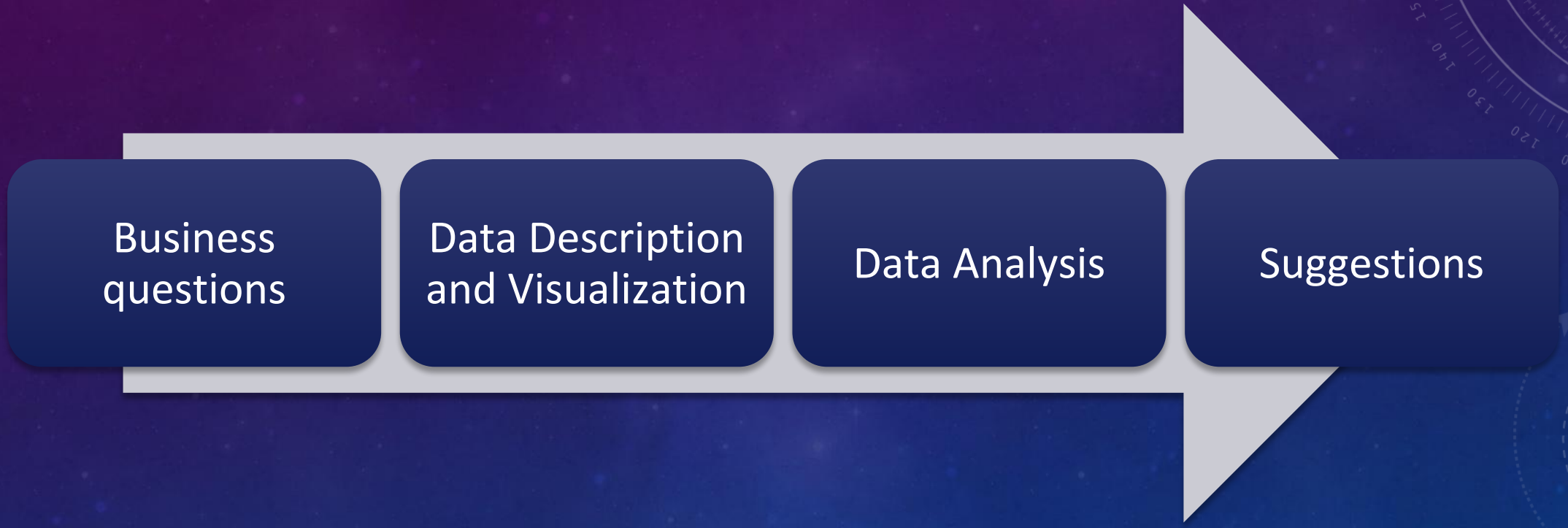
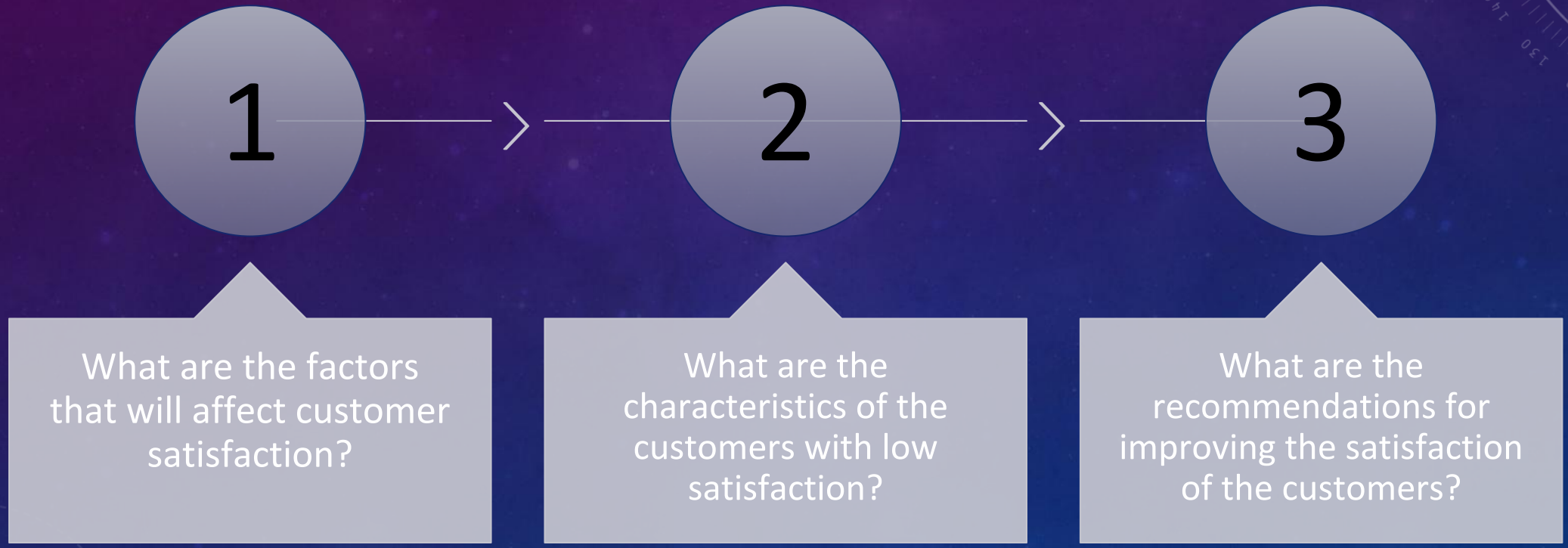
FLIGHT SATISFACTION ANALYSIS

IST-687 GROUP
AISHWARYA SOUNDARARAJAN
RACHNA SHETTY
SNEHAV SHARMA
YASH PASAR

CONTENTS


Business questions
Data Description and Visualization
Data Analysis
Suggestions

BUSINESS QUESTIONS



DATA CLEANING

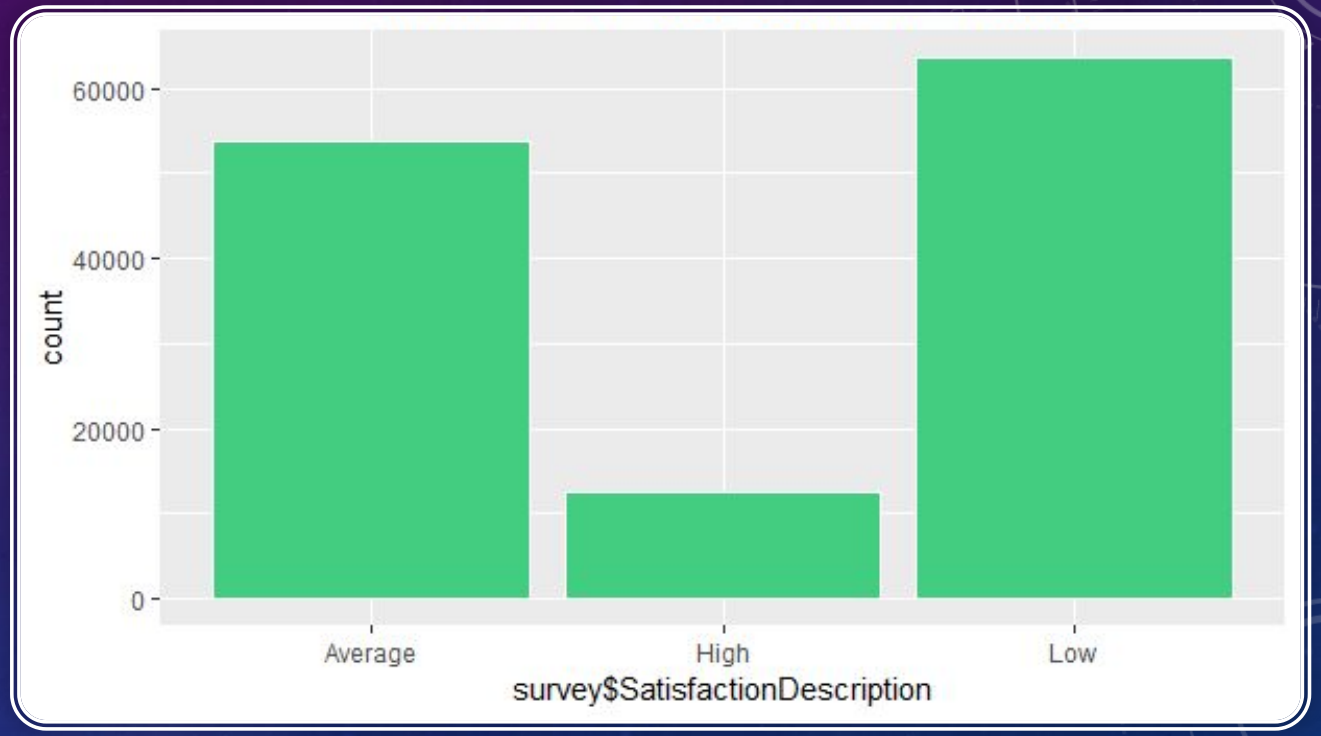
Complete Data Set

- Total Number of Survey Responses = 129889
- Total Number of Attributes = 28

Cleaned Data Set

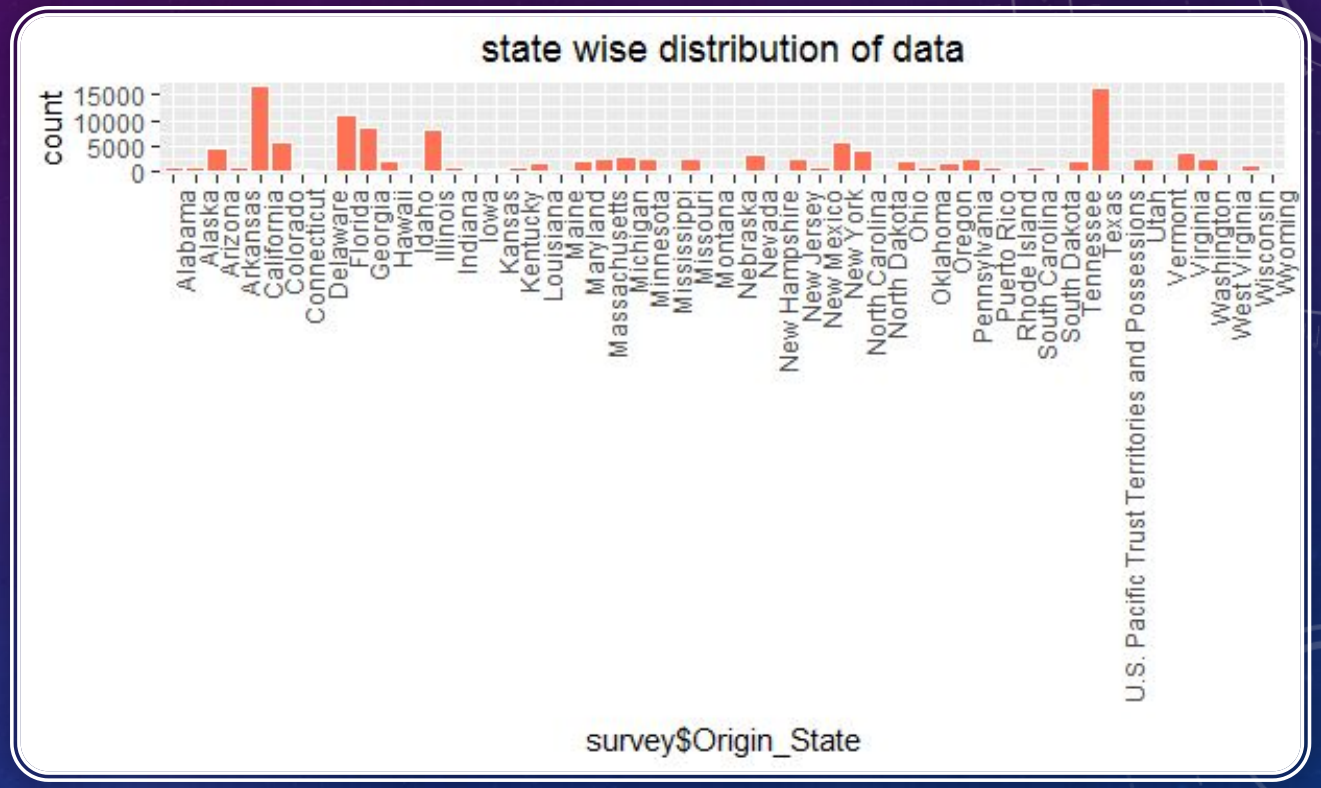
- It was observed that NAs accounted to 6% of the entire dataset.
- Instead of omitting the NAs, replaced the NAs with mean values.
- From Flight_time_in_minutes, Arrival_delay_in_minute & Departure_delay_in_minutes

SATISFACTION DISTRIBUTION



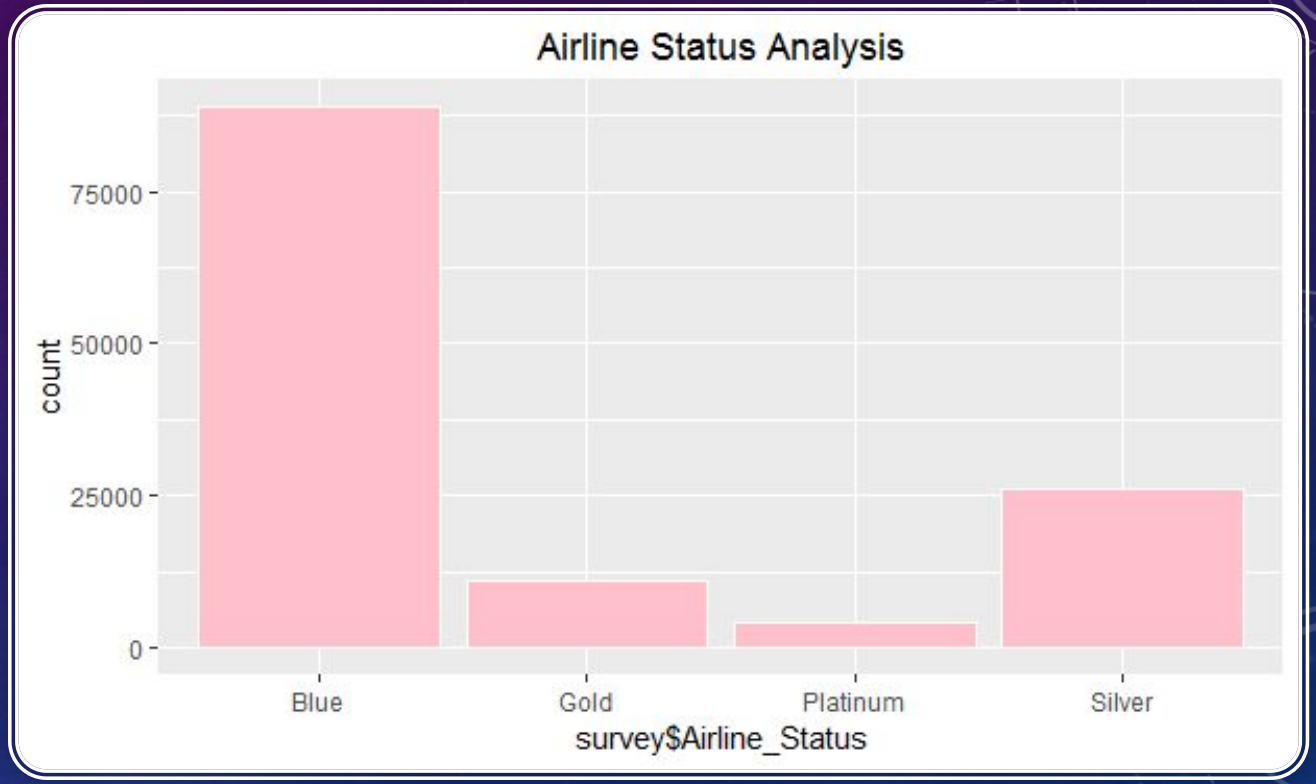
DATA DESCRIPTION :- BASED ON THE FLIGHT

Origin State



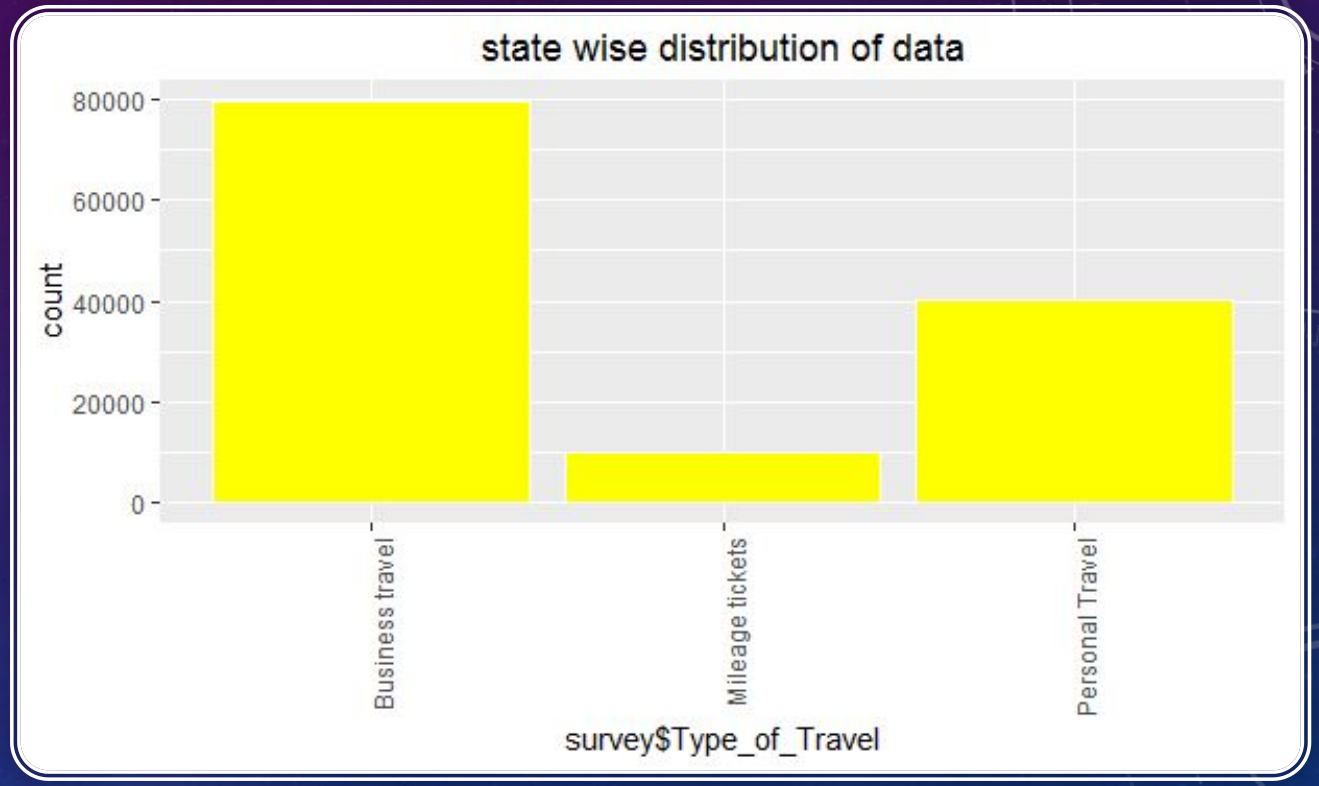
DATA DESCRIPTION :- BASED ON THE FLIGHT

Airline Status



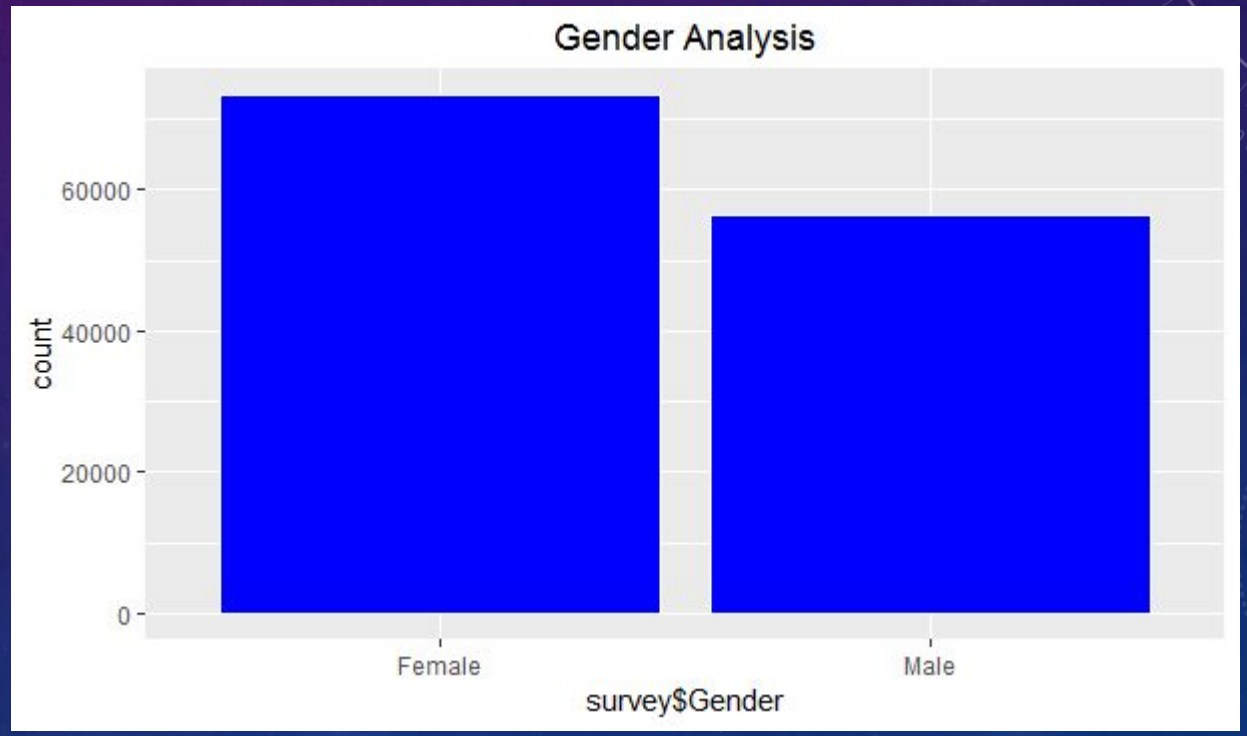
DATA DESCRIPTION :- BASED ON THE FLIGHT

Type of Travel

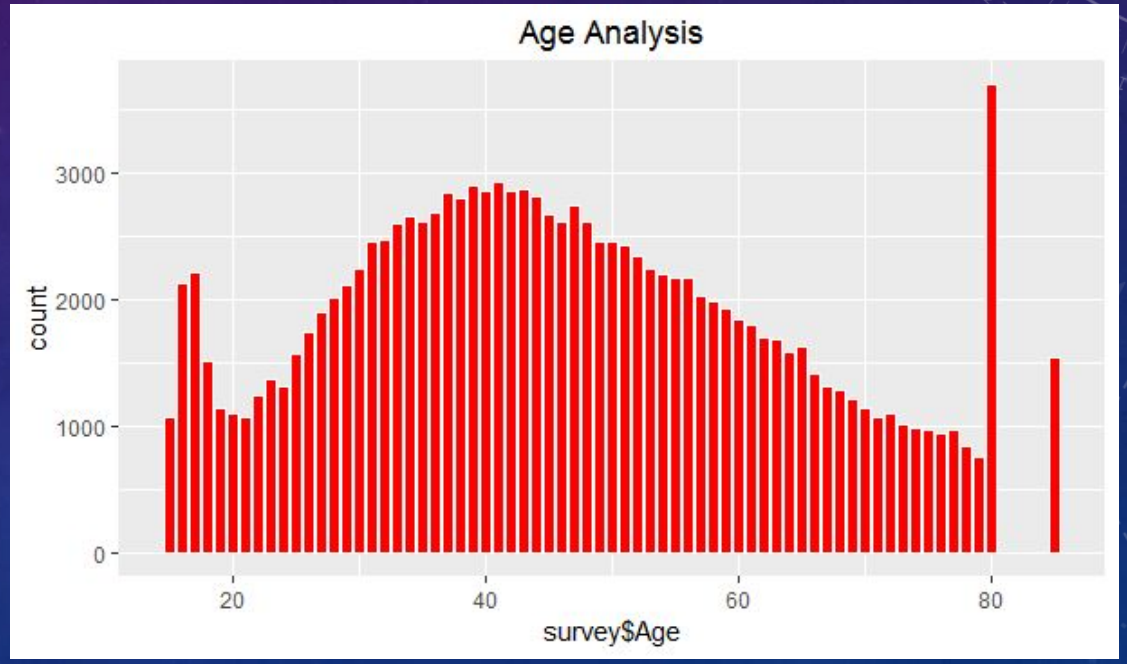


DATA DESCRIPTION :- BASED ON THE ATTRIBUTES RELATED TO THE DEMOGRAPHICS

- Gender



- Age

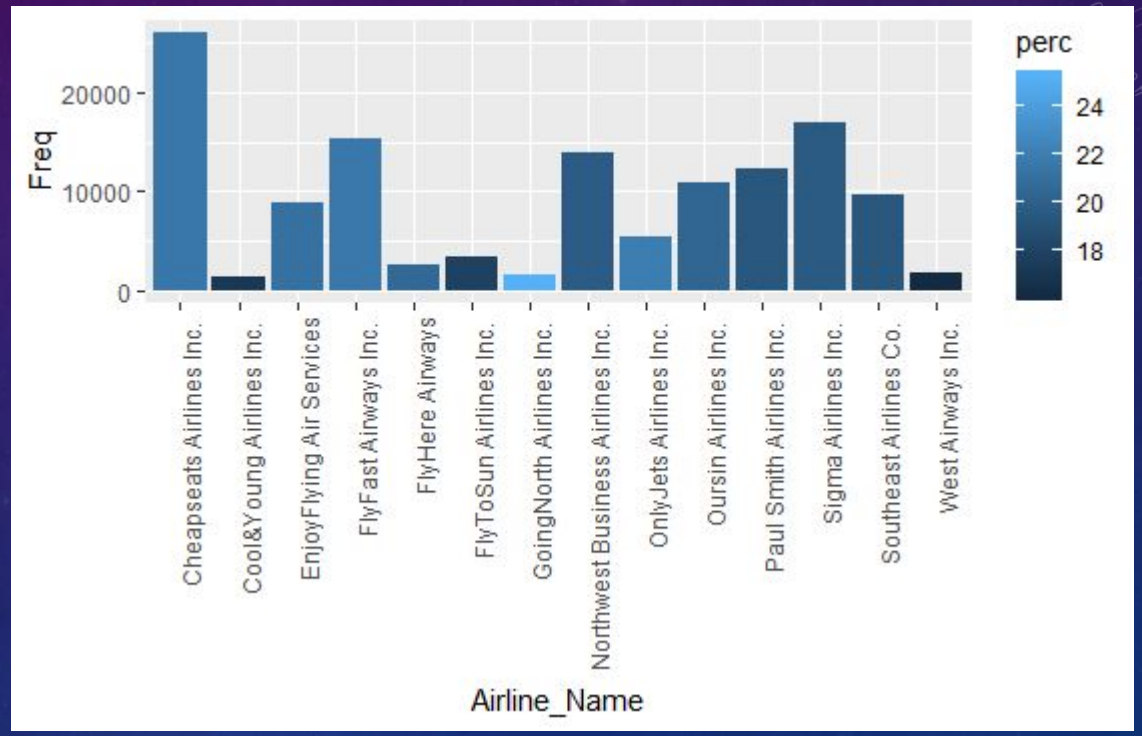


DATA DESCRIPTION :-AIRLINE ANALYSIS

Objective –

To find out the percentage of unhappy customers in each airline.

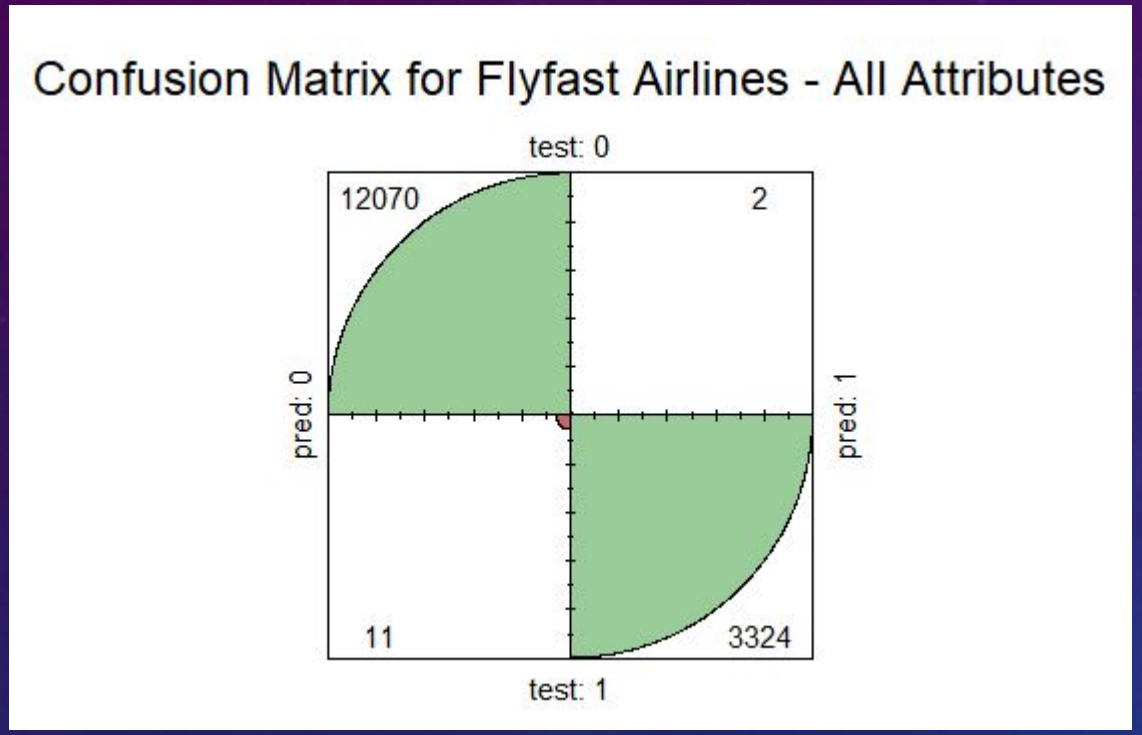
Result –
FlyFast Airways Inc. had the most number of unhappy customers with a reasonable number of total customers.



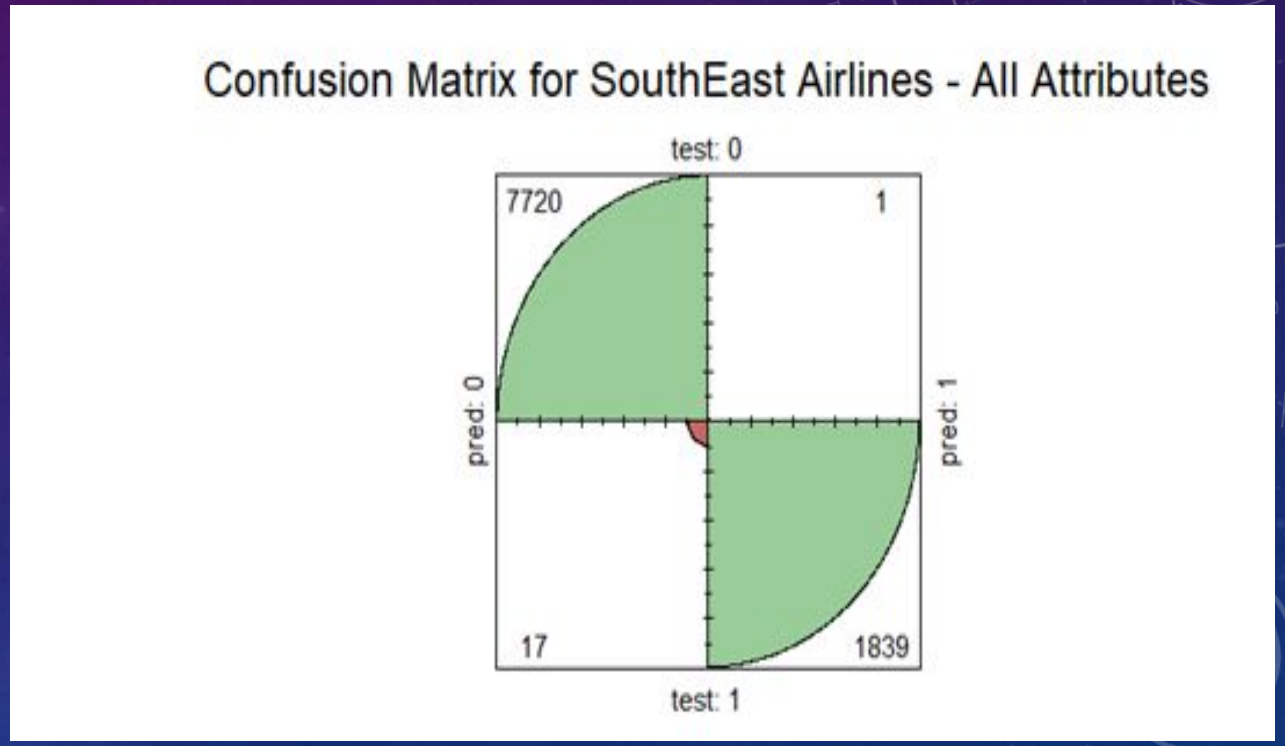
ANALYSIS MODELS USED

- Linear Regression Model
- Association Rule Mining

SUPPORT VECTOR MACHINE

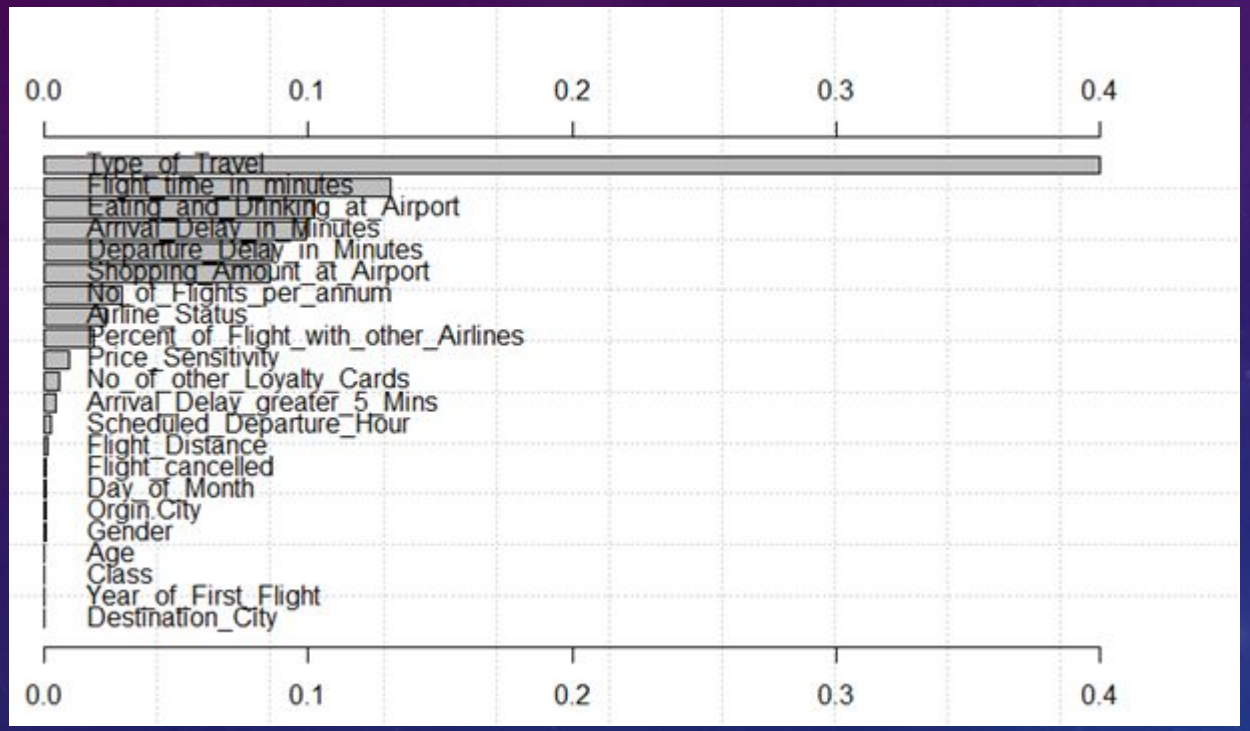


Accuracy - **99.915%**.

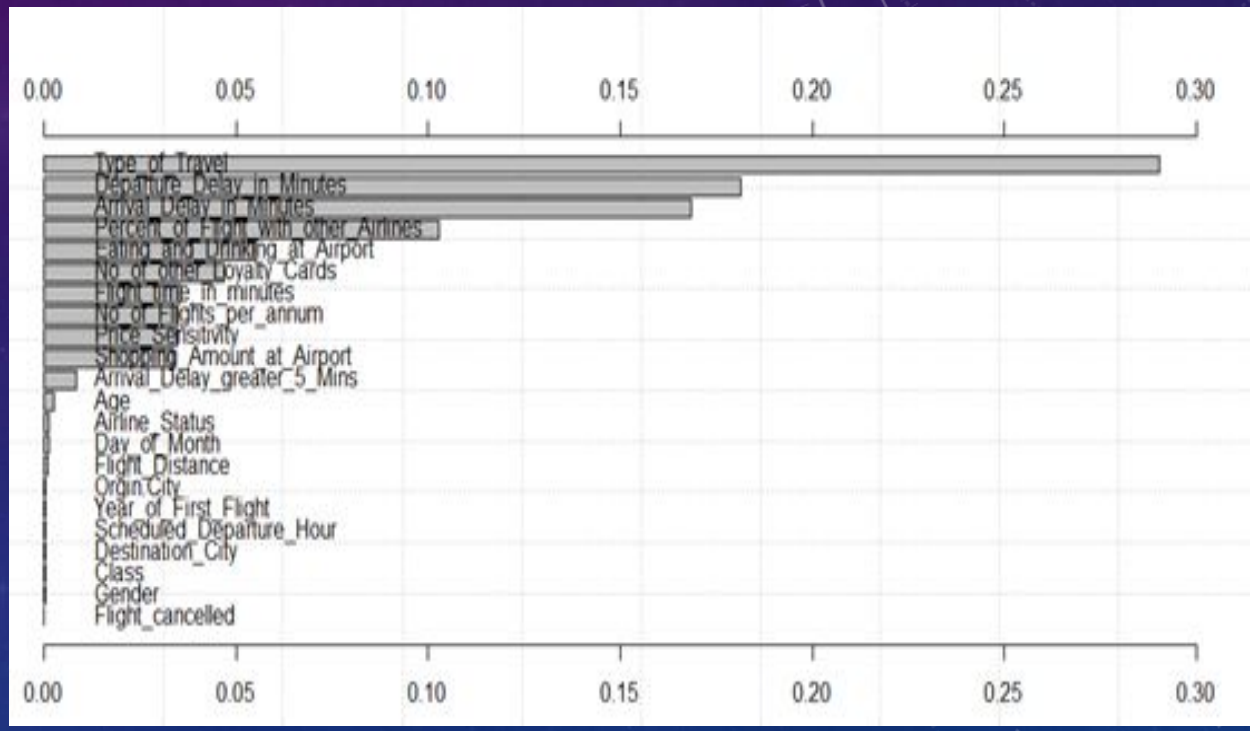


Accuracy - **99.821%**.

VARIABLE IMPORTANCE ANALYSIS - SVM



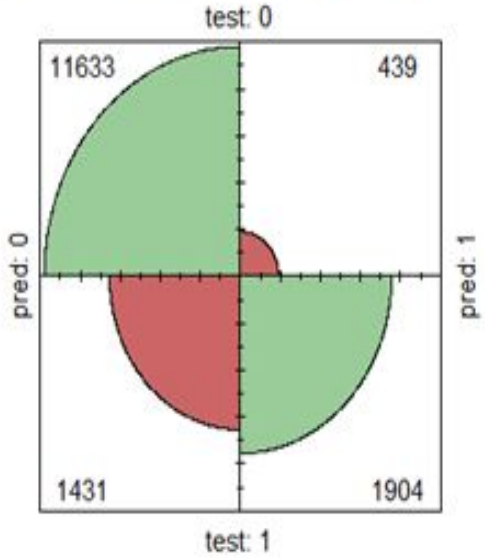
FlyFast Airways Inc.



Southeast Airlines Co.

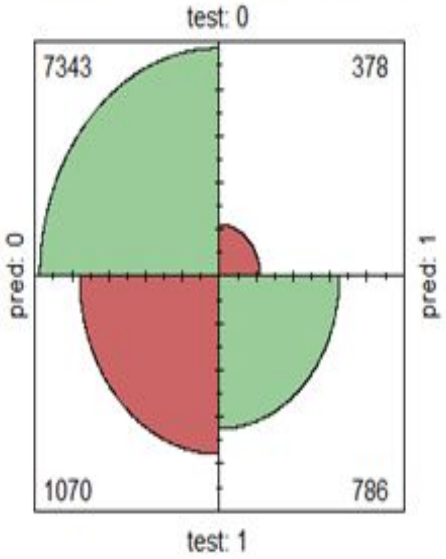
MODEL COMPARISON

Confusion Matrix for Flyfast Airlines - Significant Attributes



Accuracy – **87.862%**.

Confusion Matrix for SouthEast Airlines - Significant Attributes



Accuracy – **84.882%**.