AIRPORT DATA ANALYSIS

DETAILED PROJECT REPORT

Shwetabh Joshi

PROJECT DETAIL

Project Title	**: Airport data Analysis**
Technology	: Business Intelligence
Domain	: Aviation
Project Difficulty level	: Advanced
Programming Language Used	: Python
Tools Used	: JupyterNotebook, MS Excel, Tableau

OBJECTIVE

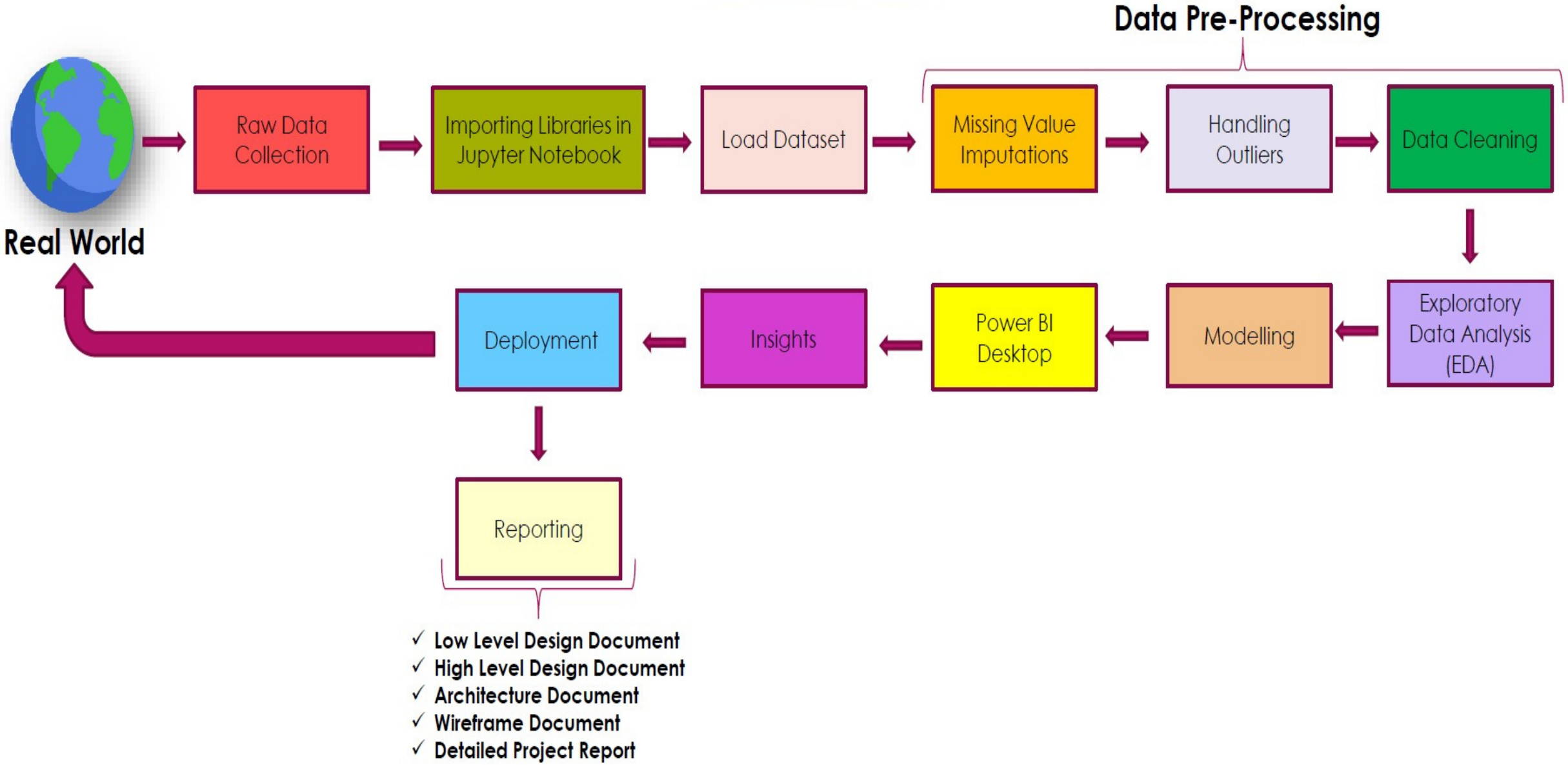
The goal of this project is to analyse the Flight travel occurrence, based on a combination of features that describes the Airport data.

PROBLEM STATEMENT

In this data analysis, wherethe various flights are going and what are the busiest and lengthiest routes from the airport have to be concluded in the dashboard.

The objective of the project is to perform data visualization techniques to understand the insight of the data. This project aims to apply various Business Intelligence tools such as Tableau or Power BI to get a visual understanding of the data.

ARCHITECTURE

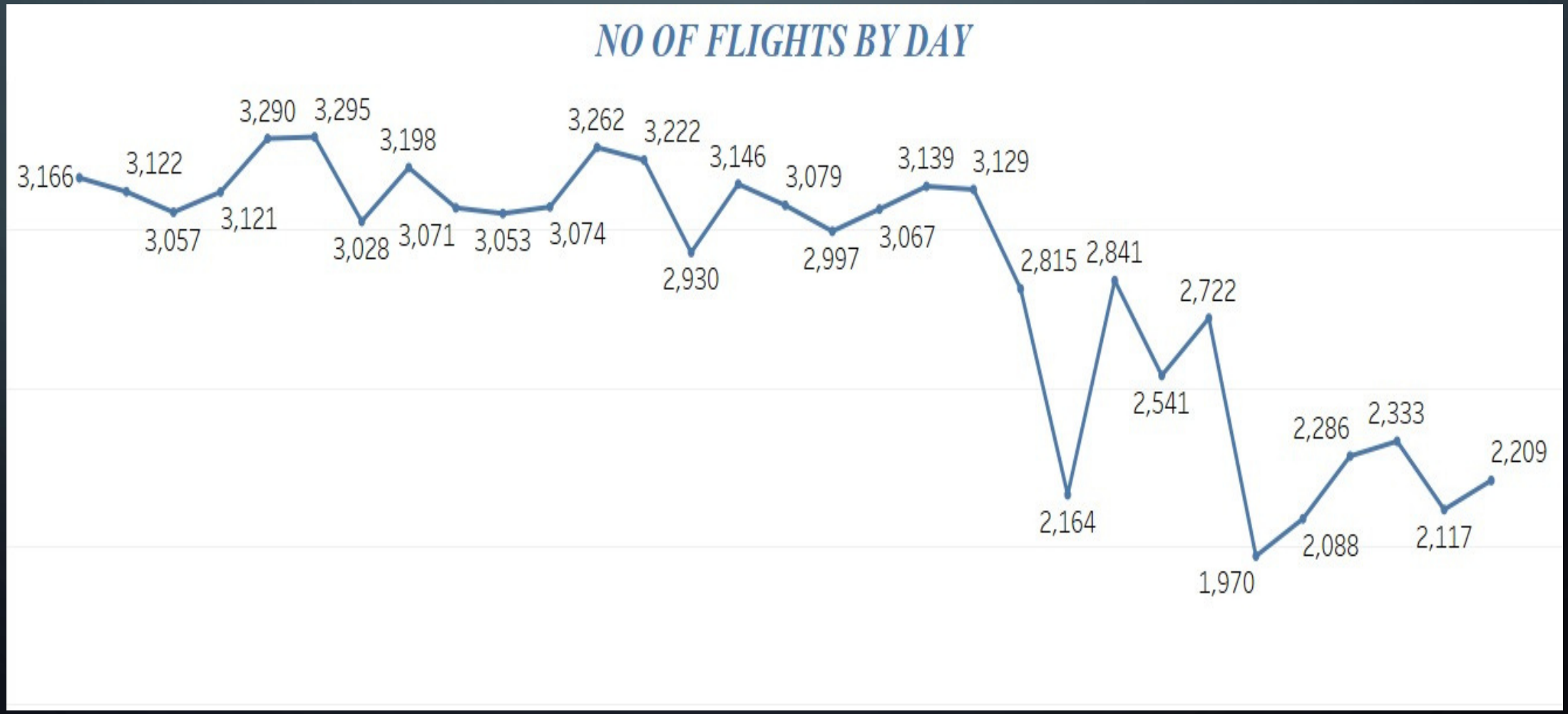


DATASET INFORMATION

- Geometry Coordinates 0 0: Flight start point Coordinate(Float)
- Geometry Coordinates 0 1: Flight start point Coordinate(Float)
- Geometry Coordinates 1 0: Flight destination point Coordinate(Float)
- Geometry Coordinates 1 1: Flight destination point Coordinate(Float)
- Geometry Type : Multipoint (String)
- Properties EdtfCessation: Flight Departure date & time
- Properties EdtfInception: Inception code
- Properties FlysfoActual Timestamp: Actual time stamp
- Properties FlysfoAirline: Arline code
- Properties FlysfoBase Airline: Airline code
- Properties FlysfoBase Flight Number:Flight no
- Date: Flight Date
- Properties FlysfoEstimated Timestamp: No of Flight hours
- Properties FlysfoEvent: Event no of Flight
- Properties FlysfoFlight Number: Flight Number
- Properties FlysfoGate: Gate number of Flight
- Route: Arrival & destination route name

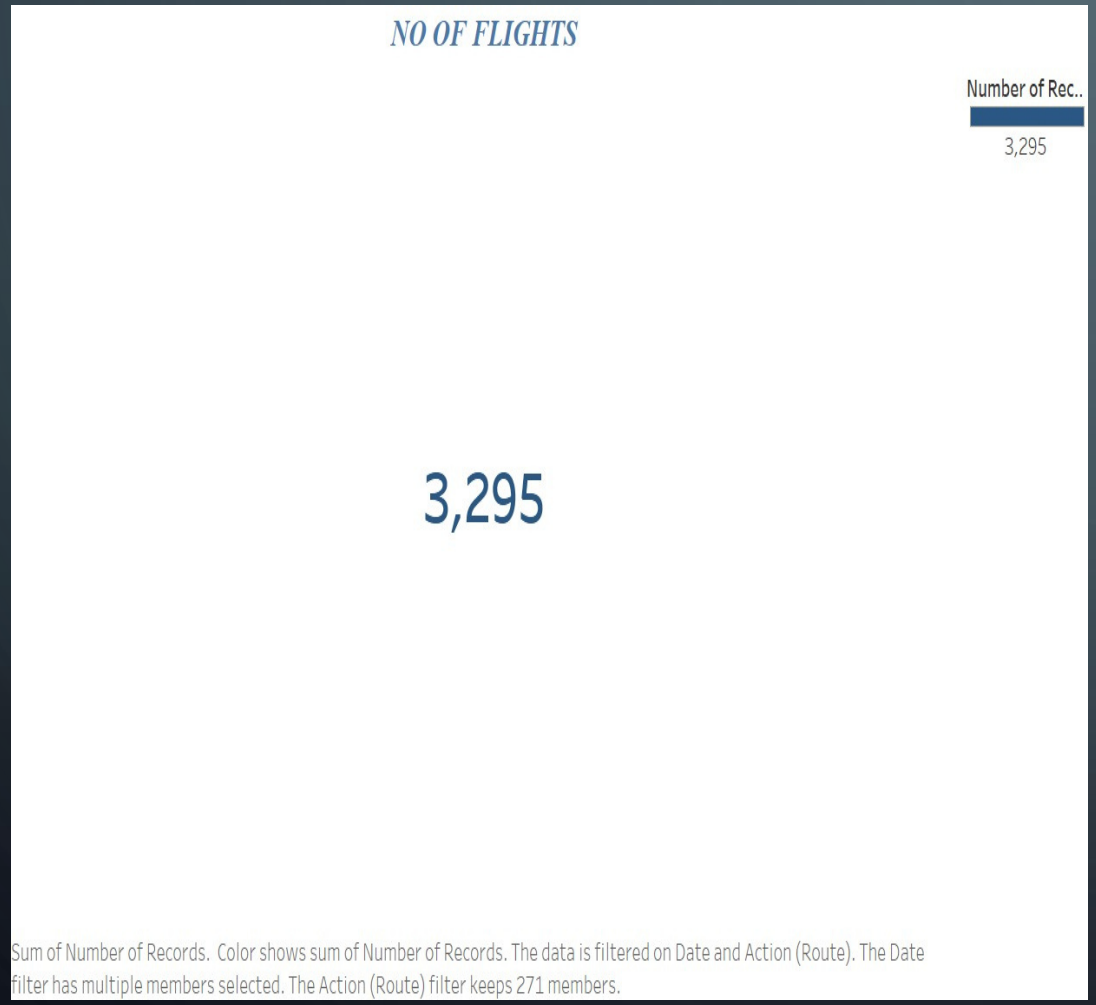
INSIGHTS

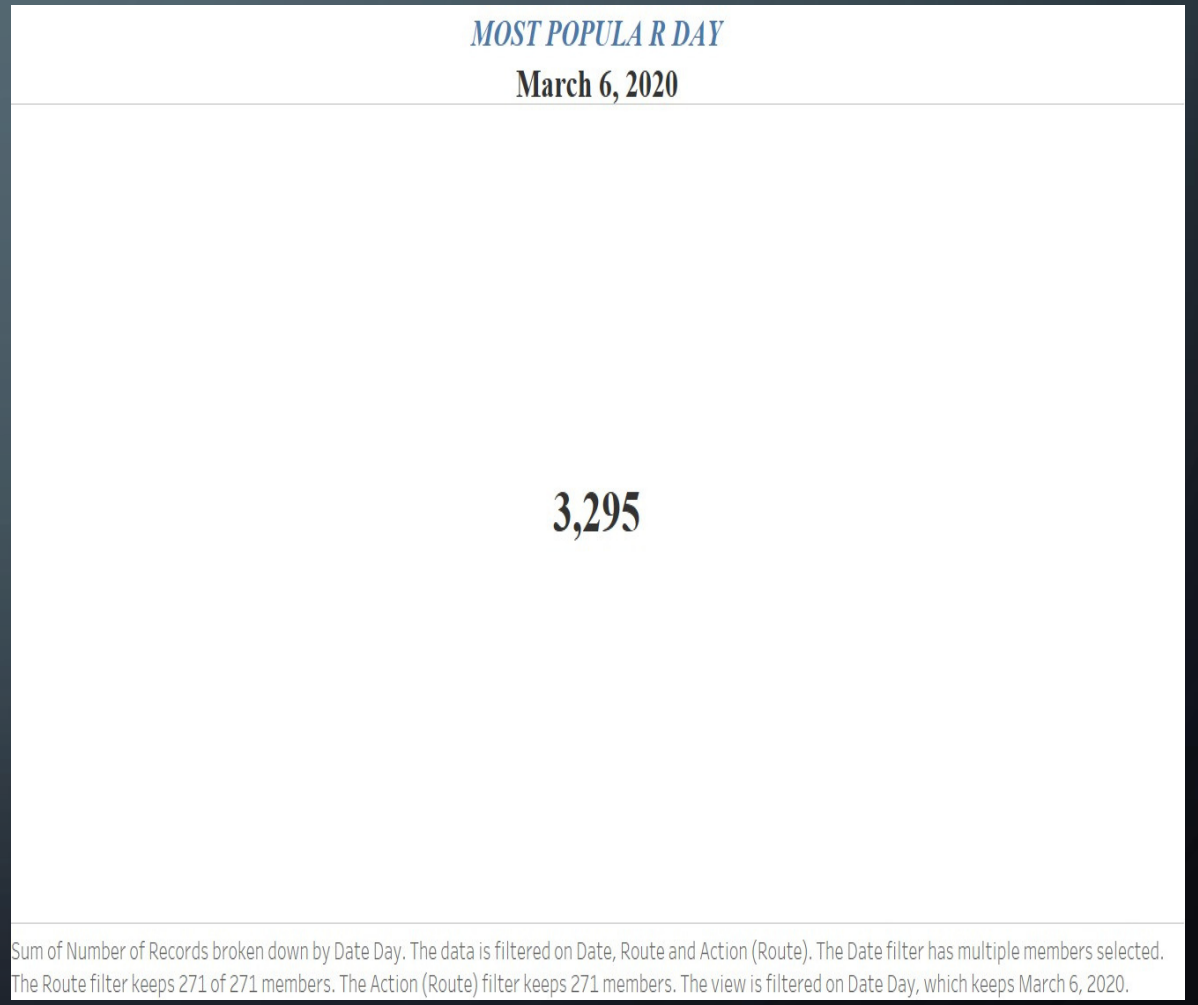
NO OF FLIGHTS PER DAY FROM SAN FRANCISCO AIRPORT AND IT IS GETTING REDUSED DAY BY DAY DUE TO COVID



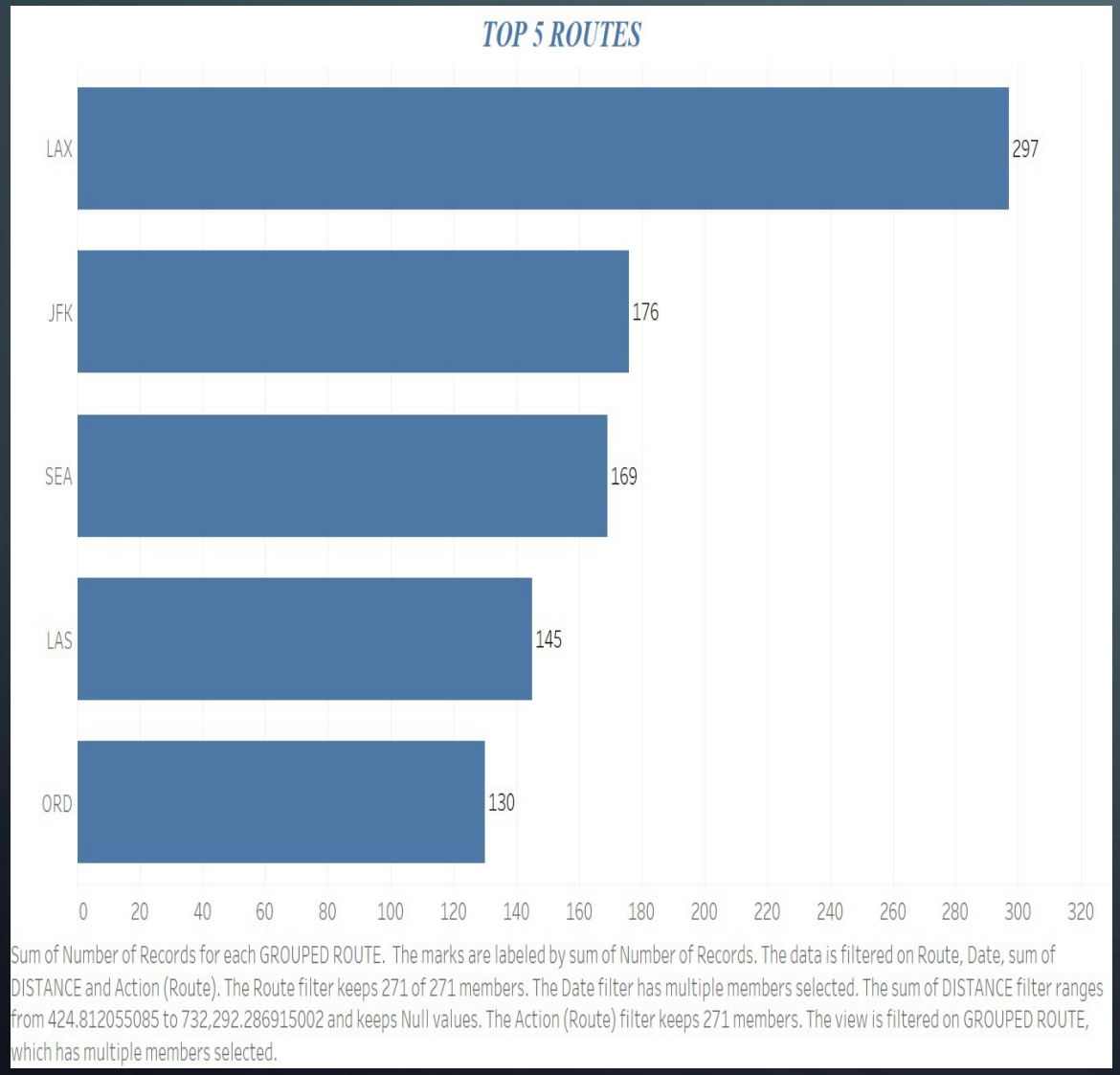
INSIGHTS

TOTAL NO OF FLIGHT SERVICE FROM SAN FRANCISCO AIRPORT
MOST POPULAR DAY IN THE AIRPORT

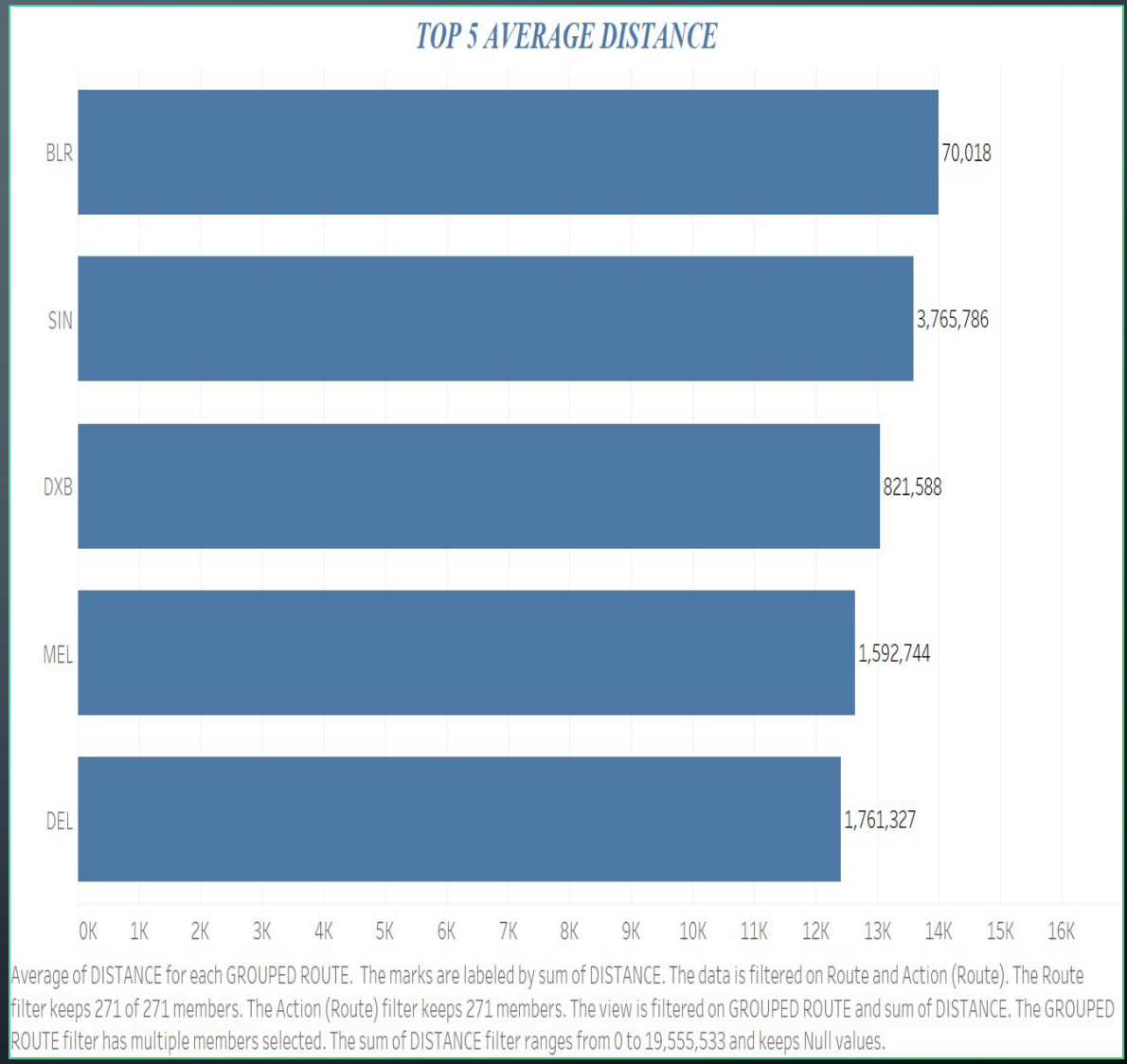




TOP 5 ROUTES FROM SAN FRANCISCO AIRPORTS LAX,JFX,SEA,LAS,ORD
TOP 5 AVERAGE DISTANCE FROM SAN FRANCISCO AIRPORT BLR,SIN,DXB,MEL,DEL

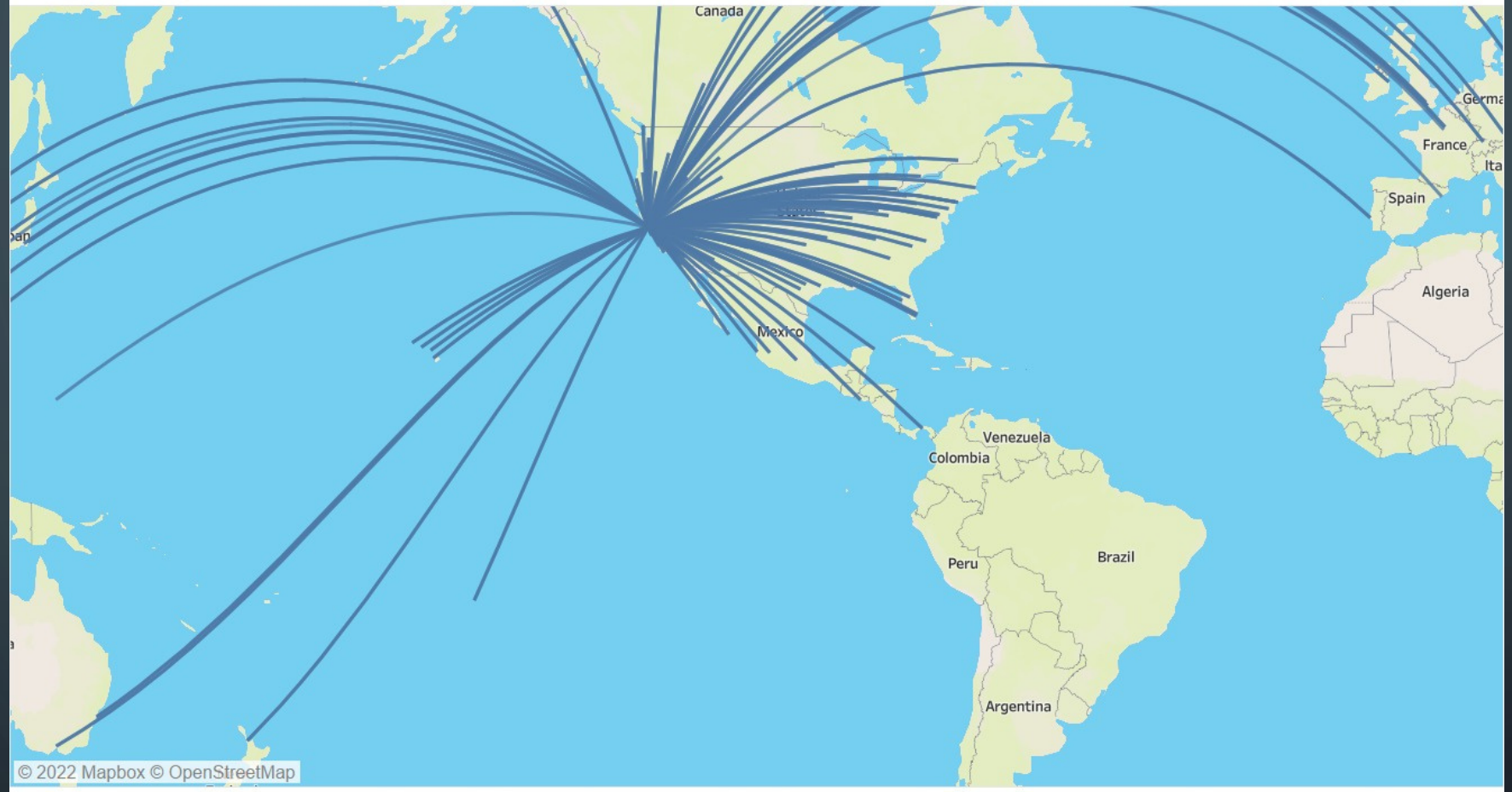


Sum of Number of Records for each GROUPED ROUTE. The marks are labeled by sum of Number of Records. The data is filtered on Route, Date, sum of DISTANCE and Action (Route). The Route filter keeps 271 of 271 members. The Date filter has multiple members selected. The sum of DISTANCE filter ranges from 424.812055085 to 732,292.286915002 and keeps Null values. The Action (Route) filter keeps 271 members. The view is filtered on GROUPED ROUTE, which has multiple members selected.



Average of DISTANCE for each GROUPED ROUTE. The marks are labeled by sum of DISTANCE. The data is filtered on Route and Action (Route). The Route filter keeps 271 of 271 members. The Action (Route) filter keeps 271 members. The view is filtered on GROUPED ROUTE and sum of DISTANCE. The GROUPED ROUTE filter has multiple members selected. The sum of DISTANCE filter ranges from 0 to 19,555,533 and keeps Null values.

MAP



Map based on Longitude (generated) and Latitude (generated). Details are shown for Route. The data is filtered on Date, which has multiple members selected. The view is filtered on Route and sum of DISTANCE. The Route filter keeps 271 of 271 members. The sum of DISTANCE filter ranges from 425 to 732,292 and keeps Null values.

FROM THIS MAP IT IS CONCLUDED THAT MOST OF THE FLIGHTS ARE DEPARTED FROM SAN FRANCICO AIRPORT

FINAL DASHBOARD WITH A HIDDEN FILTER

SAN FRANCISCO AIRPORT DASHBOARD

NO OF FLIGHTS

3,295

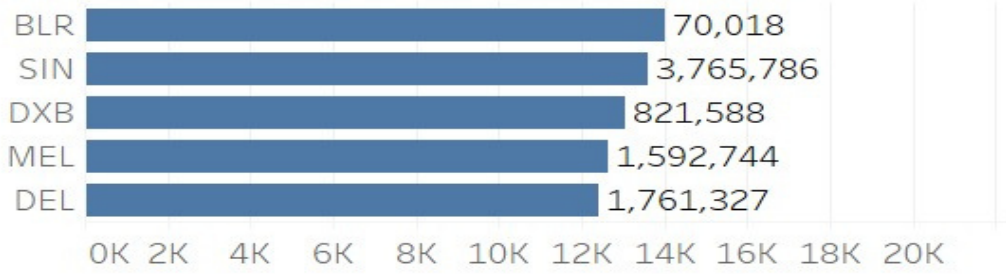
NO OF FLIGHTS BY DAY

MOST POPULA R DAY

March 6, 2020

3,295

TOP 5 AVERAGE DISTANCE



TOP 5 ROUTES

KEY PERFORMANCE INDICATOR (KPI)

Key indicators displaying a summary of where the various flights are going and what is the busiest and lengthiest routes from the airport and their relationship with different metrics

Total number of service Flights

Number of Flights by day

Most popular day

Mapping distance

Top five average distance

CONCLUSION

No of flights are getting decreasing day by day due to covid-19 effect .

The top 5 major routes from san Francisco are lax,jfk,sea,las,ord so airline has to concentrate on this routes to increase the no of flights.

The most popular day in the san Francisco is march 6 ,2020 this is actually a weekend Friday so most of the passengers are travelling on weekends.

The top 5 major AVERAGE DISTANCE from san Francisco are BLR,SIN,DXB,MEL,DEL so airline has to concentrate on this routes to increase the no of flights.

flights

From mapeddistance we can get to know the routes and distance of the

Q&A

Q1) What's the source of data?

The Dataset was taken from iNeuron'sProvided Project Description Document.

. https://drive.google.com/drive/folders/1G2fQ6_lDcToyROYbsz-ILP6uwbJrvPu6?usp=sharing

Q2) What was the type of data?

The data was the combination of numerical and Categorical values.

Q3) What's the complete flow you followed in this Project?

Refer slide 5 for better Understanding

Q4) What techniques were you using for data?

Removing unwanted attributes

Visualizing relation of independent variables with each other and output variables

Removing outliers

Cleaning data and imputing if null values are present

THANK YOU