

# CONSULTING FOR CHEAPSEATS AIRLINE

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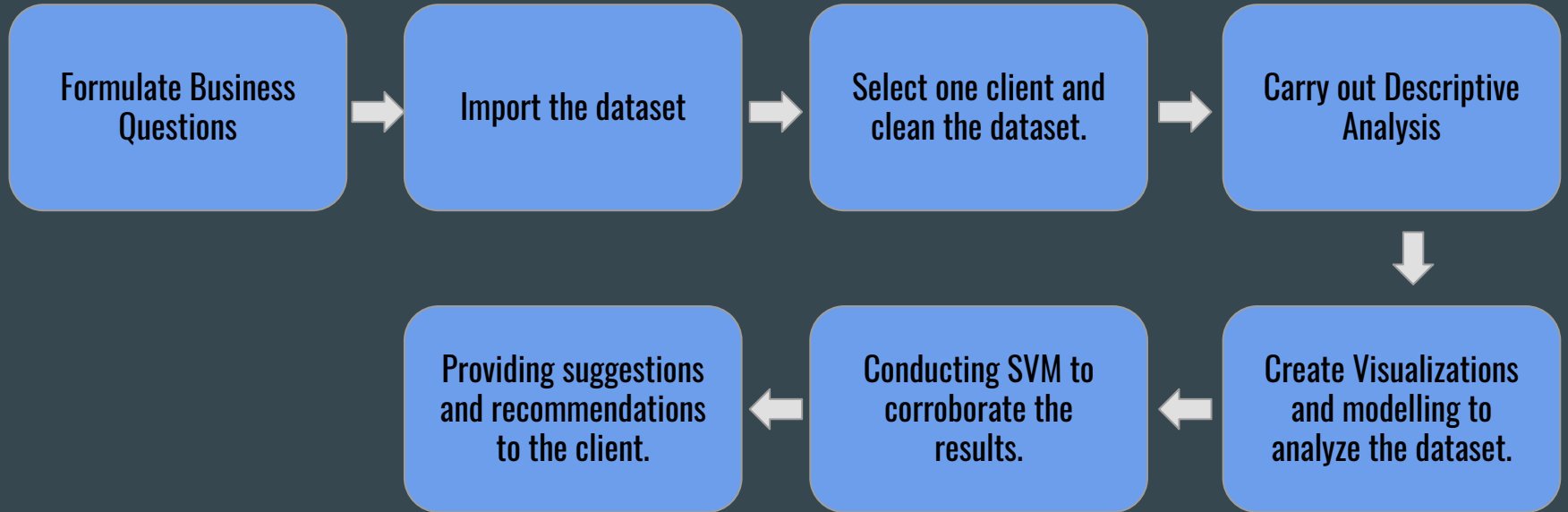
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# Overview

The project is aimed at analyzing the data from the dataset of customers flying in the United States and to generate actionable insights by analyzing customers with low satisfaction.

The aim of the project is to analyze the reasons for customers with low satisfaction and suggest recommendations to the client airways to increase their customer satisfaction.

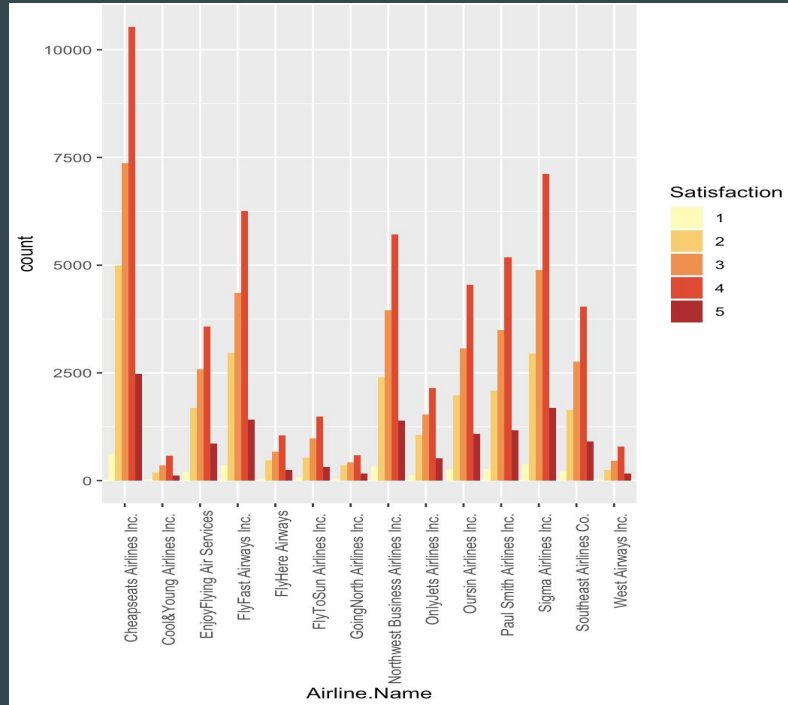
# APPROACH



# BUSINESS QUESTIONS

1. Predict customers with low satisfaction
2. Analyze the attributes/factors that affect customer satisfaction
3. Analyze what causes customers to give high satisfaction
4. Analyze what causes customers to give low satisfaction
5. Recommendations and suggestions to the client airways to improve customers with low satisfaction

# Satisfaction of all airlines

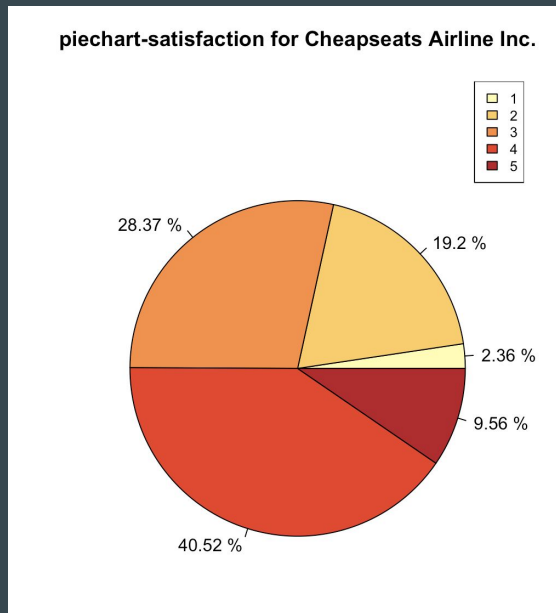
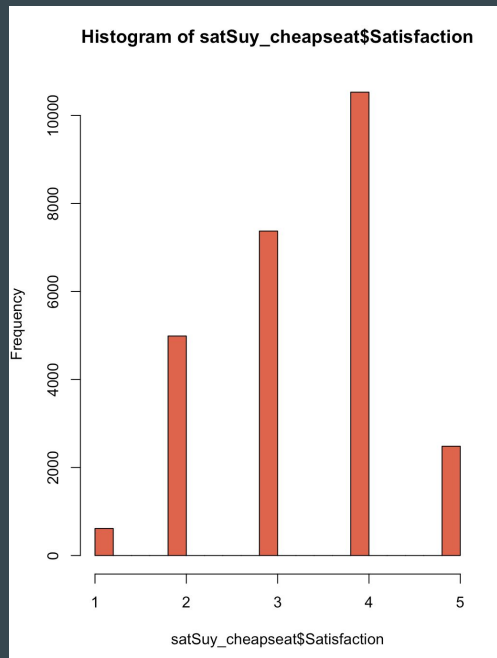


## DATA AFTER CLEANING:

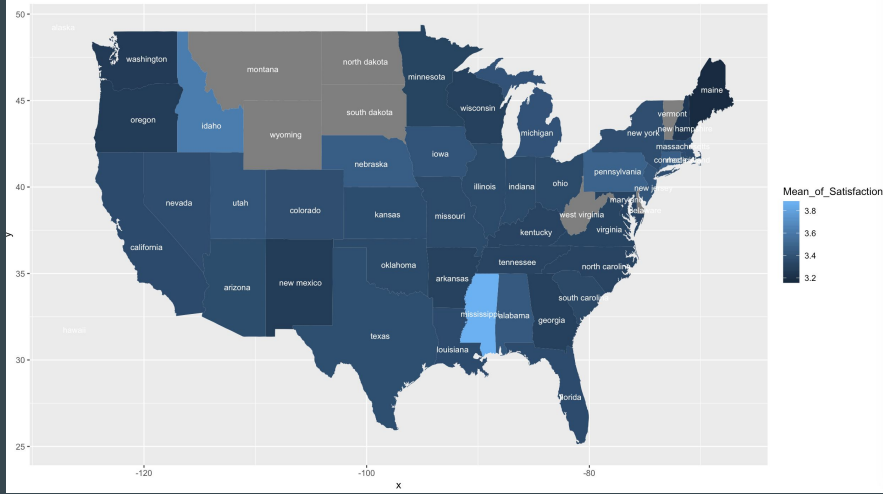
- Total Observations: 129,886
- Cheapseats Observations: 26,058 (~20%)
- Observations from other Airlines: 103,828 (~80%)

Cheapseats Airline customers has the higher proportion and large amount of low satisfaction.

# Satisfaction of Cheapseats Airline Inc.



Nearly 50% of the Cheapseats Airline customers have the low satisfaction (less than 4).



## Mean Satisfaction Across Destination States

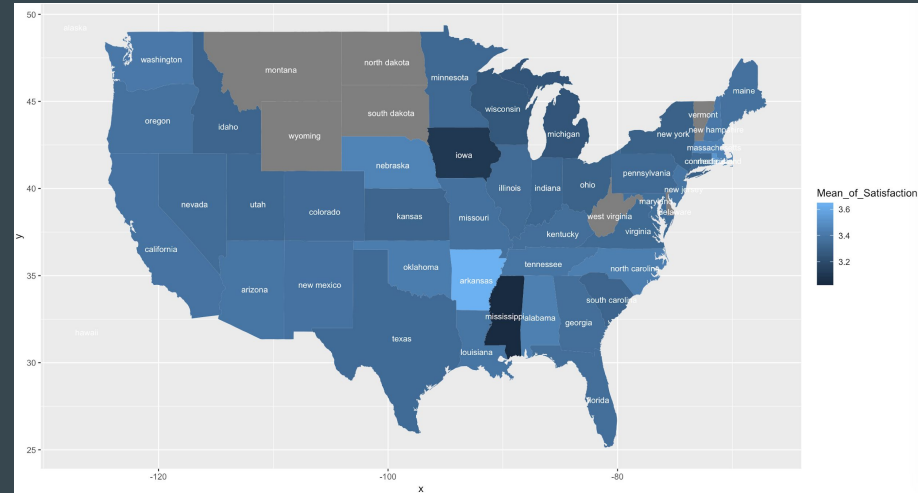
★ Destination States with low satisfaction are :

- Washington
- Oregon
- Maine
- New Mexico

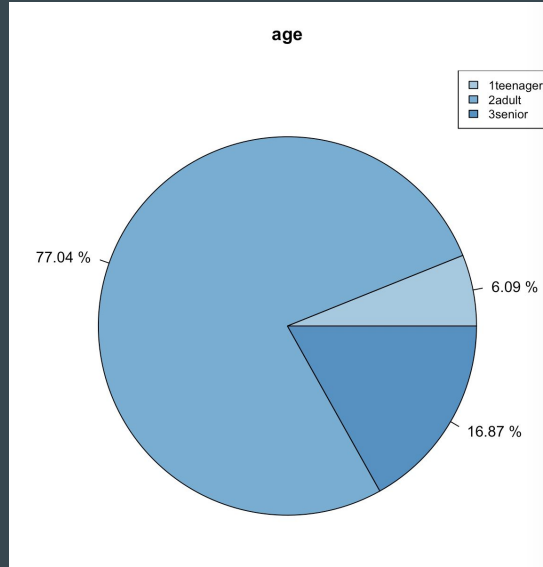
★ Origin States with low satisfaction are:

- Mississippi
- Iowa

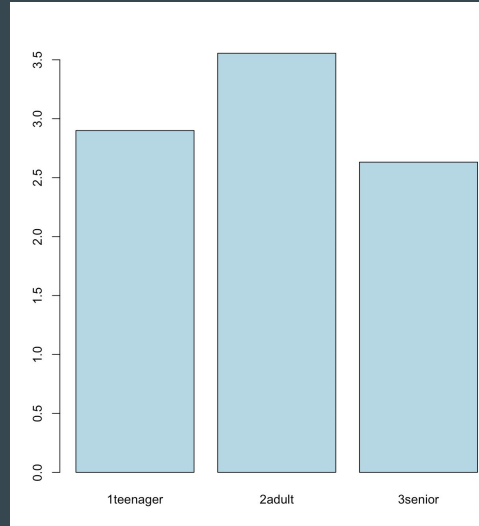
## Mean Satisfaction Across Origin States



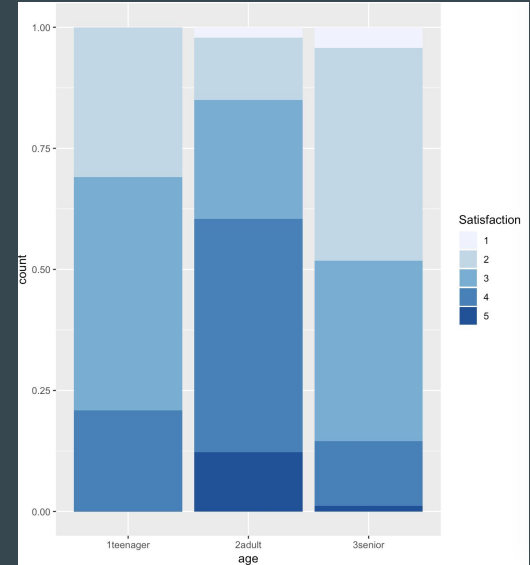
# Cheapseats Airline Customers' Age



Average Satisfaction



Proportion of satisfaction

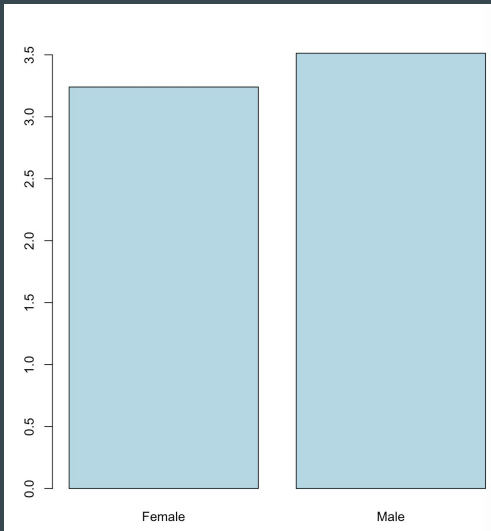


Seniors have the lowest satisfaction while adults have the highest satisfaction.

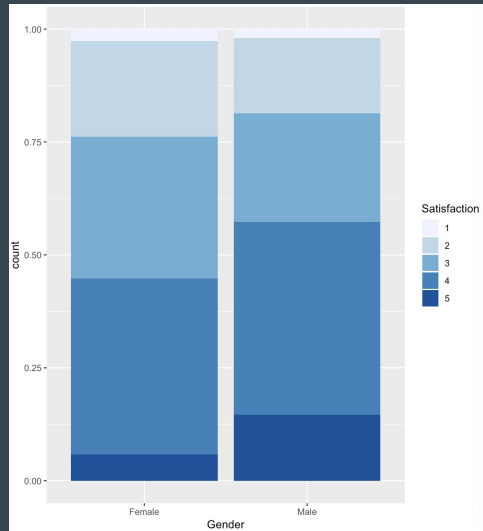


# Cheapseats Airline Customers' Gender

## Average Satisfaction



## Proportion of satisfaction rate



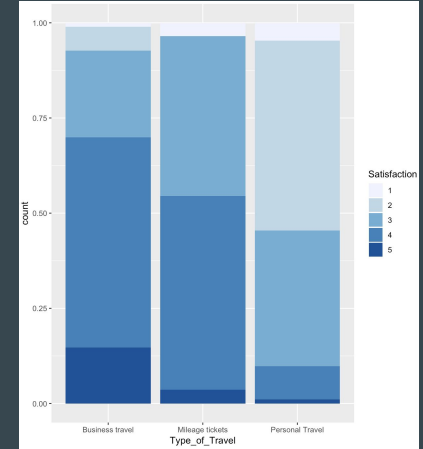
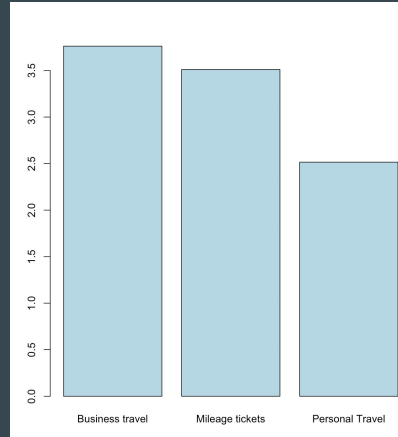
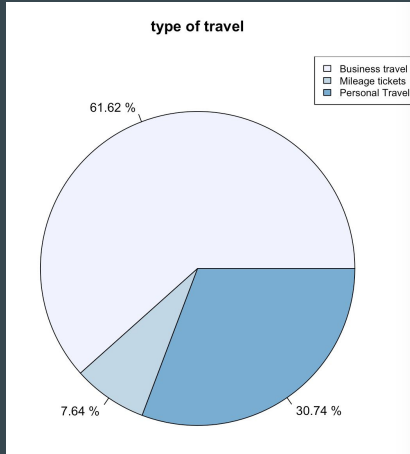
Over 55% of our customers are female

Male travelers show higher satisfaction while female travelers show low satisfaction.

# Cheapseats Airline Customers' Travel Type

Average Satisfaction

Proportion of satisfaction rate

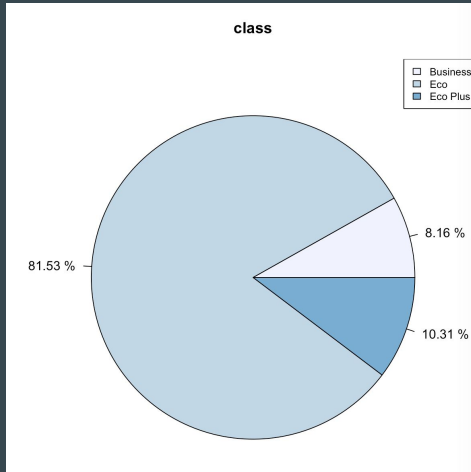


Over 60% of our customers are business travelers while 30% of them are personal travelers

Business travelers show higher satisfaction while personal travelers show lower satisfaction.

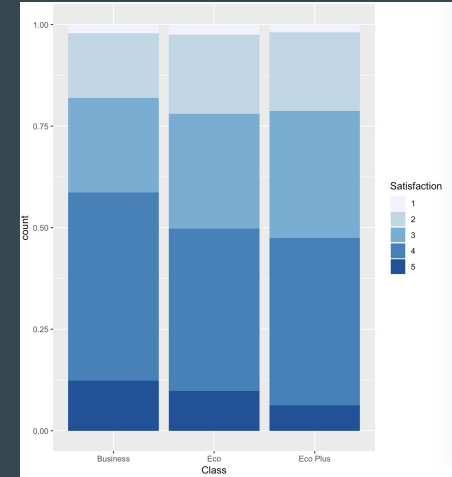
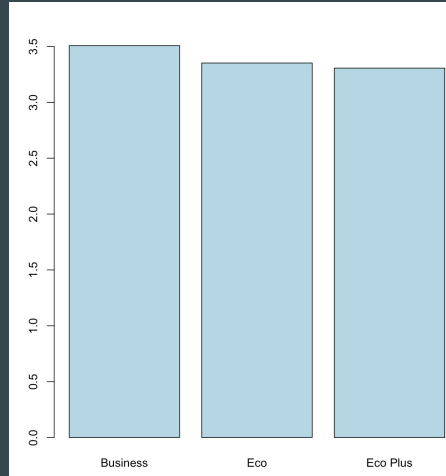
# Customers' Ticket Class

Average Satisfaction



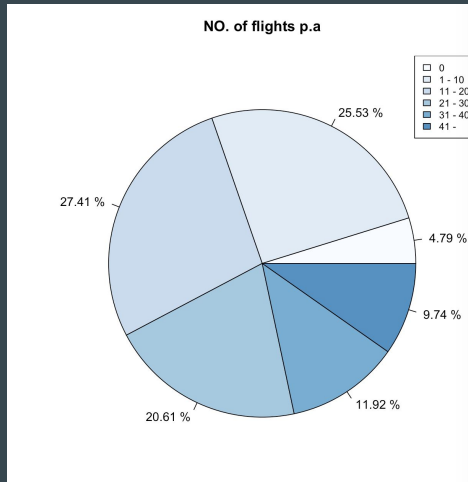
81.63% of our customers are from economy class.

Proportion of satisfaction rate

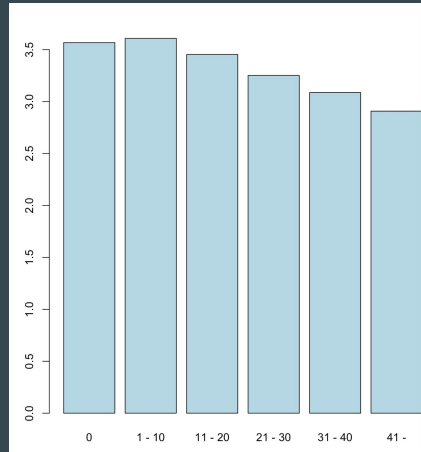


Customers in business class give higher score of satisfaction while customers in economy class give lower score of satisfaction.

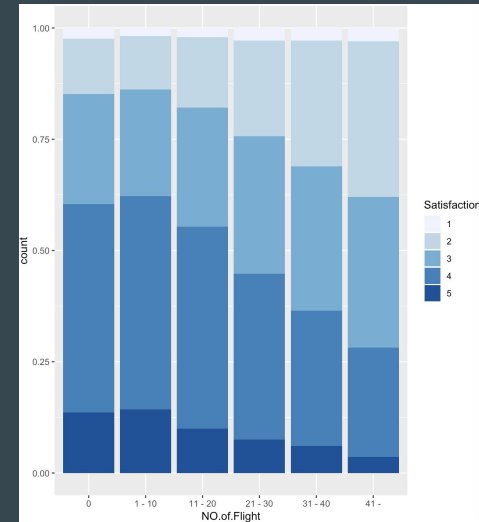
# Number of flights per year



Average satisfaction



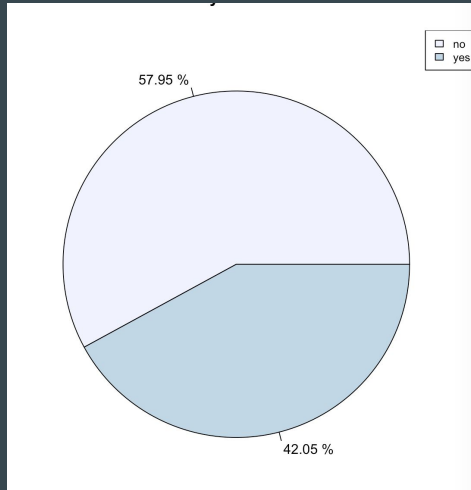
Proportion of satisfaction



People take more flights would give lower score of satisfaction.

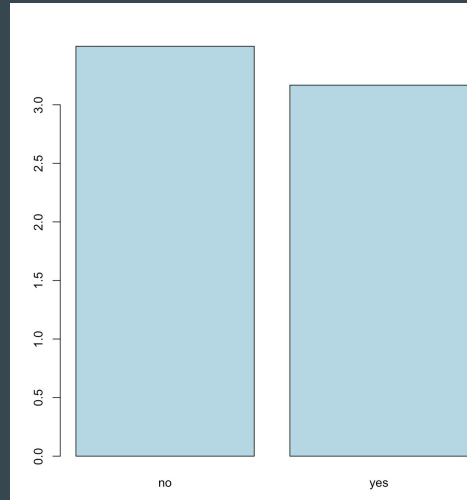
# Flight delay greater than 5 minutes

## Average satisfaction

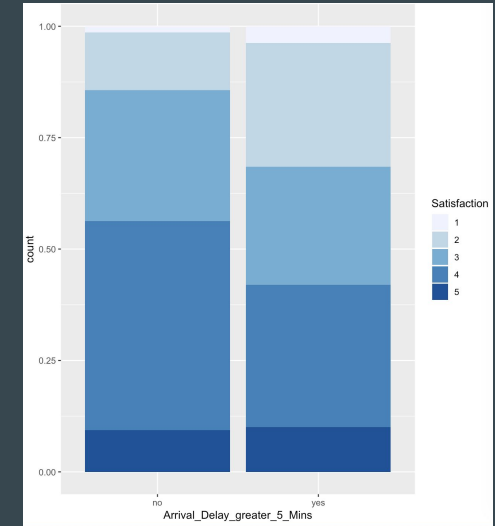


Over 55% of our flight are not delayed more than 5 minutes.

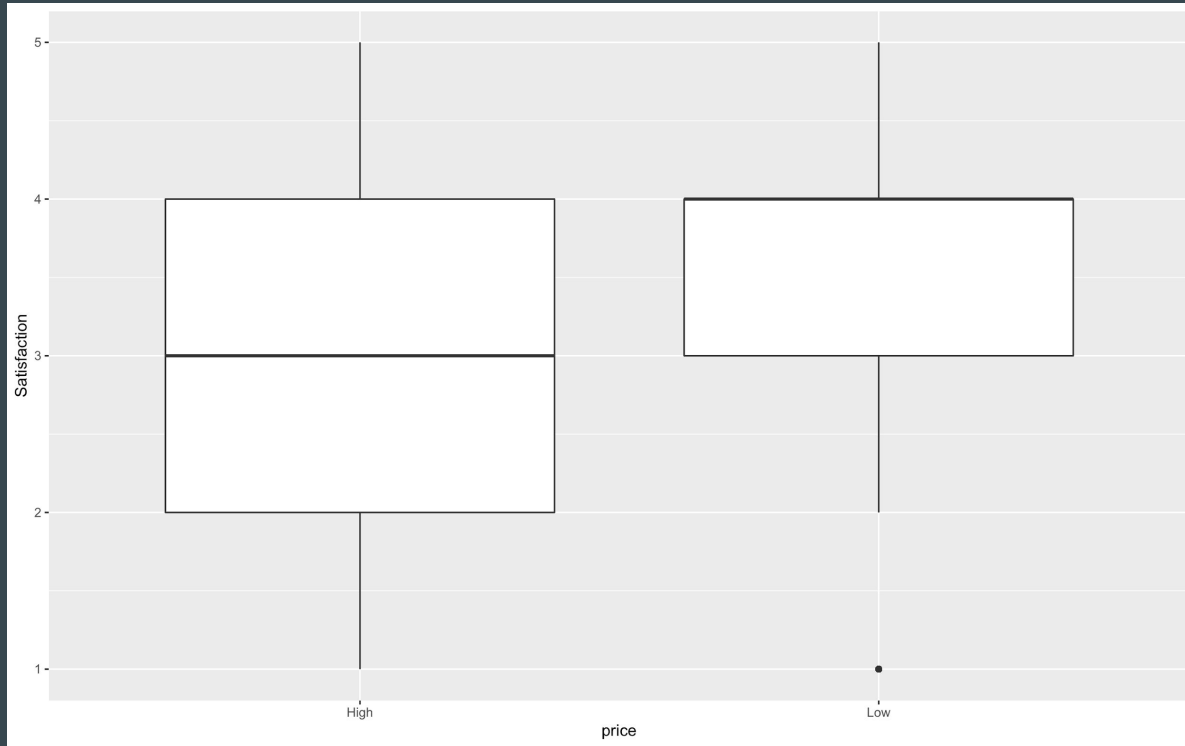
## Proportion of satisfaction rate



Customers with flight delay greater than five minutes would give lower score of satisfaction.



# Cheapseats Airline Customers' Price sensitivity



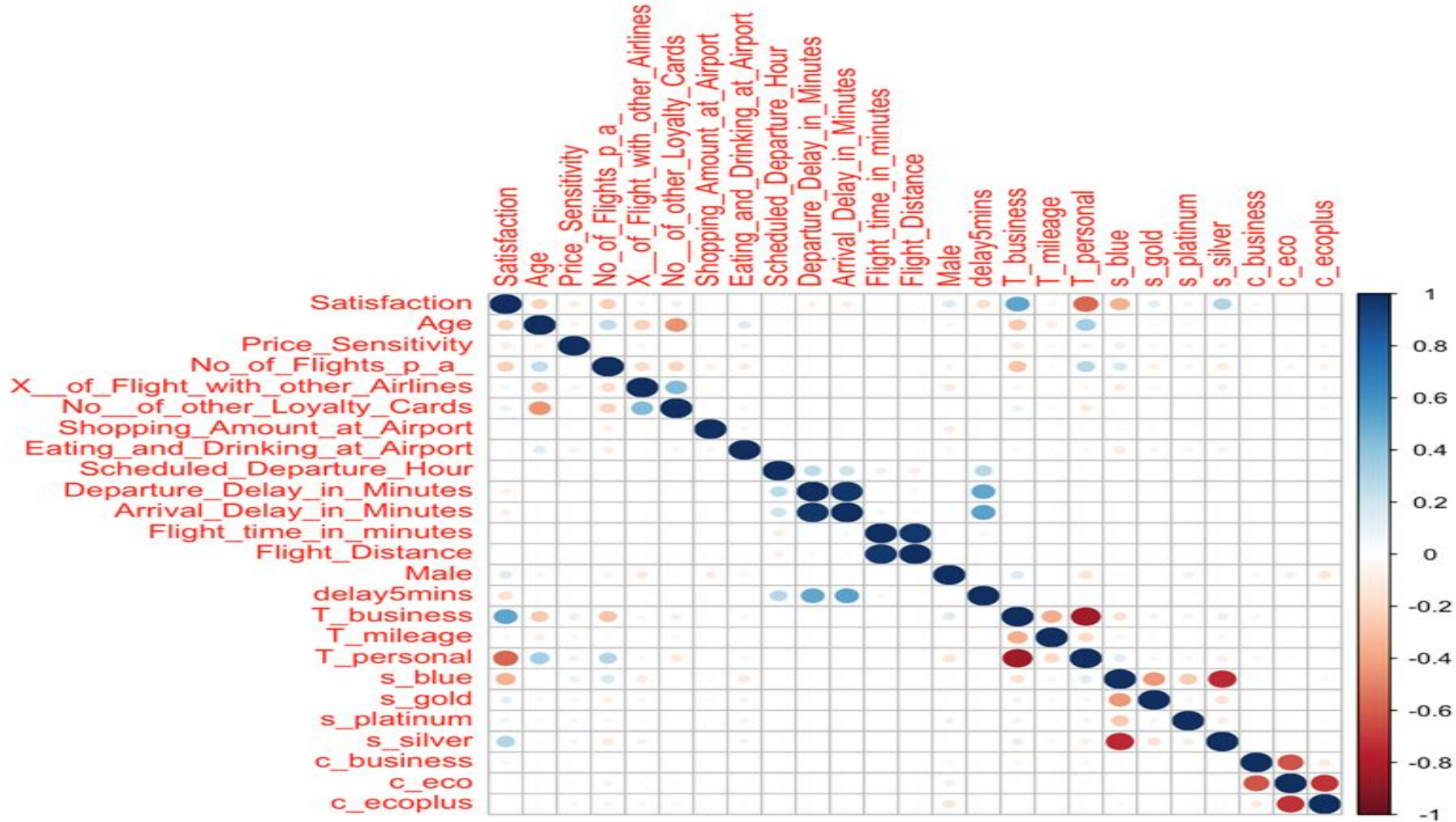
Customers with low price sensitivity prefer to give higher score for satisfaction.

# Modeling Analysis: Linear Model

The linear model portrayed the dependency of the customer satisfaction on variables:

- Customers' Age
- Customers' Gender
- Customers; Travel type
- Customers' Ticket Class
- Price Sensitivity
- Number of flights taken by the Customer per year
- Flights delayed more than 5 minutes

The strength of the relation between Customer Satisfaction and the combination of above variables is around 45%





# Modeling Analysis: Association Rule Mining

## High satisfied Customer Attributes:

- Adult Customers (Age 18-65)
- Business Travel type
- More number of Loyalty Cards (>2)
- Delay less than 5 mins
- Low Price Sensitivity

## Low satisfied Customer Attributes:

- Children and Senior Customer
- Personal Travel type
- Customer with no loyalty cards
- More flights over the year
- Female Customers
- Economy Class Customers
- Blue status Customer

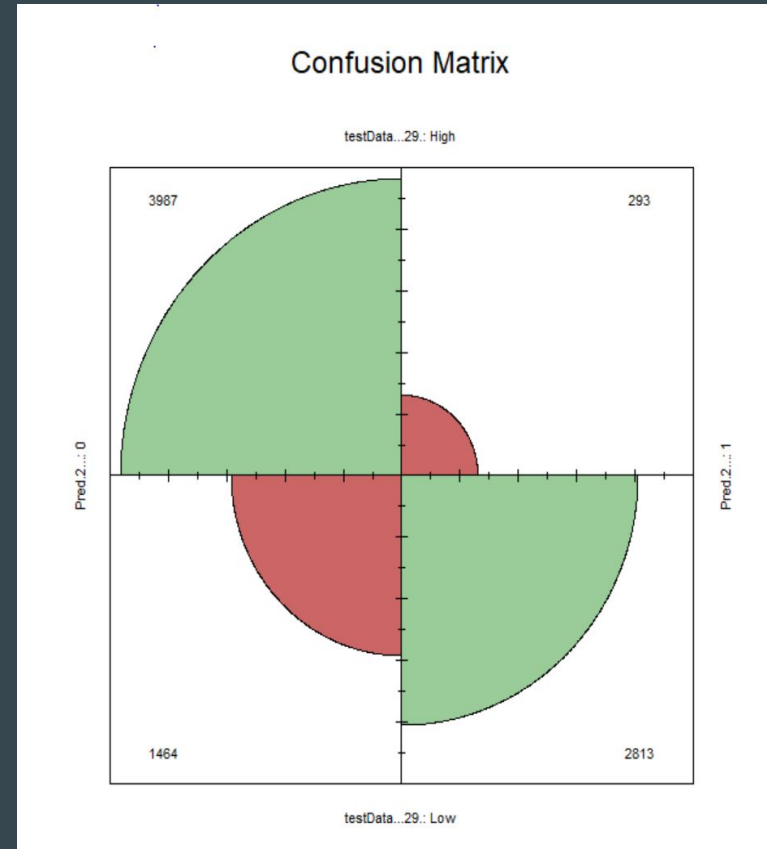
# Model Testing: Support Vector Machines (SVM)

The model predicts the likelihood to recommend about customer's Rating : Happy or Unhappy

The figure represents the number of times the model algorithm predicted customer satisfaction rating accurately

Accuracy Rate: 79.5 %

Model was based on Age, Airline Status, Type of Travel, Number of Flights, Gender, Delay greater than 5 minutes, Class and Price Sensitivity



# Recommendations

- Customers travelling for personal travel should be provide better in-flight services
- Better in-flight services like goodies and kids based entertainment services to children. Extended escort services and faster gate access to senior citizens
- Provision of better offers and opportunities to Blue customers for them to upgrade to higher status like Silver status
- Co-passenger preference to female customers travelling alone
- Provision of more loyalty cards to the frequent flyers
- Provision of promotional loyalty cards and occasional free upgrades to customers on economy class
- Provision of free lounge access and stay over facilities to the customers with delayed flights

THANK YOU!