US Airline Passenger Satisfaction

Business Intelligence
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TEAM

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REQUIREMENT AND GOALS

Requirements

ONDA Platform

PostgreSQL Database

Talend Open Studio

Microsoft Power BI

Goals

How to improve airline services?

What's the most important features?

Who are the most satisfied customers?

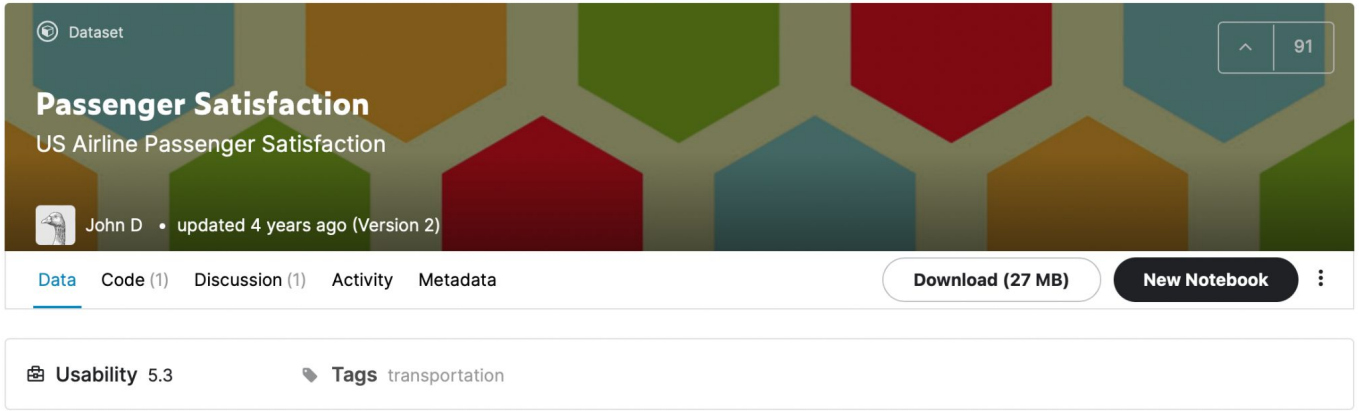
How to improve satisfaction?

Predict Overall Satisfaction depending on other features

THE DATASET

Source

https://www.kaggle.com/datasets/johnddddd/customer-satisfaction



Data

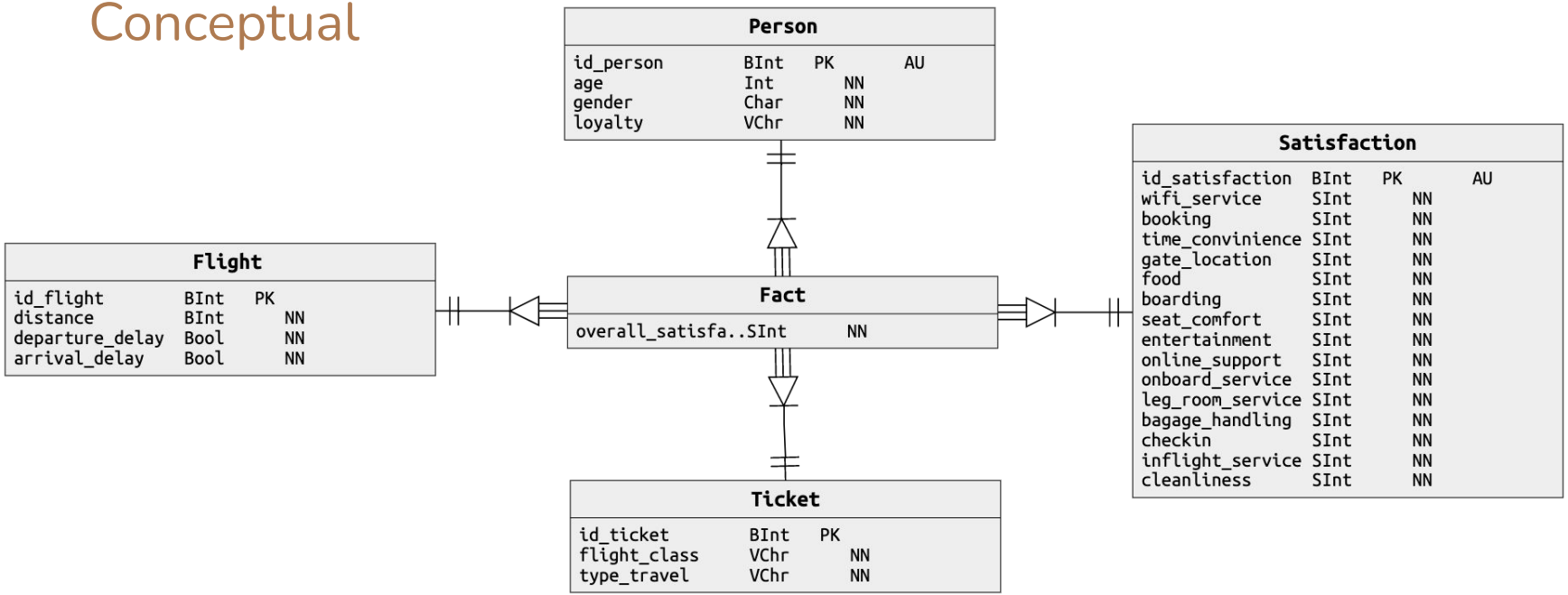
- **Airline satisfaction level**

- The actual age of the passengers
- Gender of the passengers
- Purpose of the flight of the passengers
- Travel class in the plane of the passengers
- The customer type
- The flight distance of this journey
- Minutes delayed when departure
- Minutes delayed when Arrival
- Whether the Flight cancelled or not
- Minutes of Flight takes

- Satisfaction level of the inflight wifi service
- Satisfaction level of online booking
- Satisfaction level of inflight service
- Satisfaction level of online boarding
- Satisfaction level of inflight entertainment
- Satisfaction level of Food and drink
- Satisfaction level of Seat comfort
- Satisfaction level of On-board service
- Satisfaction level of Online Support
- Satisfaction level of Leg room service
- Satisfaction level of Departure/Arrival time convenient
- Satisfaction level of baggage handling
- Satisfaction level of Gate location
- Satisfaction level of Cleanliness
- Satisfaction level of Check-in service

DATA DESIGN

Conceptual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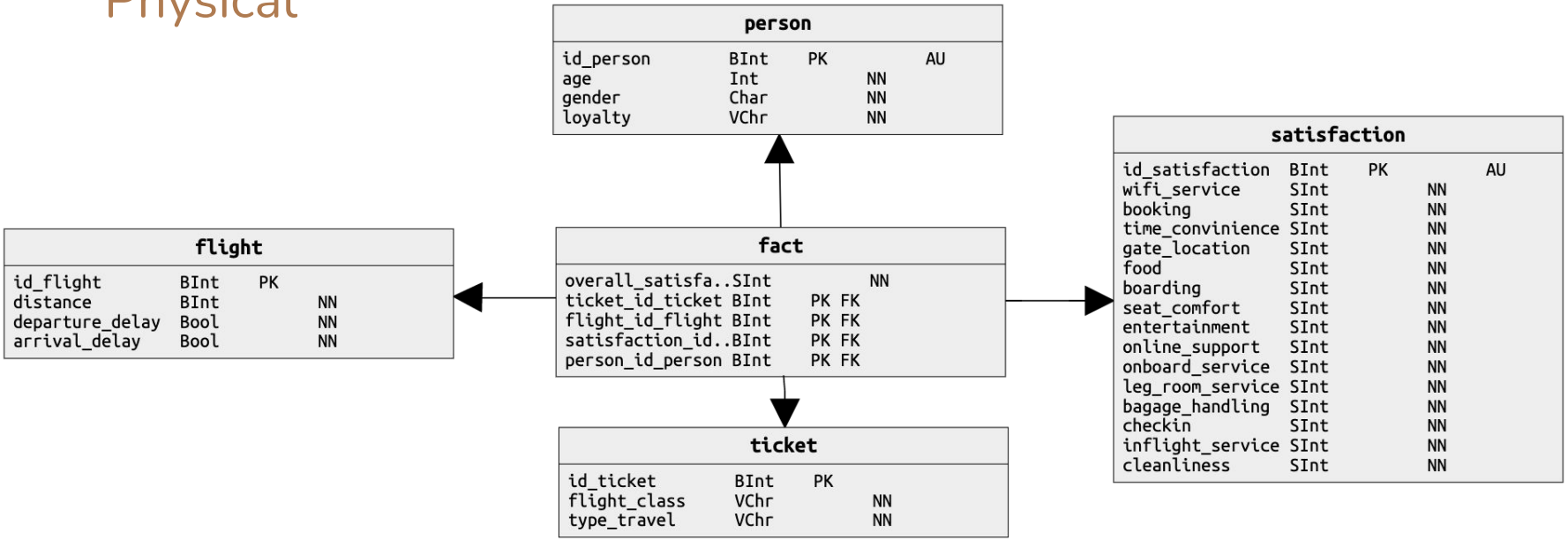
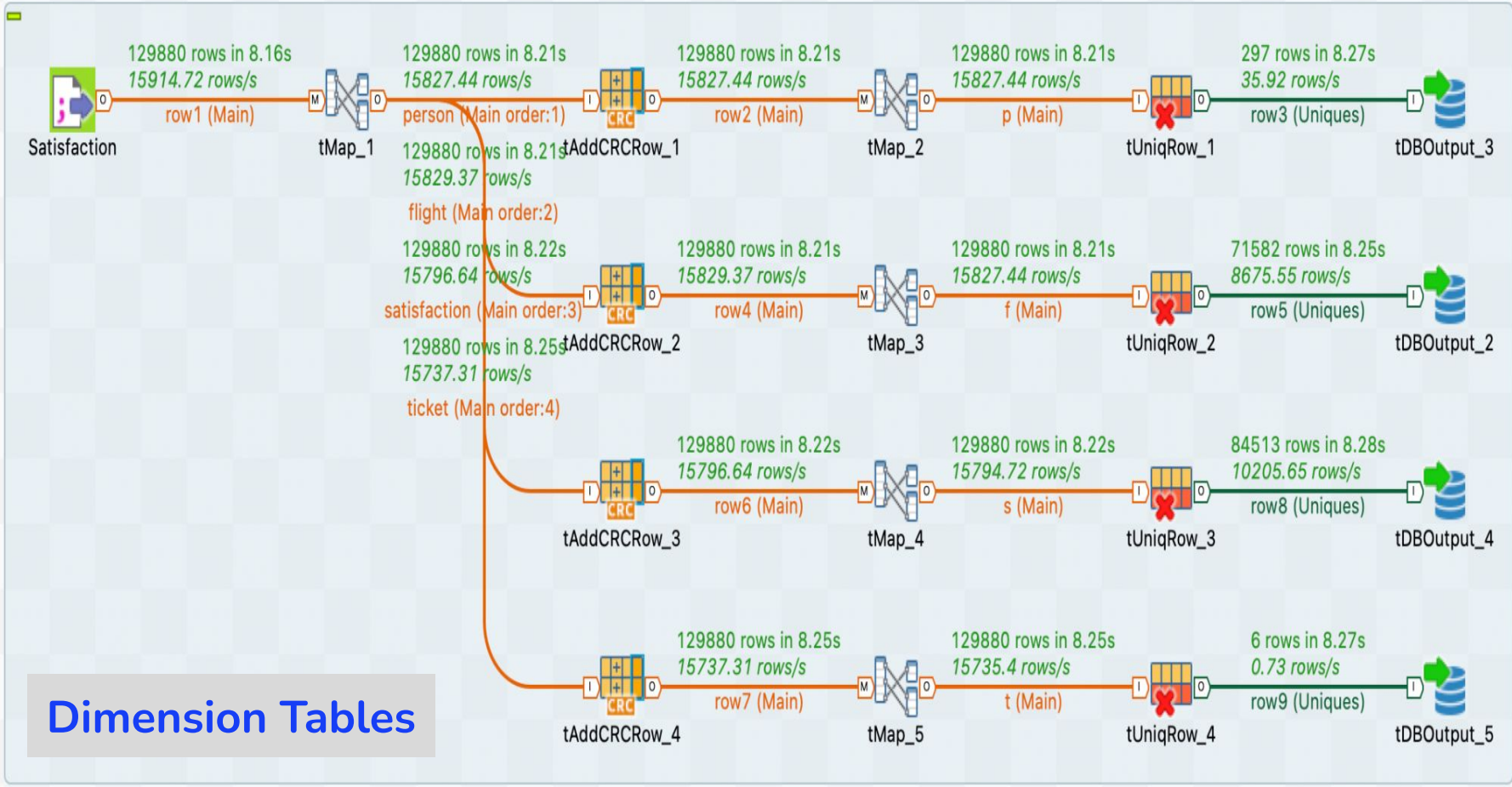
id_person BInt PK AU
age Int NN
gender Char NN
loyalty VChr NN
Satisfaction
id_satisfaction BInt PK AU
wifi_service SInt NN
booking SInt NN
time_convinience SInt NN
gate_location SInt NN
food SInt NN
boarding SInt NN
seat_comfort SInt NN
entertainment SInt NN
online_support SInt NN
onboard_service SInt NN
leg_room_service SInt NN
bagage_handling SInt NN
checkin SInt NN
inflight_service SInt NN
cleanliness SInt NN
Flight
id_flight BInt PK
distance BInt NN
departure_delay Bool NN
arrival_delay Bool NN
Fact
overall_satisfa..SInt NN
Ticket
id_ticket BInt PK
flight_class VChr NN
type_travel VChr NN

Physical

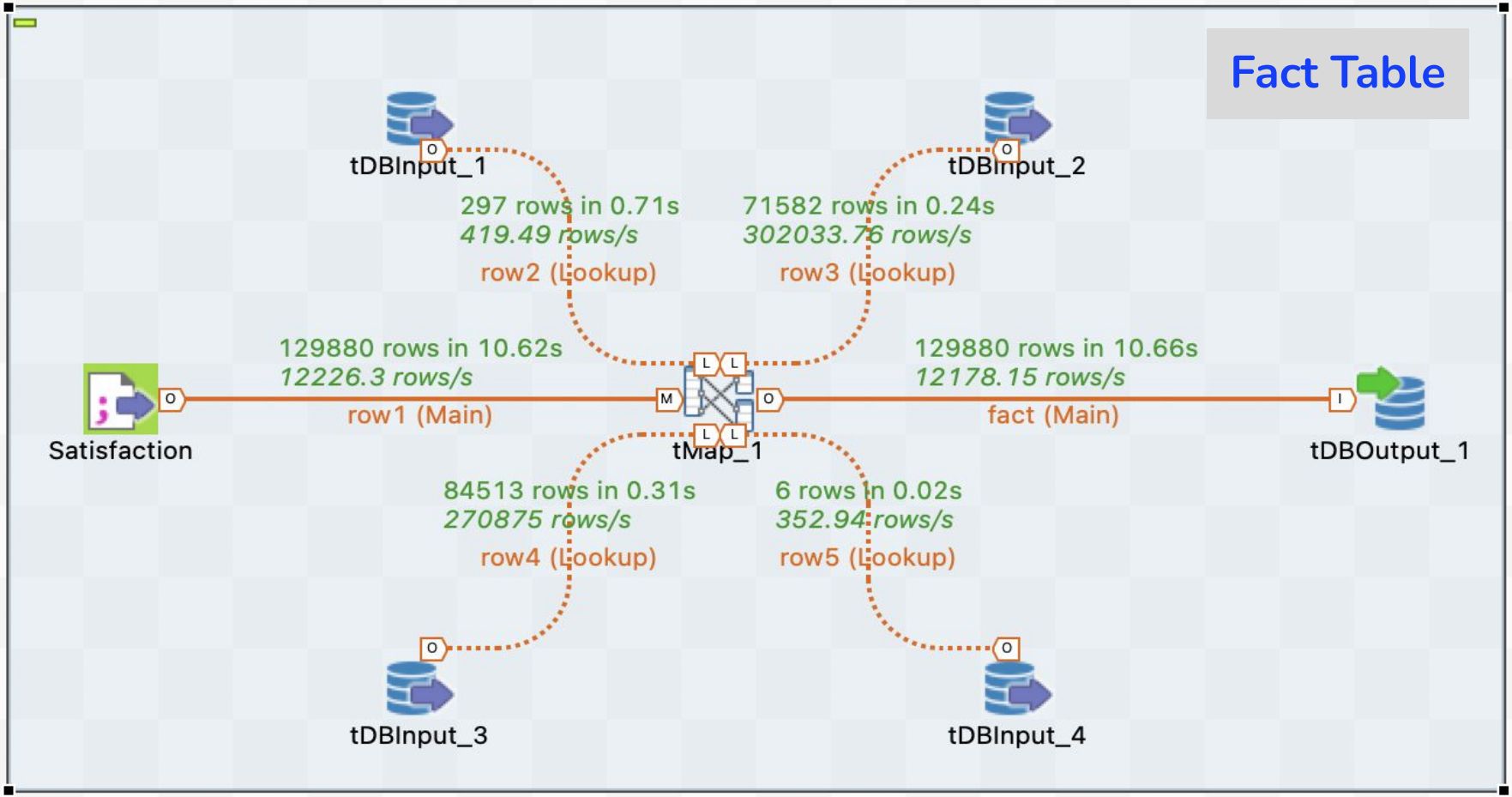

person
id_person BInt PK AU
age Int NN
gender Char NN
loyalty VChr NN
flight
id_flight BInt PK
distance BInt NN
departure_delay Bool NN
arrival_delay Bool NN
fact
overall_satisfa..SInt NN
ticket_id_ticket BInt PK FK
flight_id_flight BInt PK FK
satisfaction_id..BInt PK FK
person_id_person BInt PK FK
ticket
id_ticket BInt PK
flight_class VChr NN
type_travel VChr NN
satisfaction
id_satisfaction BInt PK AU
wifi_service SInt NN
booking SInt NN
time_convinience SInt NN
gate_location SInt NN
food SInt NN
boarding SInt NN
seat_comfort SInt NN
entertainment SInt NN
online_support SInt NN
onboard_service SInt NN
leg_room_service SInt NN
bagage_handling SInt NN
checkin SInt NN
inflight_service SInt NN
cleanliness SInt NN

DATA INTEGRATION



Dimension Tables

Fact Table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tDBInput_2
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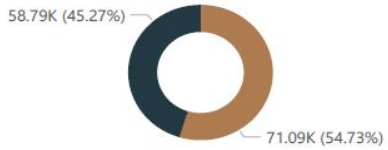
419.49 rows/s
row2 (Lookup)
71582 rows in 0.24s
302033.76 rows/s
row3 (Lookup)
129880 rows in 10.62s
12226.3 rows/s
row1 (Main)
Satisfaction
tMap_1
129880 rows in 10.66s
12178.15 rows/s
fact (Main)
tDBOutput_1
84513 rows in 0.31s
270875 rows/s
row4 (Lookup)
6 rows in 0.02s
352.94 rows/s
row5 (Lookup)
tDBInput_3
tDBInput_4

DATA APPLICATION

Satisfaction

satisfied neutral or dissatisfied

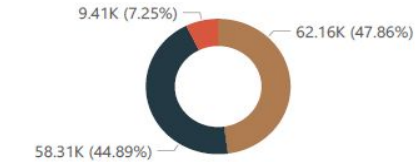


Gender

Female Male

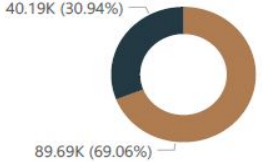
Class

Business Eco Eco Plus

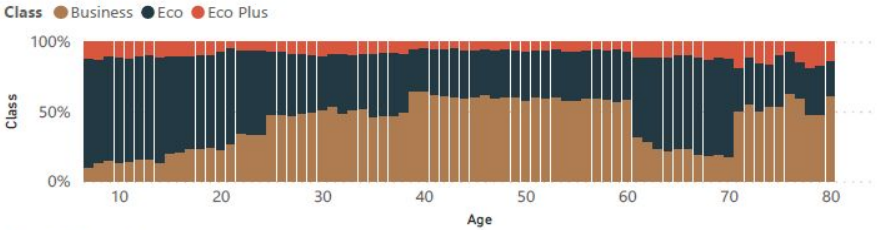


Type of Travel

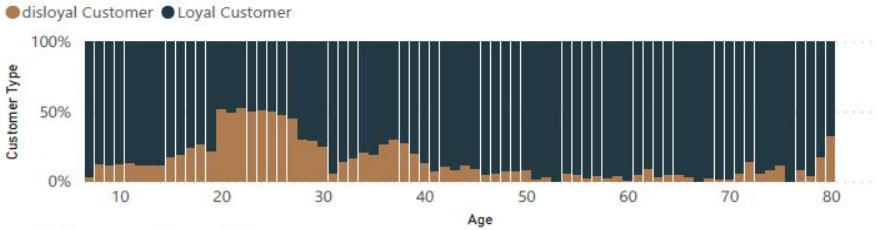
Business travel Personal Travel



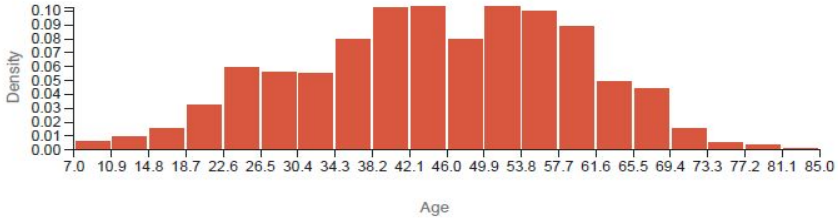
% of Class by Age



% of Customer Type by Age



Age Distribution



Flight Distance Distribution

Average of Inflight wifi service

Average of Online boarding

Average of Online boarding

Average of Seat comfort

Average of Checkin service

Thanks for your Attention!

Any questions?