliness Service by Type of Travel and Customer Type**

**Satisfaction of Baggage Handling by Gender and Customer Type**

**Satisfaction of Online booking by Class and Customer Type**

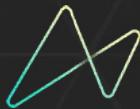
**Arrival Delay in Minutes**  
1954105

**Departure delay in Minutes**  
1911017

**Neutral or Dissatisfied**  
73K

**Satisfied**  
56K

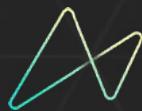
Samita Kumari



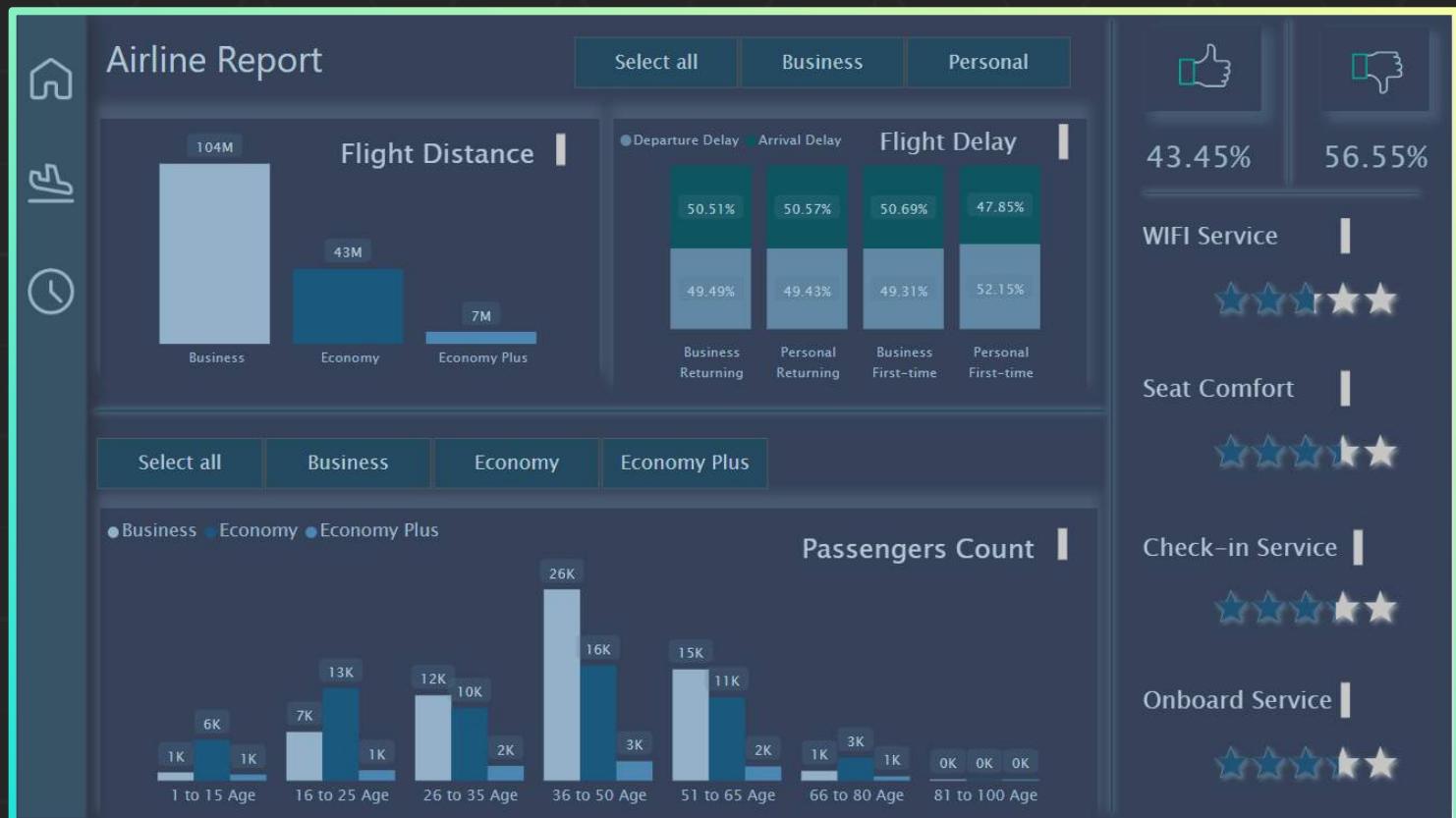
# AIRLINES CHALLENGE



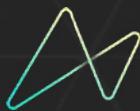
Andrew Odiniya



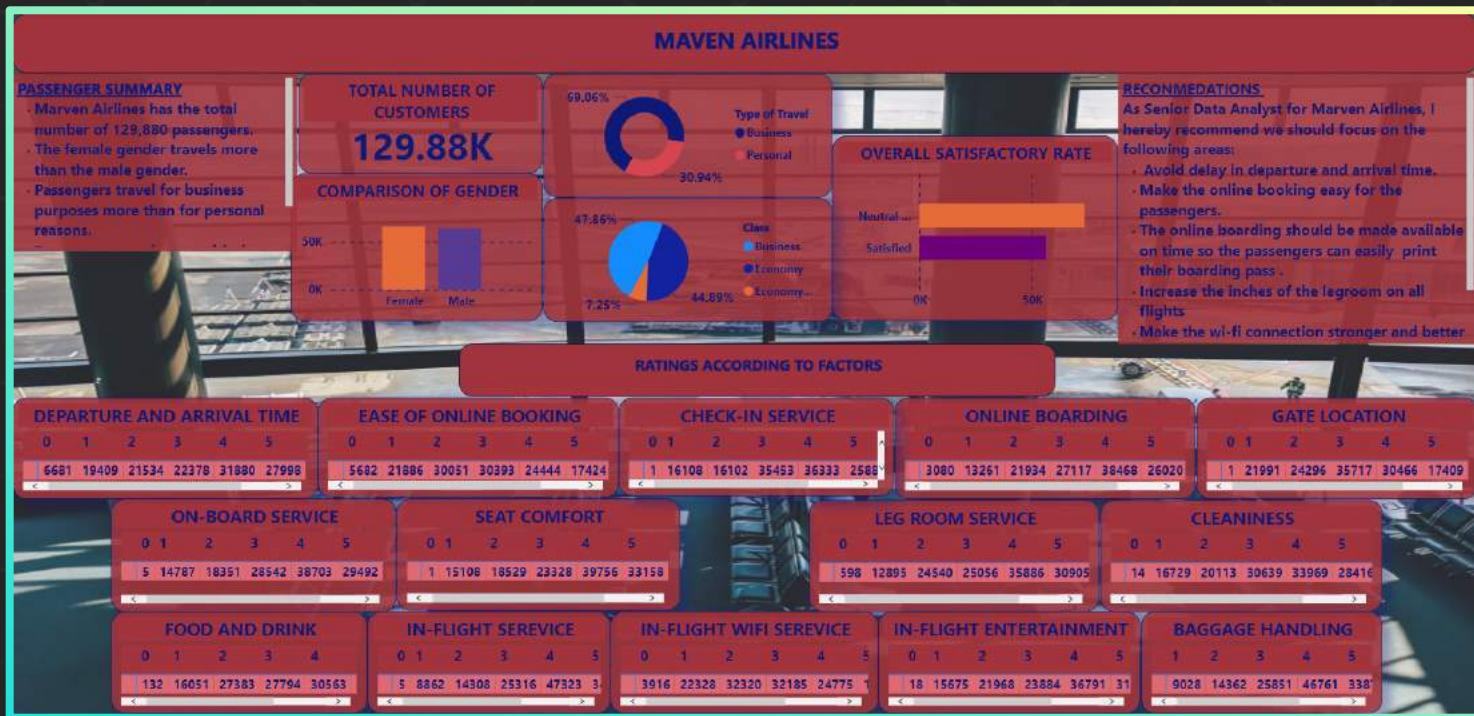
# AIRLINES CHALLENGE

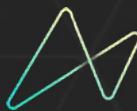


Balamurugan Sivasangar



# AIRLINES CHALLENGE





# AIRLINES CHALLENGE

## MAVEN AIRLINE PASSENGER SATISFACTION INSIGHTS

Total Respondents

129.88K

Satisfaction Rate

43.45%

Neutral/Dissatisfaction Rate

56.55%

Average of Flight Distance in miles

1.19K

Average of Departure Delay in minutes

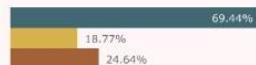
14.71

Average of Arrival Delay in minutes

15.09

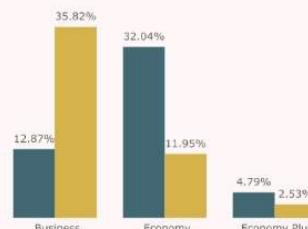
### Satisfaction Rate by Class

Class ● Business ● Economy ● Economy Plus



### In-flight WiFi Service by Class

Satisfaction ● Neutral or Dissatisfied ● Satisfied

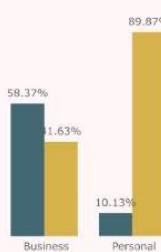


Passengers from **business class** are more satisfied.

Passengers from **business class** are more satisfied with WiFi service.

### Satisfaction Rate and Dissatisfaction Rate by Type of Travel

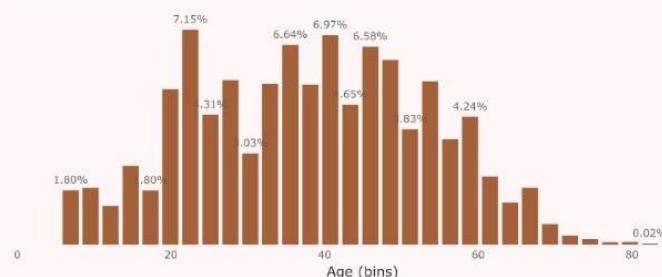
● Satisfaction Rate ● Dissatisfaction Rate



**Personal travel** passengers are more dissatisfied.

### Age Distribution

Age (bins)

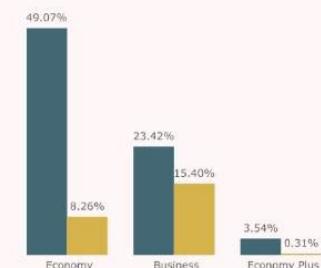


### Average Age

39.43

### First-time by Class and Satisfaction

Satisfaction ● Neutral or Dissatisfied ● Satisfied



First-time passengers from **economy class** are more dissatisfied.

### Top 3 Worst Rated Factors

#### In-flight WiFi Service



#### Ease of Online Booking



#### Gate Location



### Key Recommendations

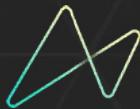
**In-flight WiFi Service** should be improved in the economy and economy plus classes.

**Ease of online booking** so that passengers are able to book tickets easily. The website/app could be more user friendly.

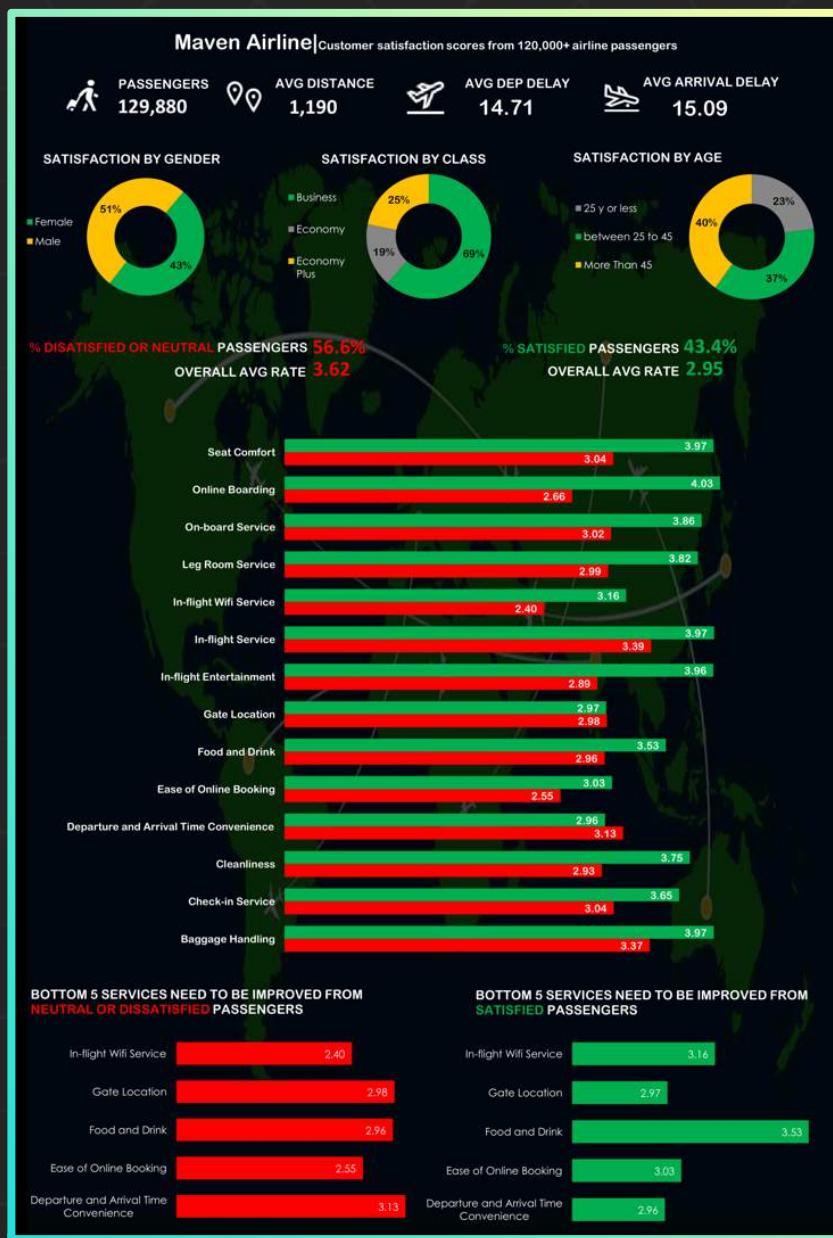
**Gate Location** should not be changed frequently and if there is any changes it should be informed well in advance.

More focus could be given on people travelling in **economy class**.

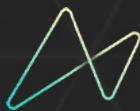
Ritu Santra



# AIRLINES CHALLENGE



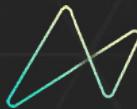
Ibrahim Mohamed Ibrahim Ellafy



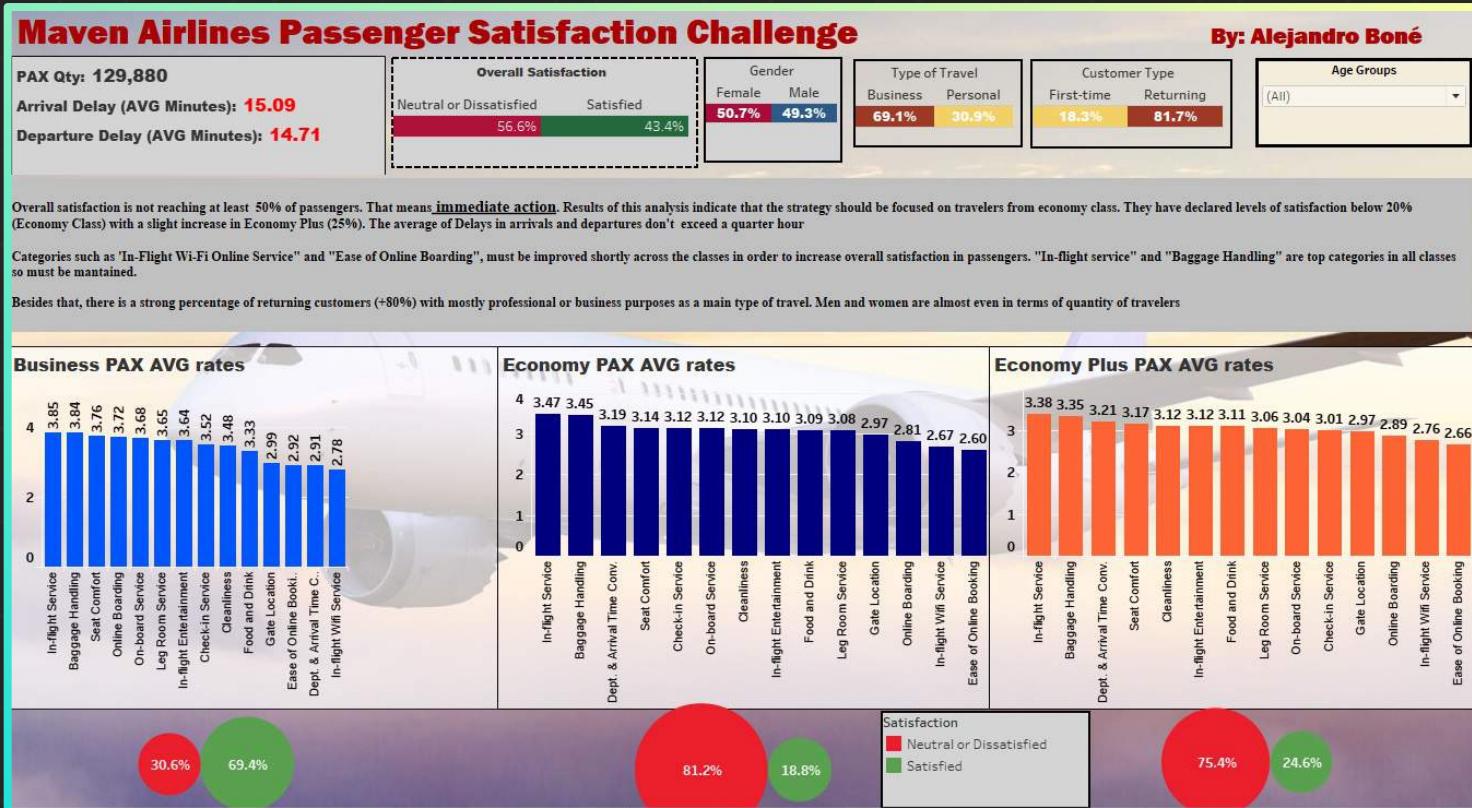
# AIRLINES CHALLENGE



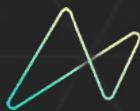
Mahadev Shah



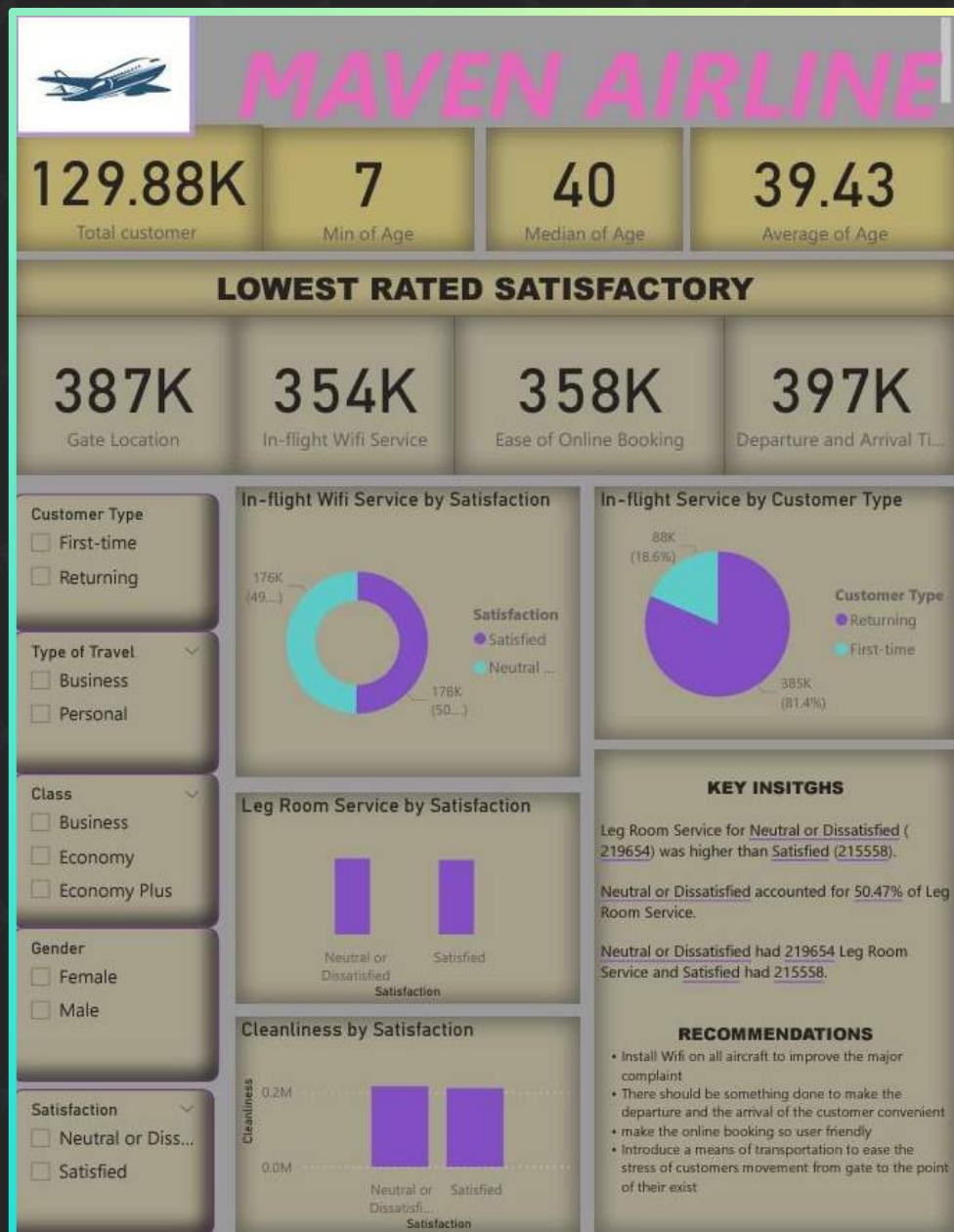
# AIRLINES CHALLENGE

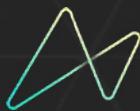


# Alejandro J Boné



# AIRLINES CHALLENGE





# AIRLINES CHALLENGE

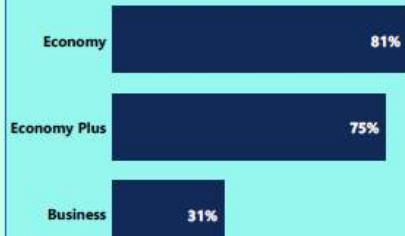
## Maven Airlines

(Satisfaction Analysis)

### Customer Type Neutral or Dissatisfied Percentage



### Class Type Neutral or Dissatisfied Percentage



130K

Participated in The survey

57%

Neutral or Dissatisfied

39

Average Age of Passengers

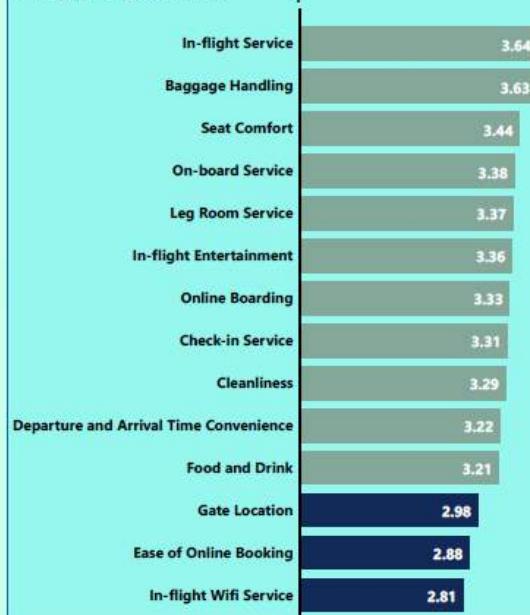
38

Average Age of Neutral or Dissatisfied Passengers

42

Average Age of Satisfied Passengers

### Average Rating of Factors



1

5

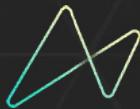
### Opportunity To Improve:

Gate Location, Ease of Online Booking and In-flight Wi-Fi Service have the lowest rating. But also this is an opportunity to increase satisfaction immediately by focusing on these factors.

Also Online Boarding is among three lowest rated factors when we only select neutral or dissatisfied passengers.

Compared to the age of satisfied passengers, More younger passengers are neutral or dissatisfied. Also among dissatisfaction factors, the In-flight Wi-Fi Service, Ease of online Booking and Online Boarding are all related to technology, internet and E-COMMERCE. Fixing this one problem or trying to improve it will have an impressive effect on the satisfaction of customers.

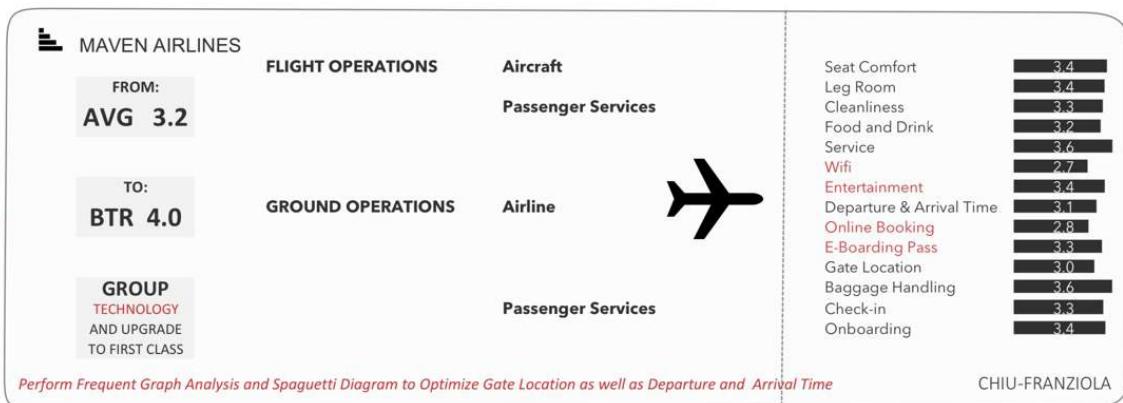
Sajjad Ahmadi



# AIRLINES CHALLENGE

Current Customer Satisfaction at 3.2 on a scale of 1 to 5

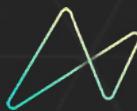
New Goal of 4.0 set by Maven Airlines CEO



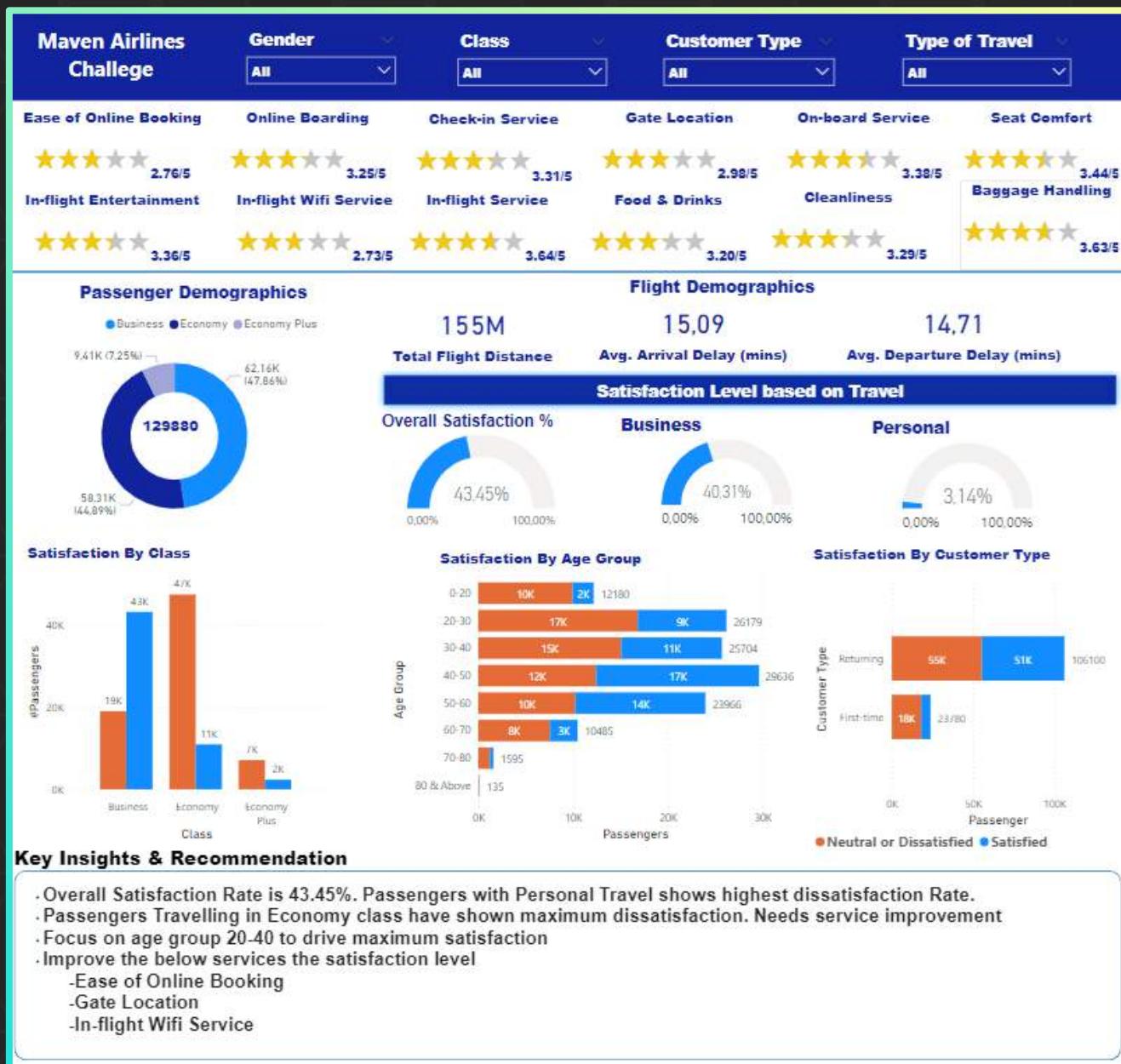
## RECOMMENDATIONS

- Redesign the Online Booking and E-Boarding Pass Apps and Website
- Improve the In-flight WiFi and Entertainment
- Implement Graph Analytics and Spaghetti Diagram to optimize the Gate Location as well as Departure and Arrival times as well as other concerns not in the dataset but pressing in the current landscape such as Cyber-security and Fraud detection

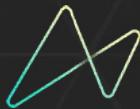
Franziola Chiu



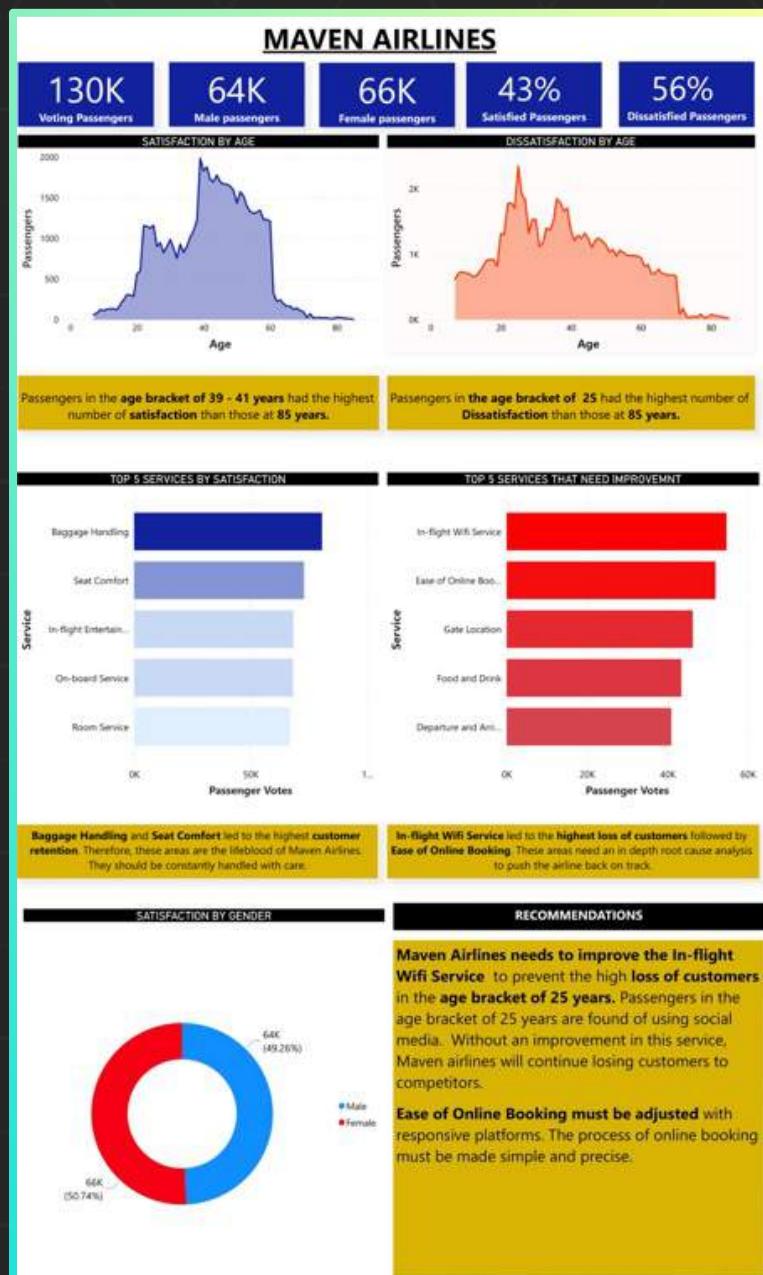
# AIRLINES CHALLENGE



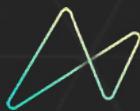
Pallavi Routaray



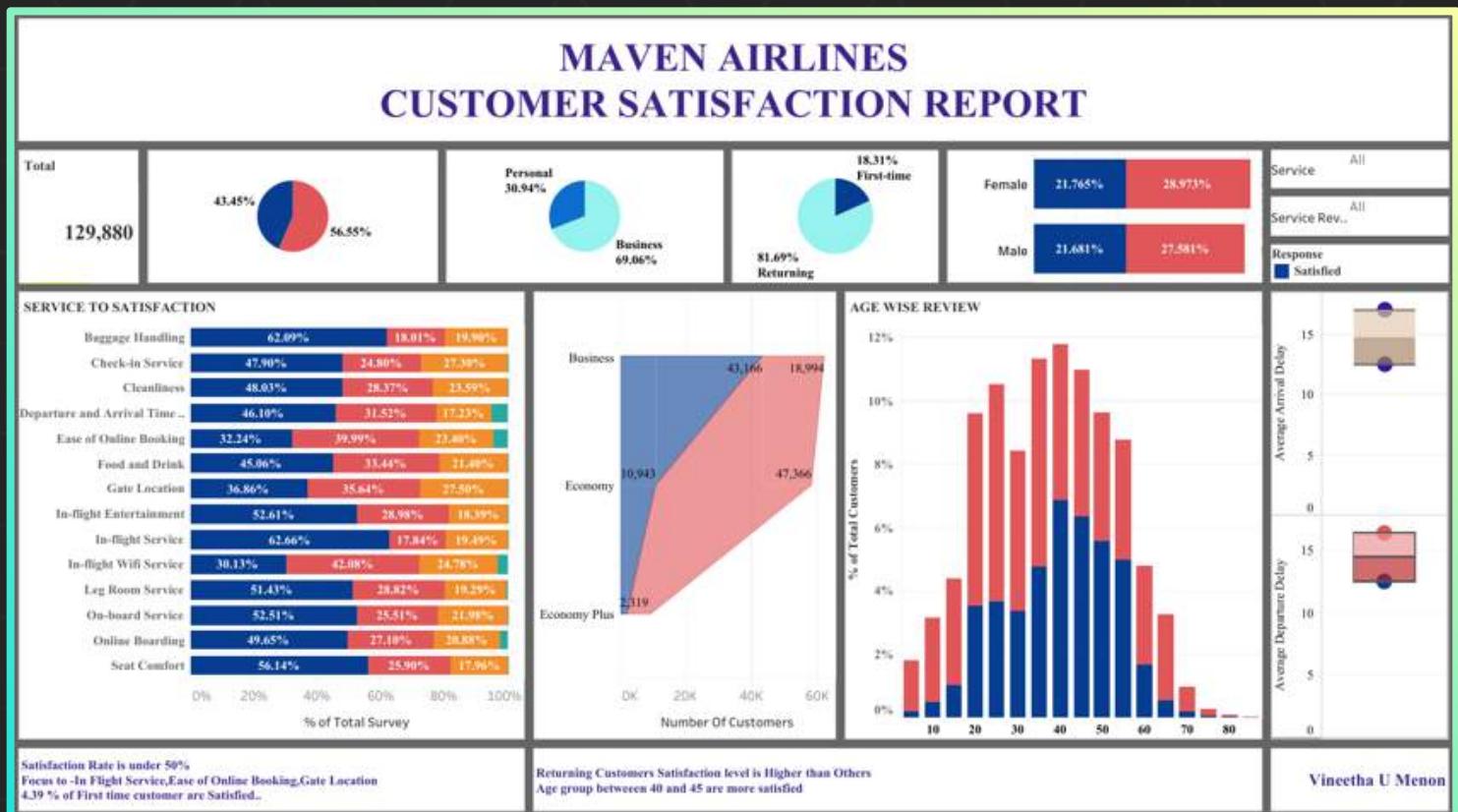
# AIRLINES CHALLENGE



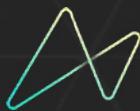
# Sean Kamugasa



# AIRLINES CHALLENGE



Vineetha U Menon



# AIRLINES CHALLENGE

## Marven Airlines Customer Satisfaction Survey

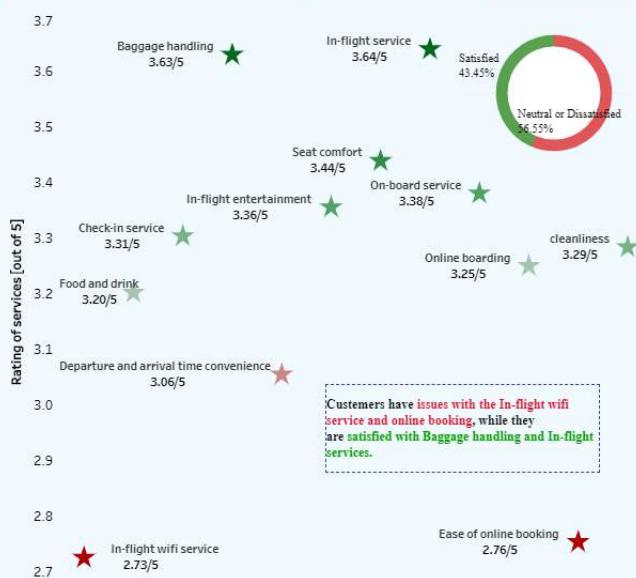
Total Distance Covered  
**154,598,293 miles**

Total Responses  
**129,880**

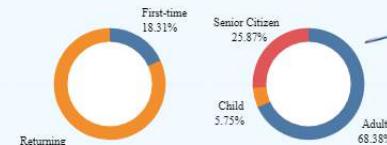
Average Delay in Departure  
**14.71 minutes**

Average Delay in Arrival  
**15.09 minutes**

Rating from Passengers for Various Services



Passenger Profile Overview



Response Summary

Satisfaction	Customer Type	Type of Travel	Male			Female		
			Child	Adults	Senior Citizen	Child	Adults	Senior Citizen
Satisfied	First-time	Business	94	2,538	101	90	2,742	103
		Personal		10	7	1	8	6
	Returning	Business	163	16,157	7,080	156	16,050	7,082
		Personal	298	1,102	609	290	1,136	605
Neutral or Dissatisfied	First-time	Business	340	7,352	410	362	8,899	548
		Personal	12	42	31	15	40	29
	Returning	Business	263	6,515	2,886	285	6,589	2,888
		Personal	2,532	9,842	5,597	2,565	9,790	5,620

Unais Mk