PROJECT REPORT

Project Title: Competitive Analysis of Leading Travel Aggregators

Team ID: LTVIP2023TMID02311

Team Size: 4

Team Leader: RAHIM SHAIK

Team Members: 1.LENKA AJAY

2.MANTHI DILEEP

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Competitive Analysis Of Leading Travel Aggregators

1.INTRODUCTION

1.1 Overview

Travel aggregators are online platforms or websites that gather information from various travel providers, such as airlines, hotels, and car rental companies, and present it to users in a consolidated format.

An online travel agency (OTA) arranges and sells accommodations, tours, transportation and trips on an online platform for travelers. They are third parties who sell services on behalf of other companies . Usually, these OTAs offer many benefits with added convenience with more of a self-service approach.

A travel aggregator is a website that finds travel offers and prices across multiple sources and aggregates them all in one place. This helps users find the best prices out of all the results the aggregator has found. It is easy for consumers to know that they are booking at the lowest price possible.

- **Data Collection and Preprocessing:**

A comprehensive dataset was collected from **kaggle** which includes bookings, travellings.

The collected data underwent through preprocessing to handle missing values, remove inconsistencies, and ensure data quality.

- **Exploratory data Analysis**

EDA was conducting to gain a deep understanding of the dataset. Visualizations and summary of the data and guided further analysis'

Highlights

- The study extends innovation resistance theory (IRT) to the online travel agencies (OTAs) context.
- Benefits barrier is the strongest inhibitor of purchase intentions.
- Privacy and security concerns, and vulnerability positively predict intentions.
- Visibility moderates the association of benefits barrier and purchase intentions.
- Young and old OTA users differ in the association between barriers and purchase intentions.

1.2 Purpose

Travel agents have global connections and also exclusive access to special deals on flights, hotels, tour packages and activities so ideally they can only offer you the most reasonable holiday options than booking online. Also, they keep you informed about special deals if you sign up for the newsletter.

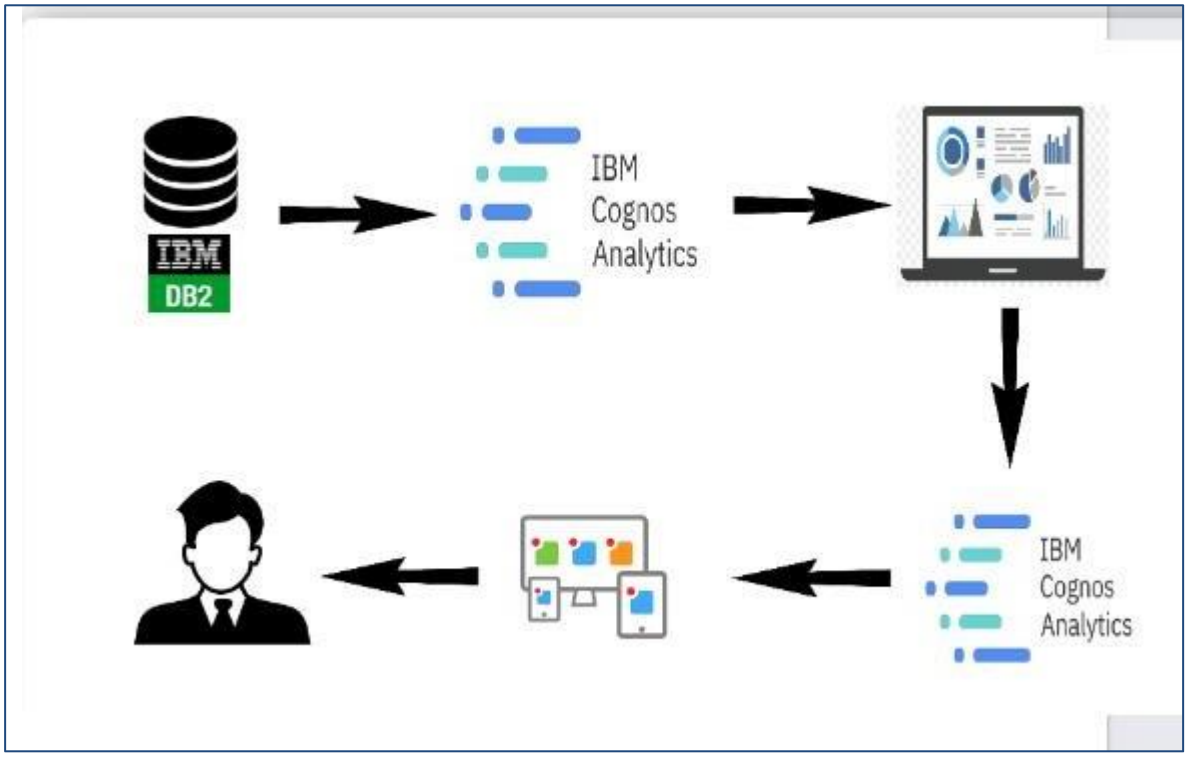
A travel aggregator is a website that finds travel offers and prices across multiple sources and aggregates them all in one place. This helps users find the best prices out of all the results the aggregator has found. It is easy for consumers to know that they are booking at the lowest price possible.

A major benefit of travel management is the ability to reduce costs associated with travel. This can include everything from airline tickets, to hotel room rates and travel insurance. Generally, travel management specialists will have industry contacts and enough experience to find or negotiate the best deals.

An analysis of a travel aggregator can be a great opportunity to understand the travel industry trends, consumer preferences, and the impact of external factors on the travel industry. This can be done by analysing the data from the travel aggregator such as bookings, reviews, prices and other related data, which can be used to draw insights and make data-driven decisions.

Convenience and time-saving. Ability to compare multiple options in one place: Travel aggregators provide users with a consolidated view of various travel options, allowing them to compare prices, routes, and schedules from multiple providers simultaneously.

An Online Travel Aggregator (OTA) is an intermediary / agent selling travel. Products and services such as the airlines, car rental, cruise lines, Hotels / Accommodation, railways and vacation packages on behalf of suppliers using internet as a medium. They.



2.LITERATURE SURVEY

- In a literary survey, students analyse critically and concisely earlier research and literature related to a particular research problem, and utilize them for their understanding the significance of new research and its connections to earlier work.
- The research problem and personal aims must be kept in mind when compiling the survey. It serves a particular aim and purpose. The intention is to form a dialogue with earlier research knowledge through selection and argumentation.
- This study examines the competitive dynamics among online travel agencies (OTAs), including the top travel aggregators such as Expedia, Booking.com, and TripAdvisor. The authors analyse the strategic behaviour of OTAs, their market share, and the factors that influence customer choices in selecting an OTA.
- A good literature review will not only summarize the information, but also point out weaknesses in the experimental procedures as well as possible theoretical conflicts. It builds on the current knowledge by identifying gaps in the available literature and suggesting future directions for research.

Existing Problems

- Over-reliance on low-quality sources.
- A lack of landmark/seminal literature.
- A lack of current literature.
- Description instead of integration and synthesis.
- Irrelevant or unfocused content.
- Poor chapter structure and layout.
- Plagiarism and poor referencing.

Proposed Solutions

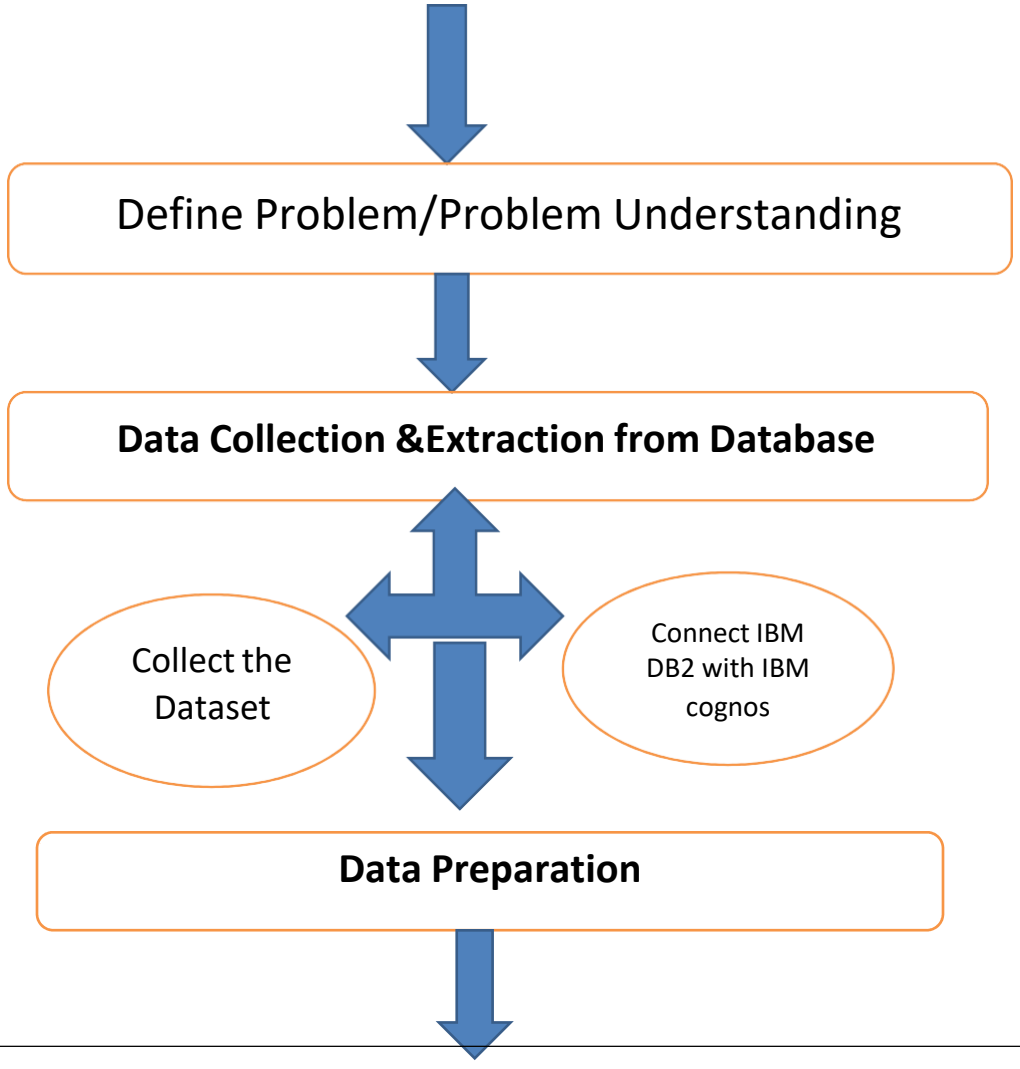
To overcome these issues, you should use a variety of sources and databases, evaluate the sources critically and carefully, use a systematic and structured approach to analyze and organize the sources, and use clear and precise language.

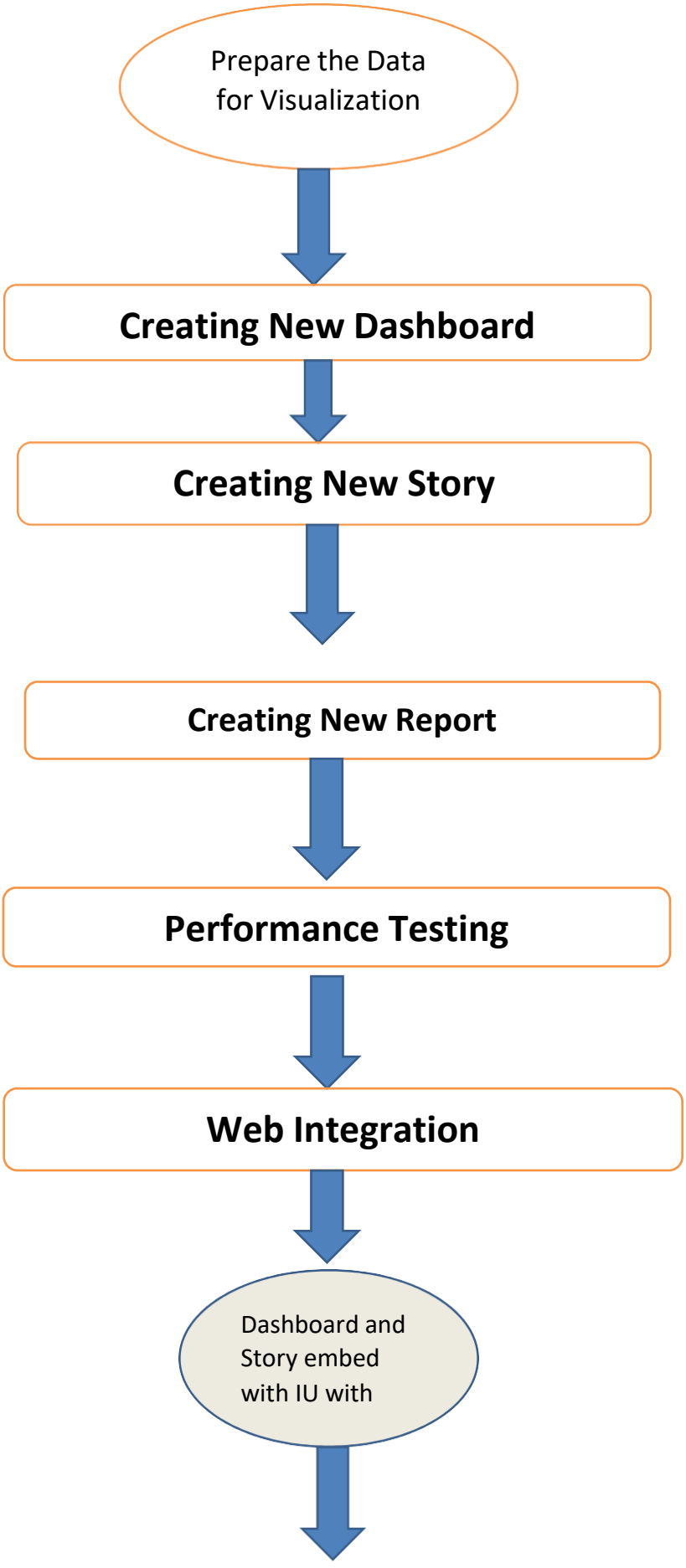
3.THEORITICAL ANALYSIS

Block diagram:

Creating a detailed block diagram for Estimation and prediction of Travel Aggregators involves breaking down the process into key steps and components. Below is a high-level block diagram outlining the main stages and elements involved in estimating and predicting travel aggregators.

Competitive Analysis Of Leading Travel Aggregators




Prepare the Data for Visualization
Creating New Dashboard
Creating New Story
Creating New Report
Performance Testing
Web Integration
Dashboard and Story embed with IU with

Project Demonstration & Documentation

1.Record Explanation video

2.Project Documentation

- Hardware /Software Designing

❖ Hardware requirements:

- Minimum System Requirements(RAM-4GB,Quad core processor Or above)

Admin Requirements:

The admin can add new packages.

The admin can update any package.

The admin can delete any package.

The admin can search any package

The admin can also change his name or password from the dashboard settings.

End User Requirements:

The end users book tour plan according to their choice.

User share their feedback with comments.

The user can sign up after filling all the fields mentioned in the sign up form.

The user can login after validation of his/her details from the database.

The end users can reserve their seats for tour plan which they choose or like.

System Requirements:

Operating Environment:- Linux, Windows.

Development Environment:- Jupyter Notebook, Google Collab

Travel management system offer logout functionality to end users.

Travel management system will only accept a valid login details to enroll on a travel Management System in PHP.

Travel management system will provide password recovery facility.

Travel management system will redirect the user to whats-app whenever the whats-app icon is pressed for online payment purposes.

Database Security:

An unauthorized person cannot access the panel and database, do not read and write the information. It should maintain the security of the client's payment method.

Reservations Requirement:

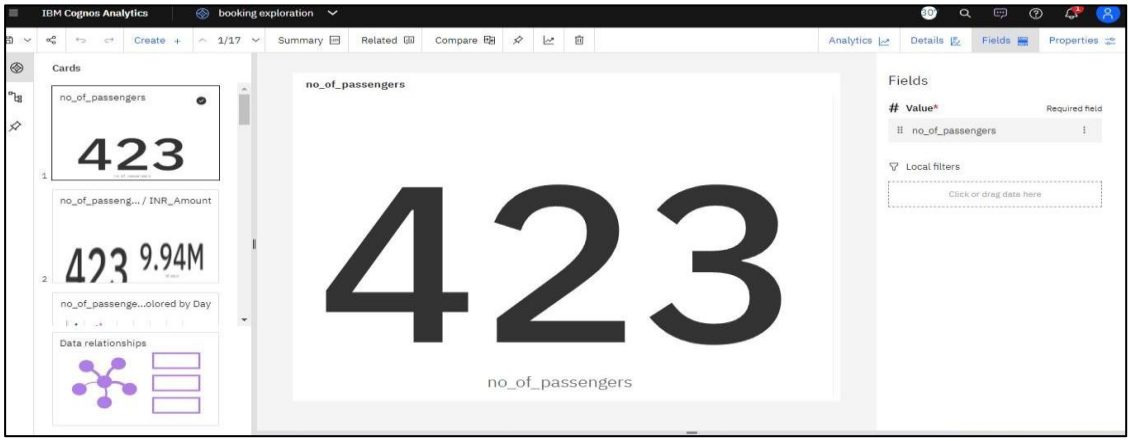
Travel management system should reserve a travel package in maximum 30 to weekly evaluation by the project guide.

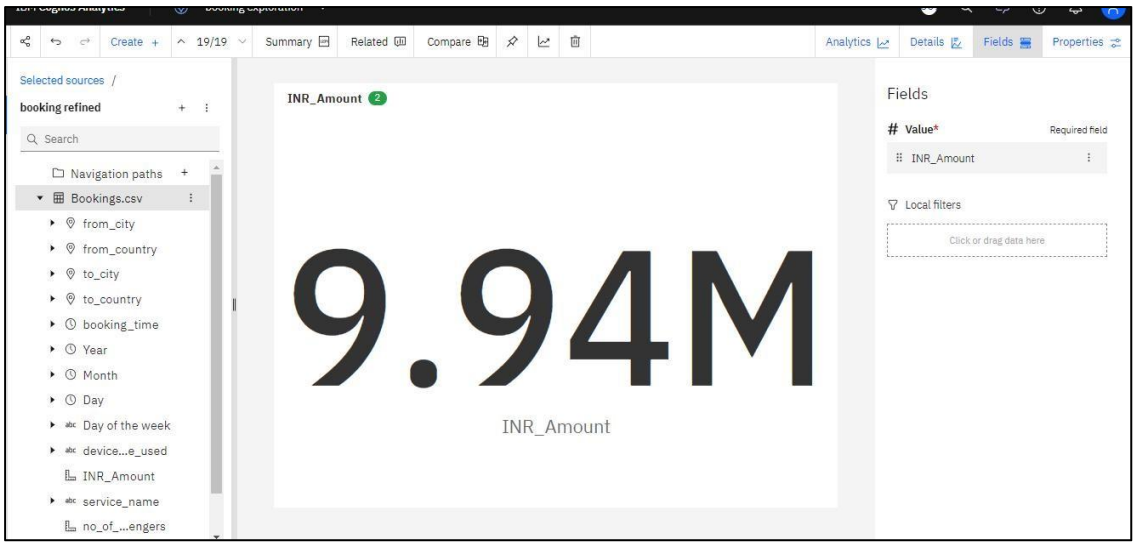
- **Sfotware Requirements Specifications:**

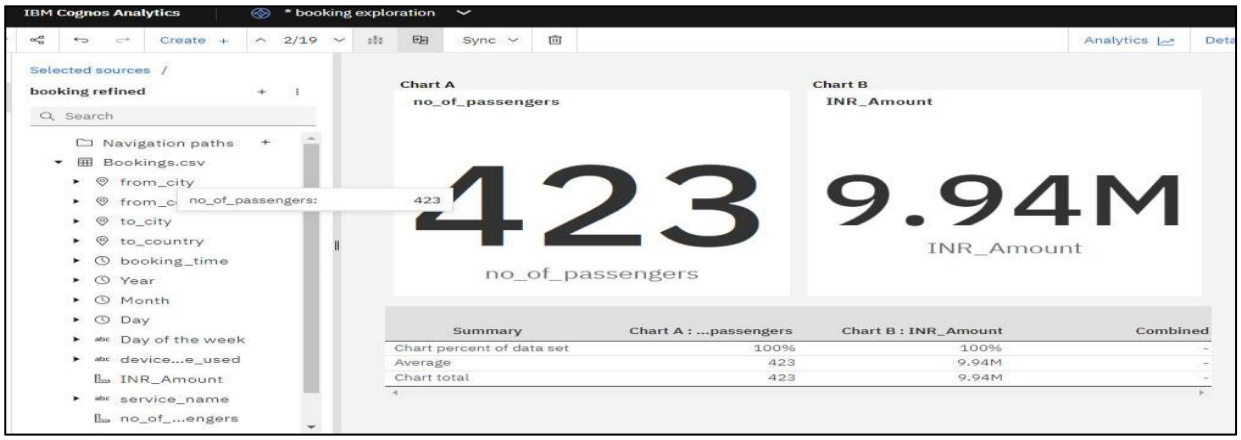
- Function requirements: Python.
- Flask.
- Integrated Development Environment(IDE)-Spyder

4.RESULT:

DATA VISUALIZATIONS:






IBM Cognos Analytics
* booking exploration
Create
2/19
Sync
Analytics
Selected sources /
booking refined
Search
Navigation paths
Bookings.csv
from_city
from_country
to_city
to_country
booking_time
Year
Month
Day
Day of the week
device...e_used
INR_Amount
service_name
no_of_...engers
no_of_passengers: 423
Chart A
no_of_passengers
423
no_of_passengers
Chart B
INR_Amount
9.94M
INR_Amount
Summary
Chart A : ...passengers
Chart B : INR_Amount
Combined
Chart percent of data set
100%
100%
Average
423
9.94M
Chart total
423
9.94M

IBM Cognos Analytics
* booking exploration
Create
3/19
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Bookings.csv
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Day
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Fields
x-axis*
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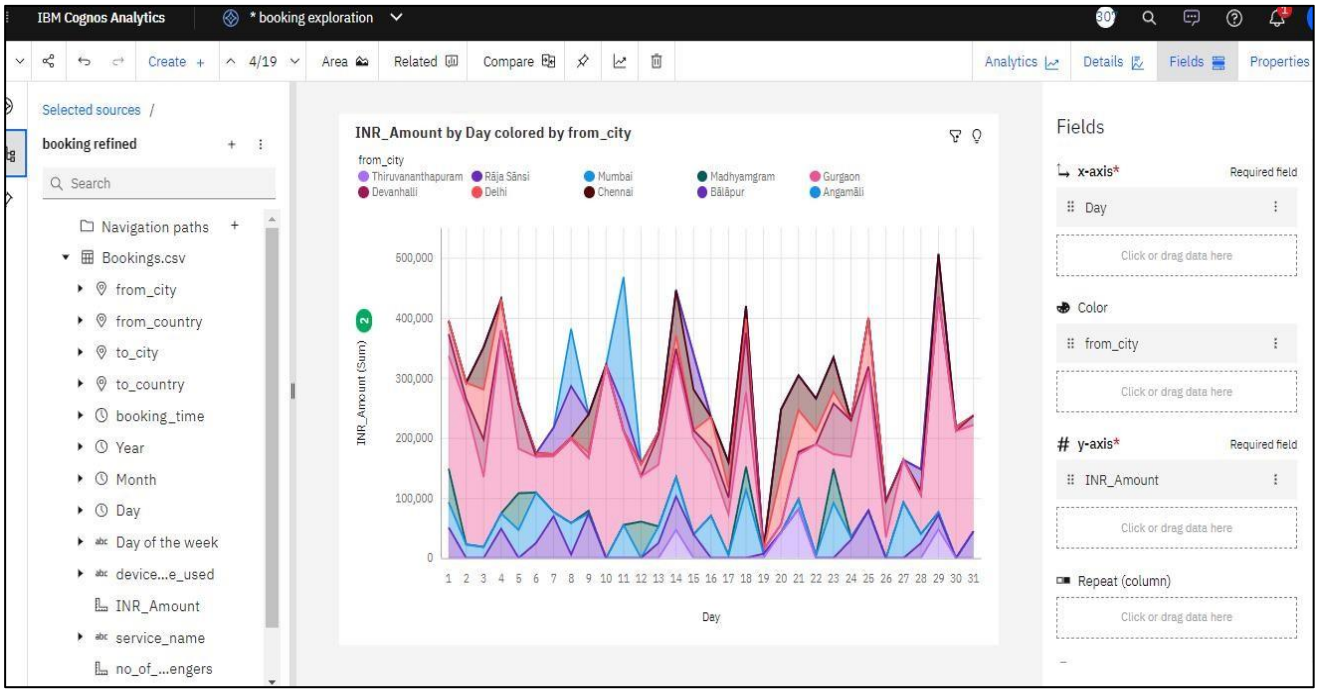
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Bookings.csv
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INR_Amount
service_name
no_of_...engers
INR_Amount by Day colored by from_city
from_city
Thiruvananthapuram
Rāja Sānsi
Mumbai
Madhyamgram
Gurgaon
Devanhalli
Delhi
Chennai
Bālāpur
Angamāli
INR_Amount (Sum)
Day
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x-axis*
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INR_Amount
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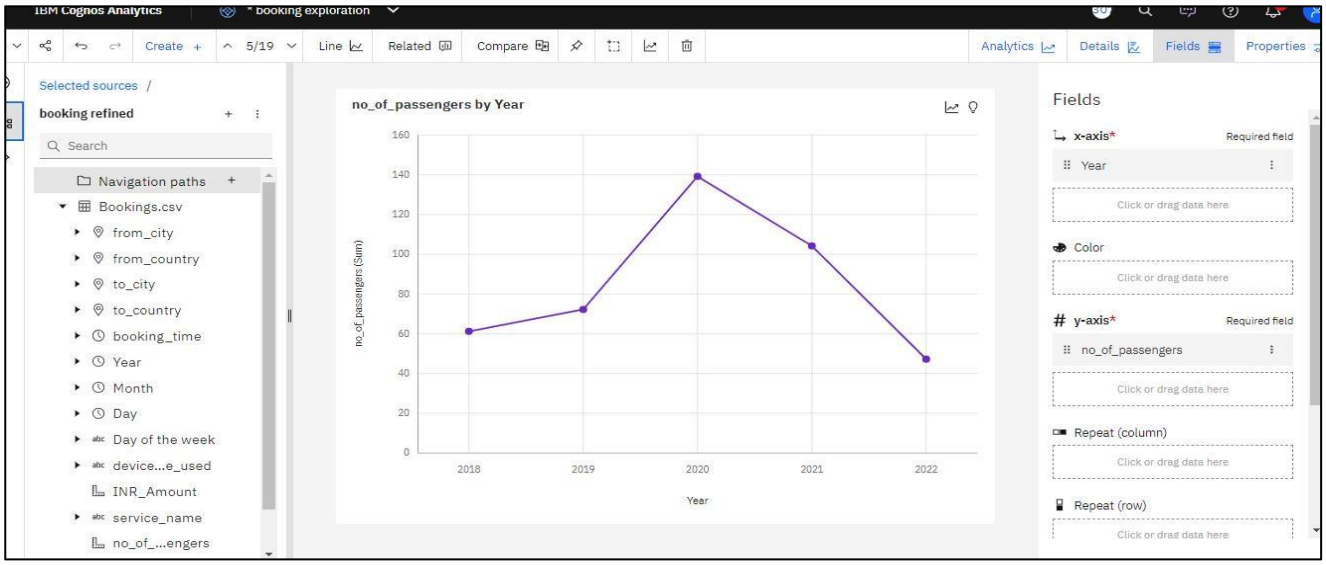
IBM Cognos Analytics
* booking exploration
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no_of_passengers (Sum)
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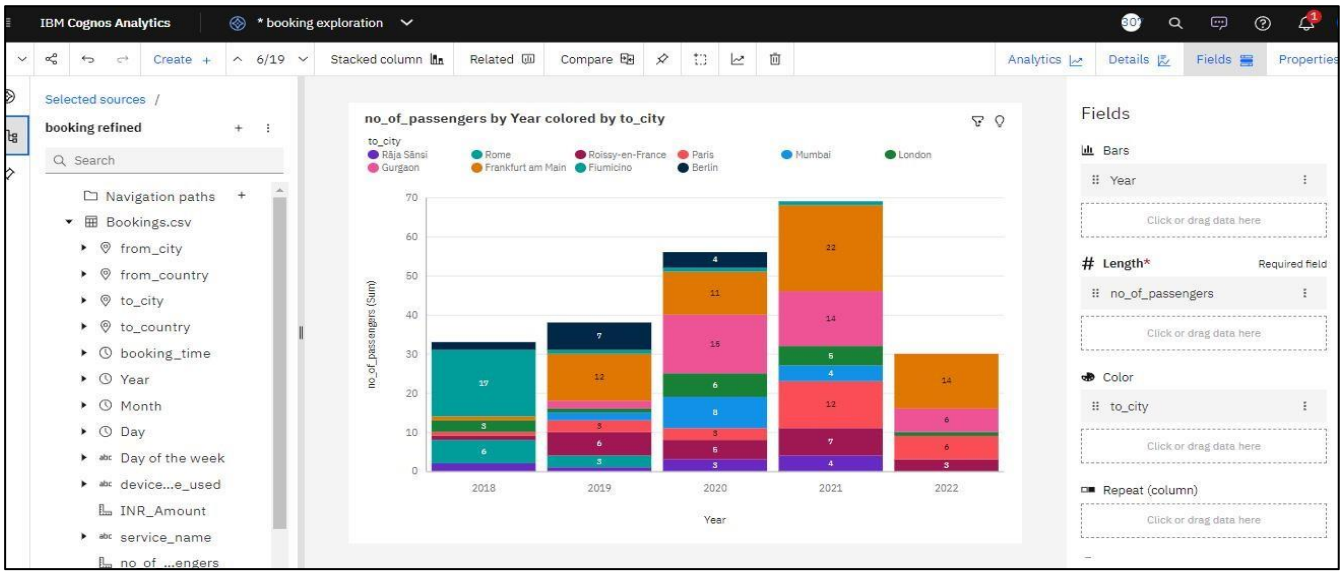
Repeat (row)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Year
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INR_Amount
service_name
no_of_...engers
no_of_passengers by Year colored by to_city
to_city
Rāja Sānsi
Gurgaon
Rome
Frankfurt am Main
Roissy-en-France
Fiumicino
Paris
Berlin
Mumbai
London
no_of_passengers (Sum)
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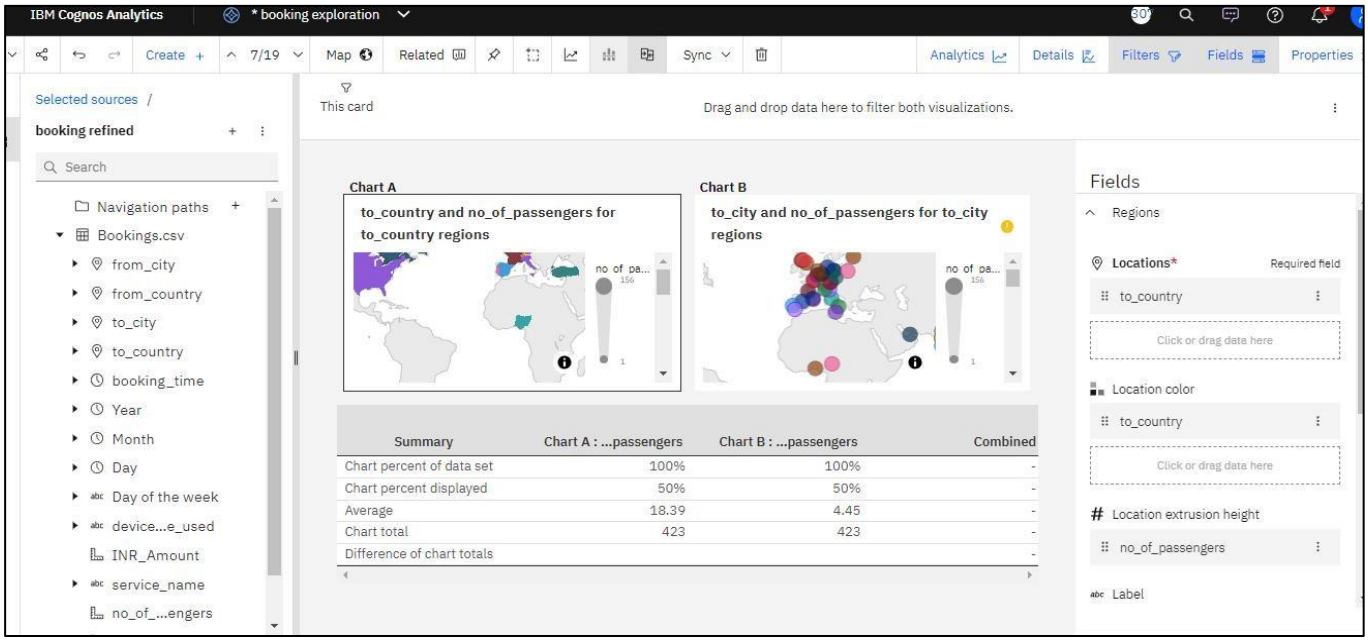
to_city
Repeat (column)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Bookings.csv
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to_city
to_country
booking_time
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Day
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service_name
no_of_...engers
This card
Drag and drop data here to filter both visualizations.
Chart A
to_country and no_of_passengers for to_country regions
Chart B
to_city and no_of_passengers for to_city regions
Summary
Chart A : ...passengers
Chart B : ...passengers
Combined
Chart percent of data set
100%
100%
Chart percent displayed
50%
50%
Average
18.39
4.45
Chart total
423
423
Difference of chart totals
Fields
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Locations*
Required field
to_country
Location color
Location extrusion height
no_of_passengers
Label

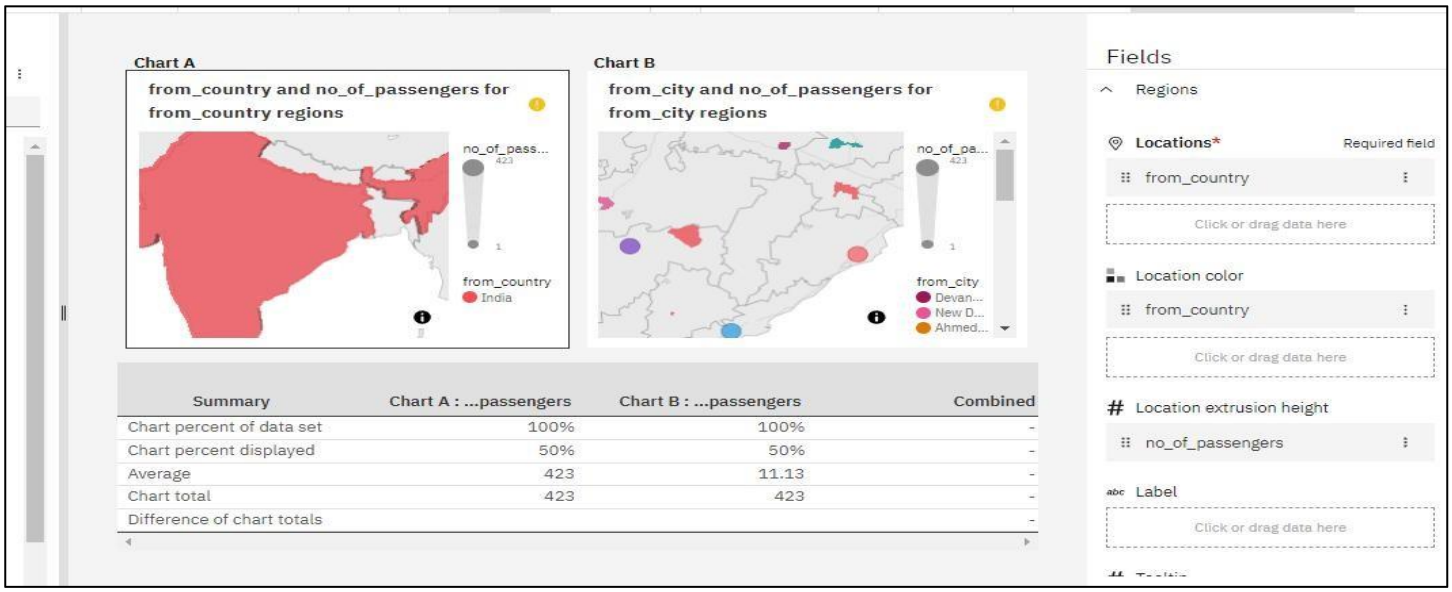
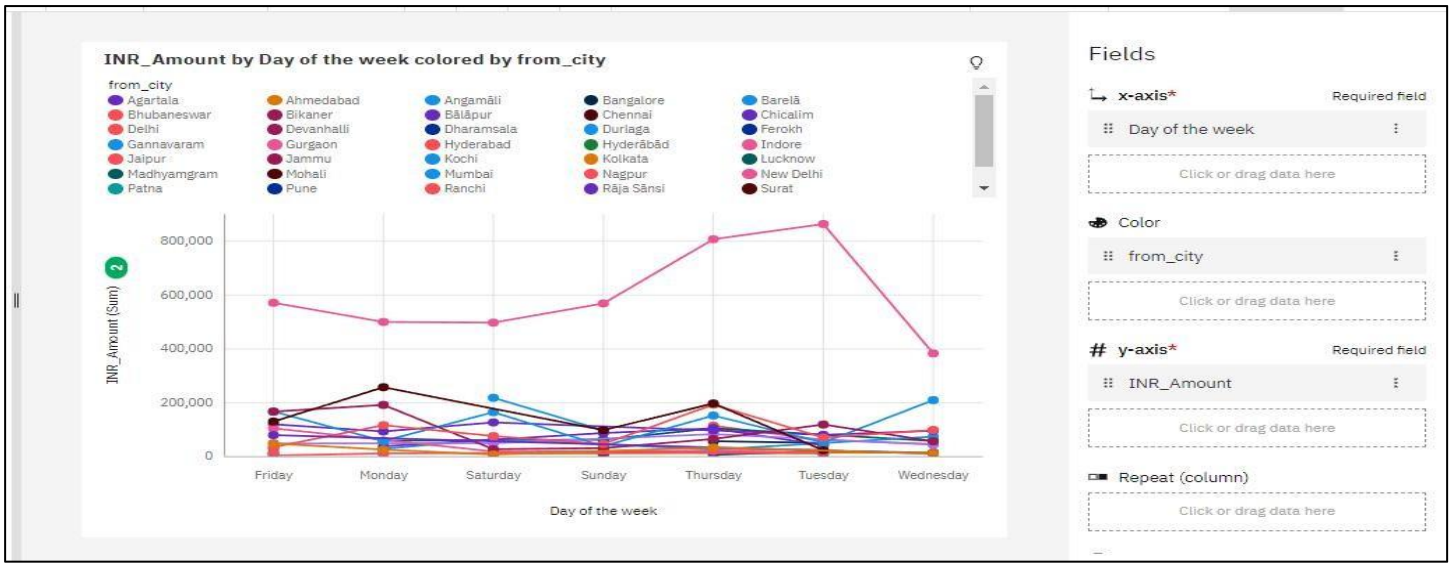


Chart A
from_country and no_of_passengers for from_country regions
no_of_pass...
423
1
from_country
India
Chart B
from_city and no_of_passengers for from_city regions
no_of_pa...
423
1
from_city
Devan...
New D...
Ahmed...
Summary | Chart A : ...passengers | Chart B : ...passengers | Combined
Chart percent of data set | 100% | 100% | -
Chart percent displayed | 50% | 50% | -
Average | 423 | 11.13 | -
Chart total | 423 | 423 | -
Difference of chart totals | | | -
Fields
Regions
Locations* Required field
from_country
Click or drag data here
Location color
from_country
Click or drag data here
Location extrusion height
no_of_passengers
Label
Click or drag data here


INR_Amount by Day of the week colored by from_city
from_city
Agartala
Ahmedabad
Angamāli
Bangalore
Barelā
Bhubaneswar
Bikaner
Bālāpur
Chennai
Chicalim
Delhi
Devanhalli
Dharamsala
Duriaga
Ferokh
Gannavaram
Gurgaon
Hyderabad
Hyderābād
Indore
Jaipur
Jammu
Kochi
Kolkata
Lucknow
Madhyamgram
Mohali
Mumbai
Nagpur
New Delhi
Patna
Pune
Ranchi
Rāja Sānsi
Surat
800,000
600,000
400,000
200,000
0
INR_Amount (Sum)
Friday
Monday
Saturday
Sunday
Thursday
Tuesday
Wednesday
Day of the week
Fields
x-axis* Required field
Day of the week
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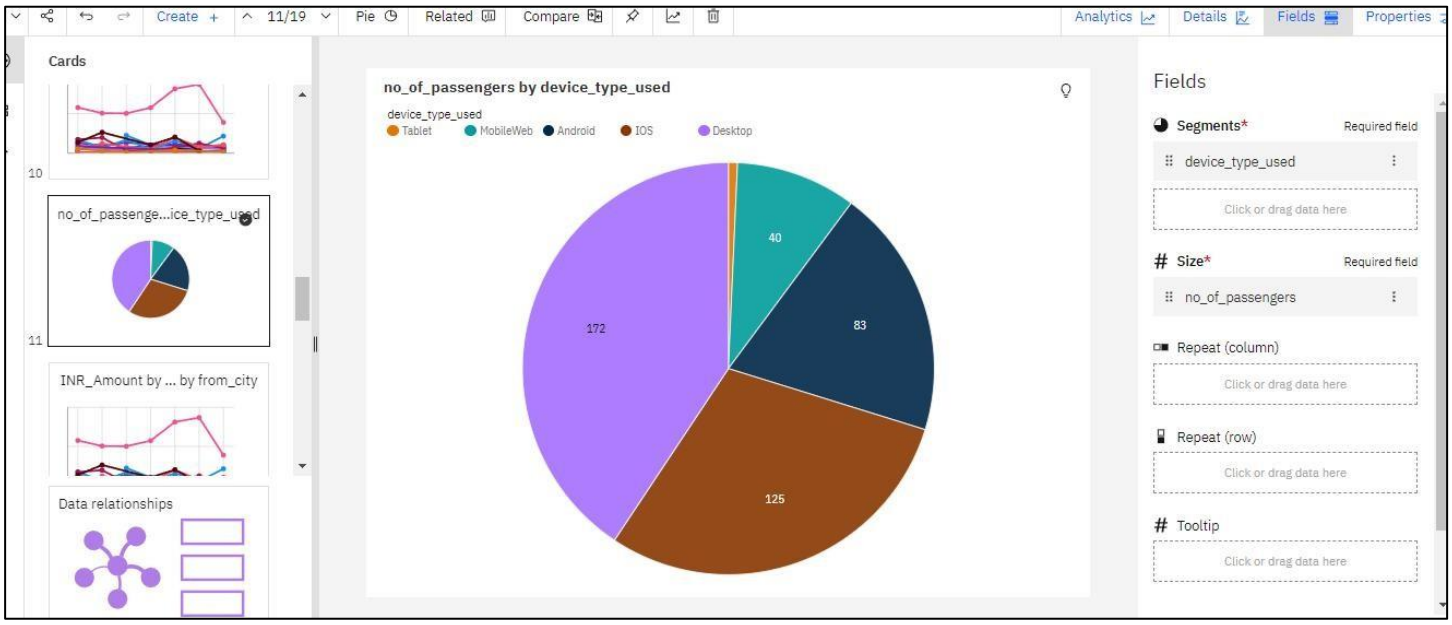
Color
from_city
Click or drag data here
y-axis* Required field
INR_Amount
Click or drag data here
Repeat (column)
Click or drag data here


Create
11/19
Pie
Related
Compare
Analytics
Details
Fields
Properties
Cards
10
no_of_passenge...ice_type_used
11
INR_Amount by ... by from_city
Data relationships
no_of_passengers by device_type_used
device_type_used
Tablet
MobileWeb
Android
IOS
Desktop
40
83
125
172
Fields
Segments* Required field
device_type_used
Click or drag data here
Size* Required field
no_of_passengers
Repeat (column)
Click or drag data here
Repeat (row)
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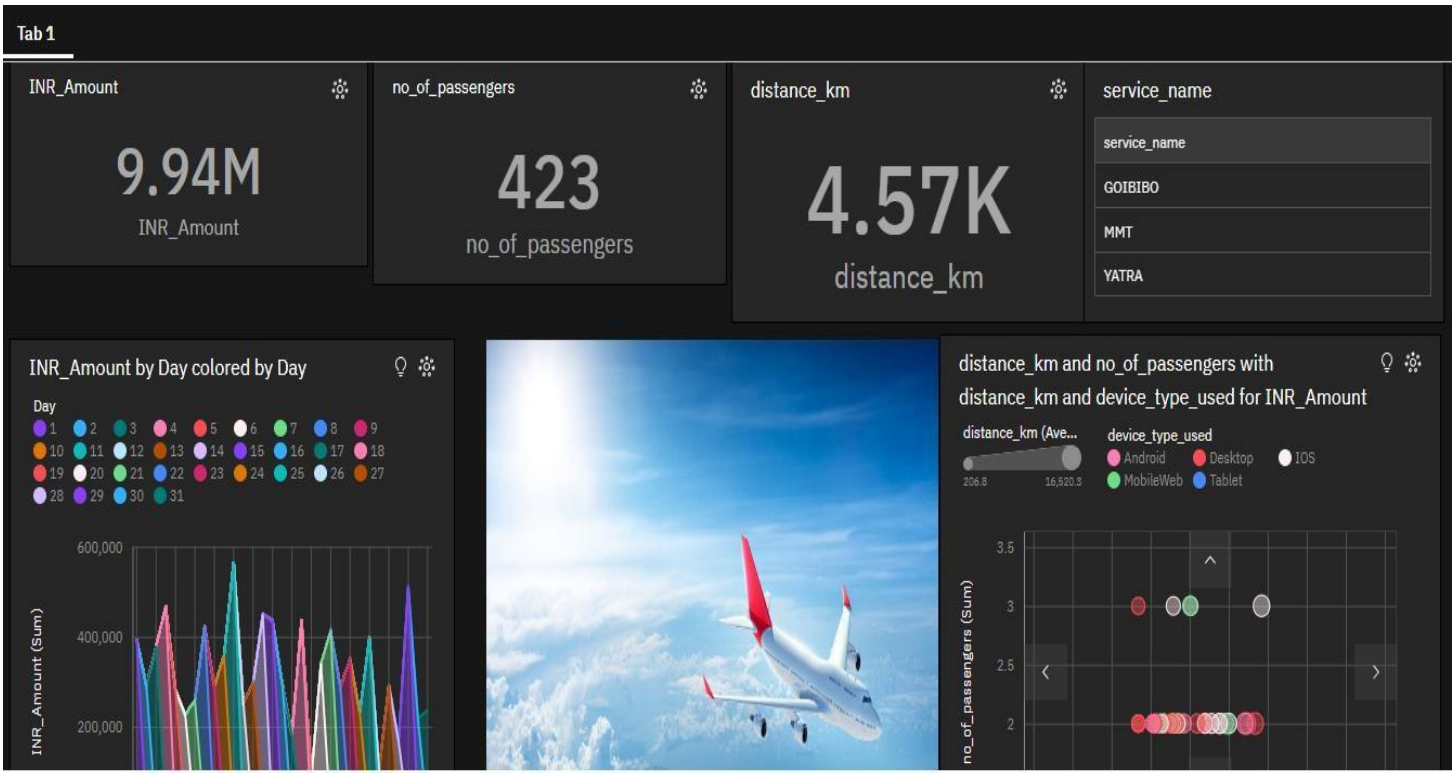
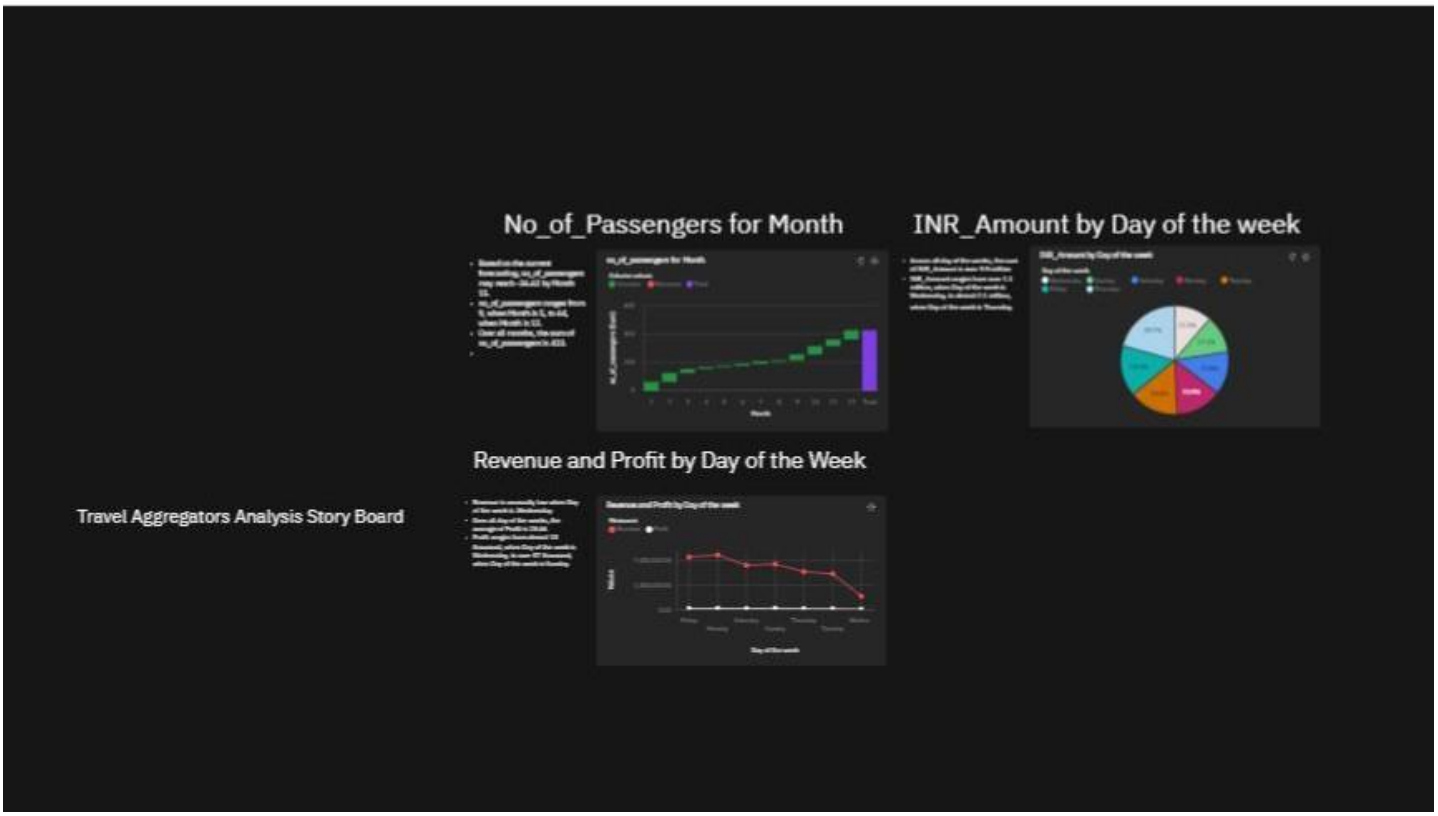
Tooltip
Click or drag data here

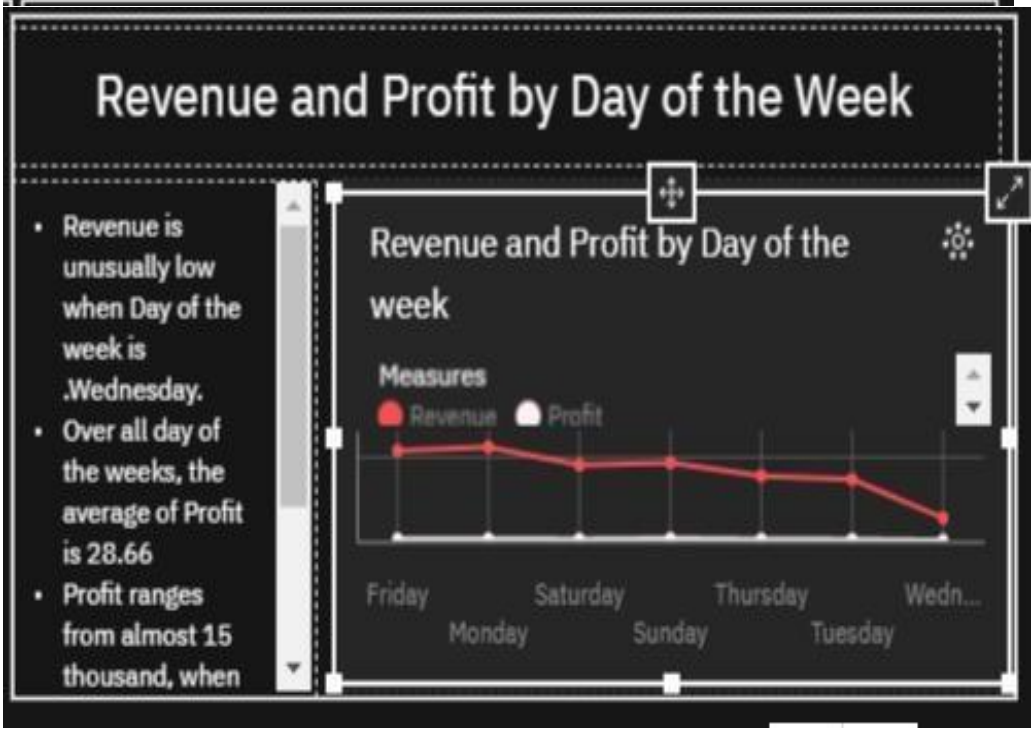
TRAVEL BOOKING DASHBOARDS:

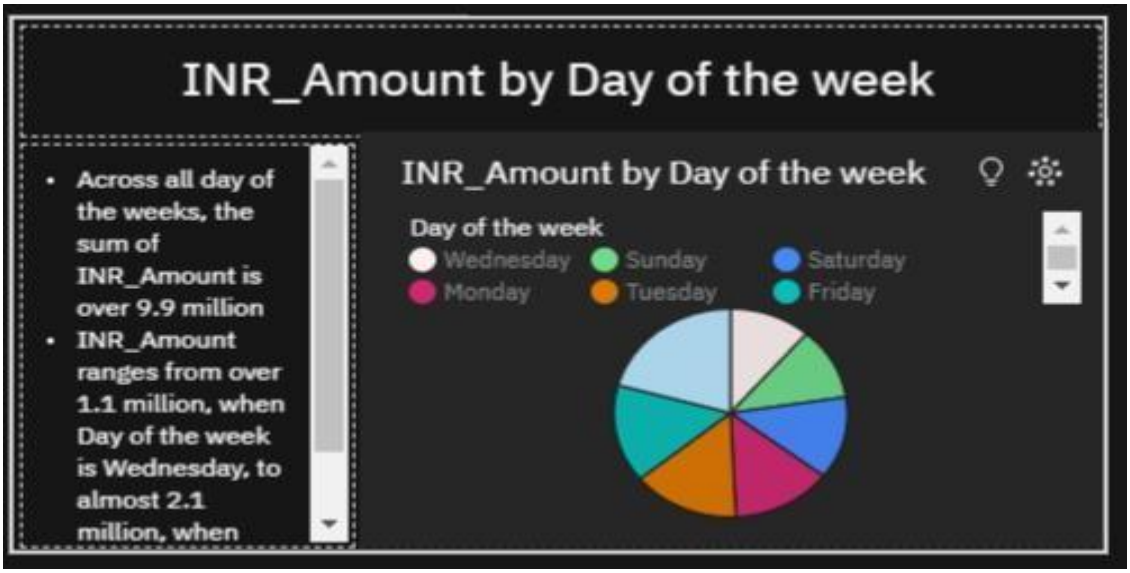


STORY (GUIDED JURNEY):

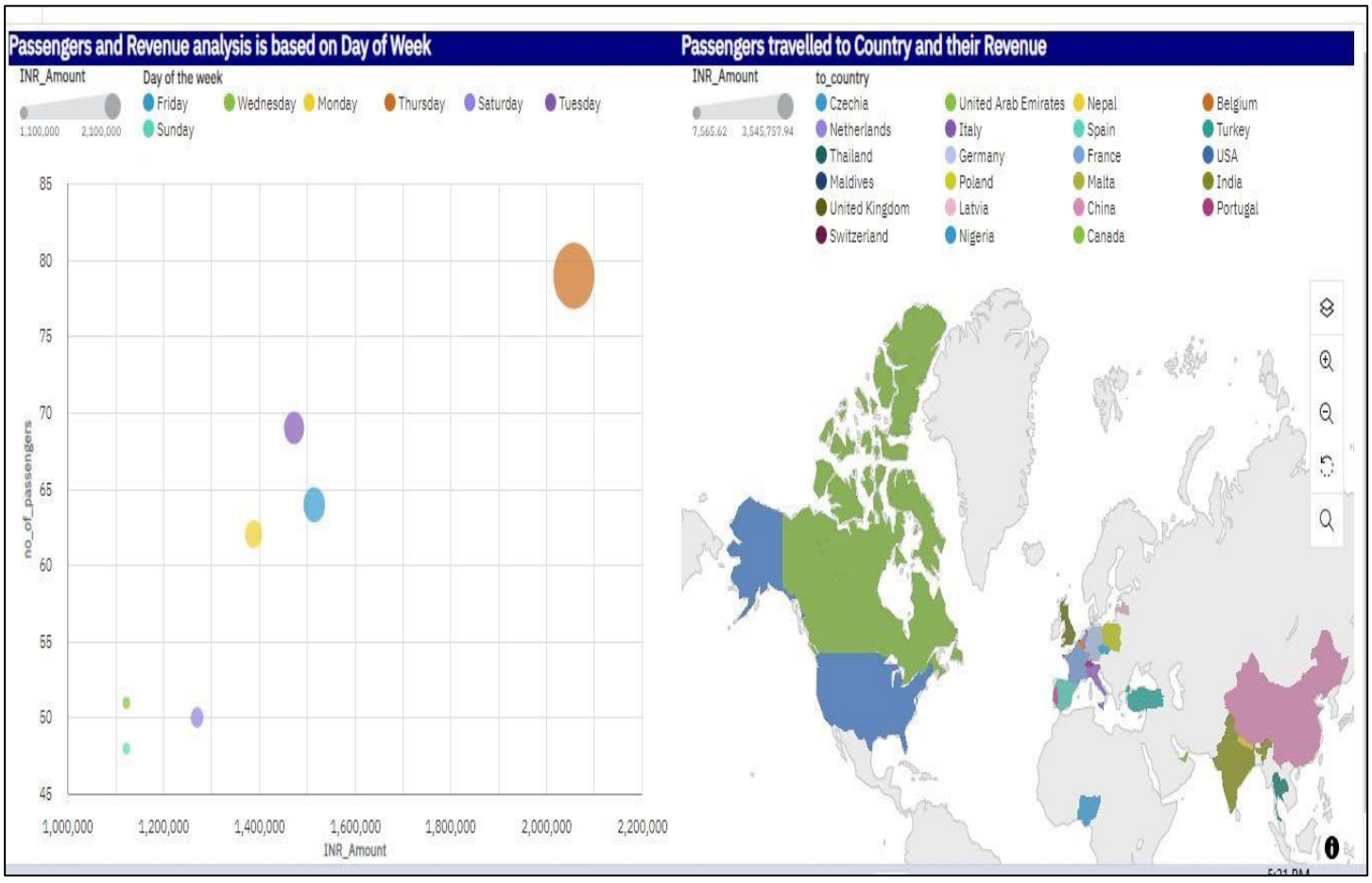


STORY (SLIDESHOW):

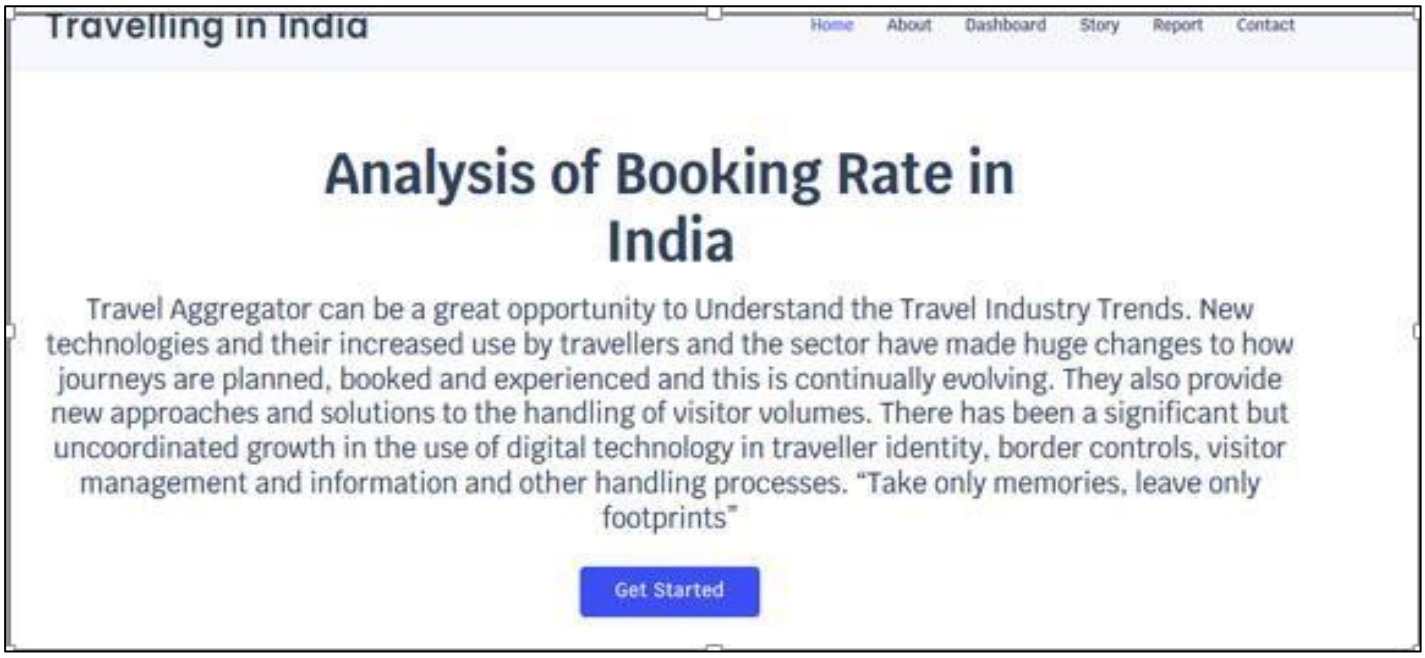


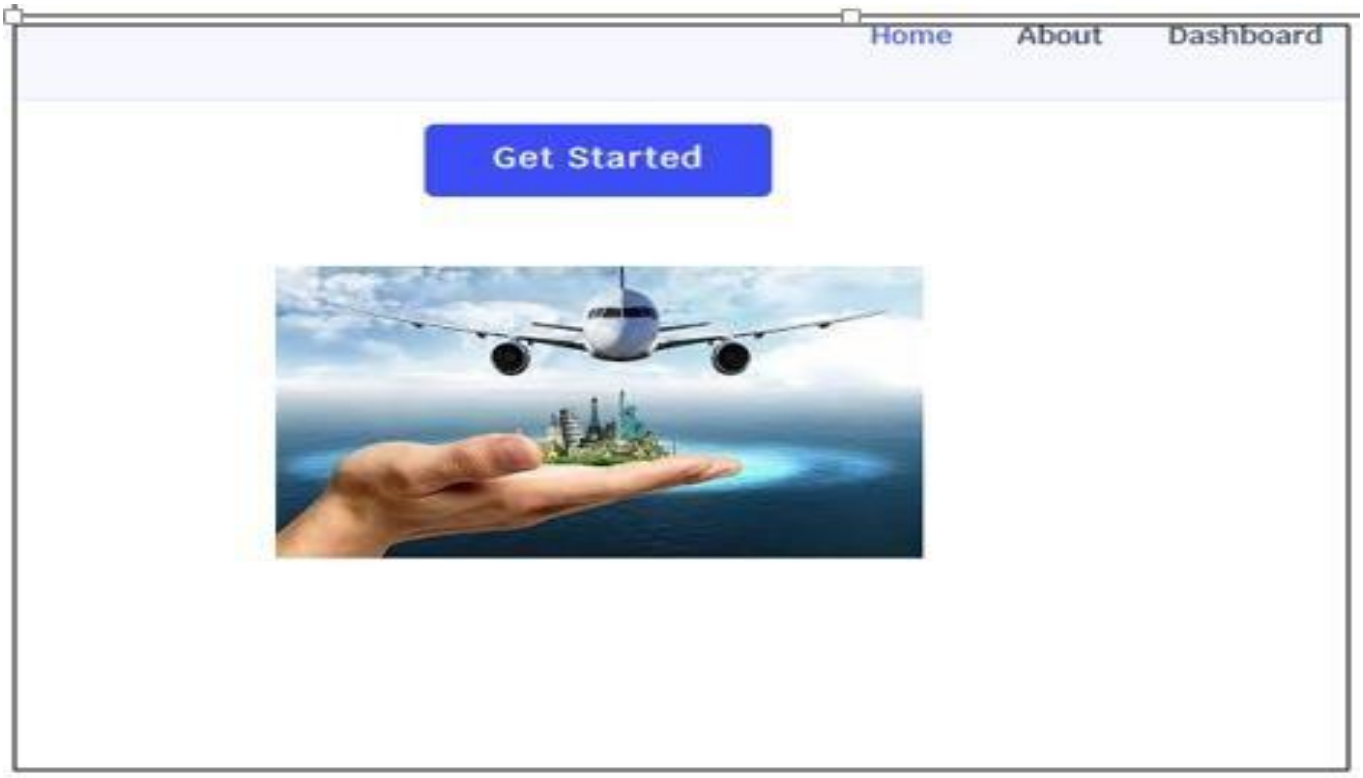


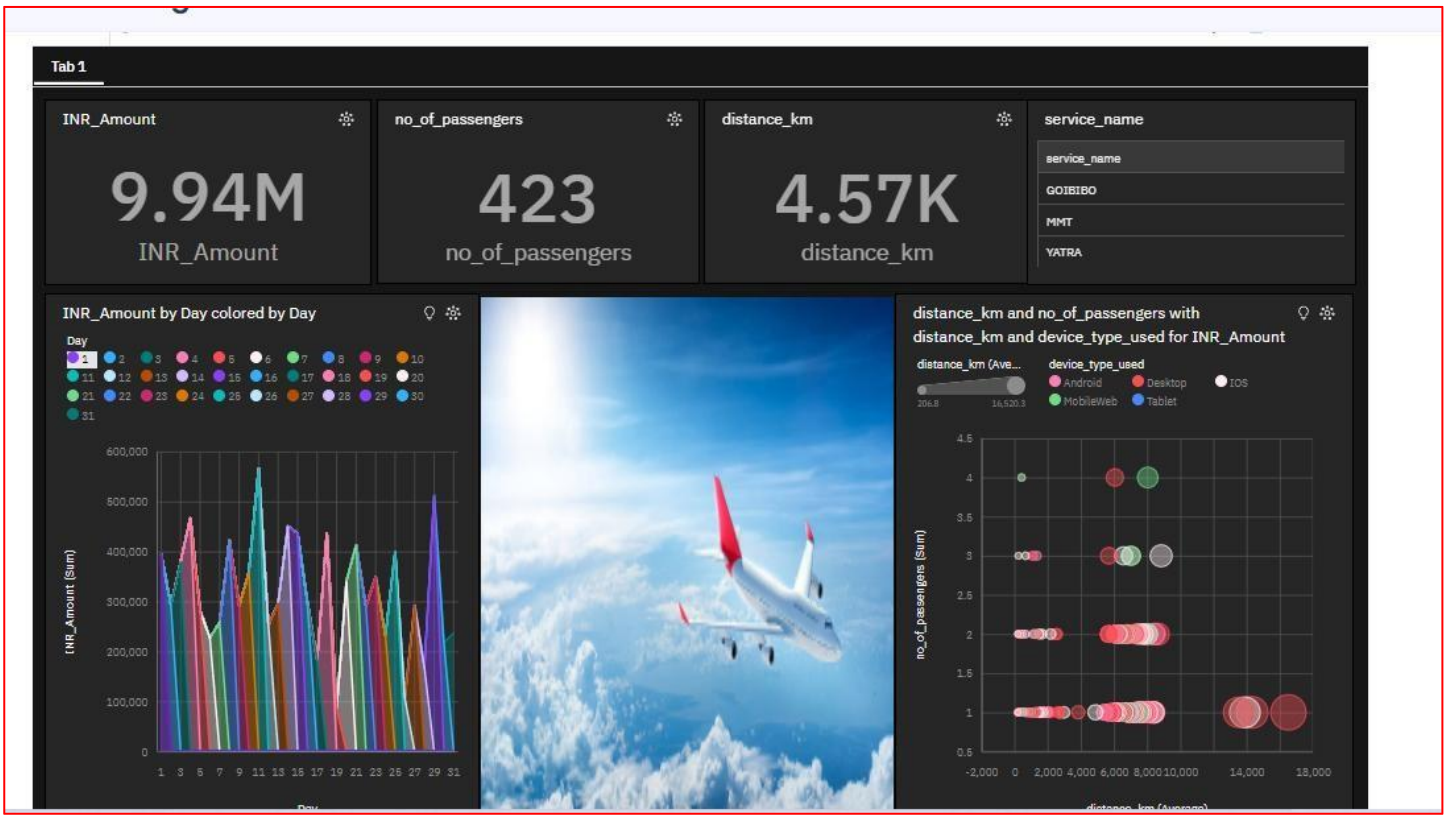
AIRLINE REPORT:

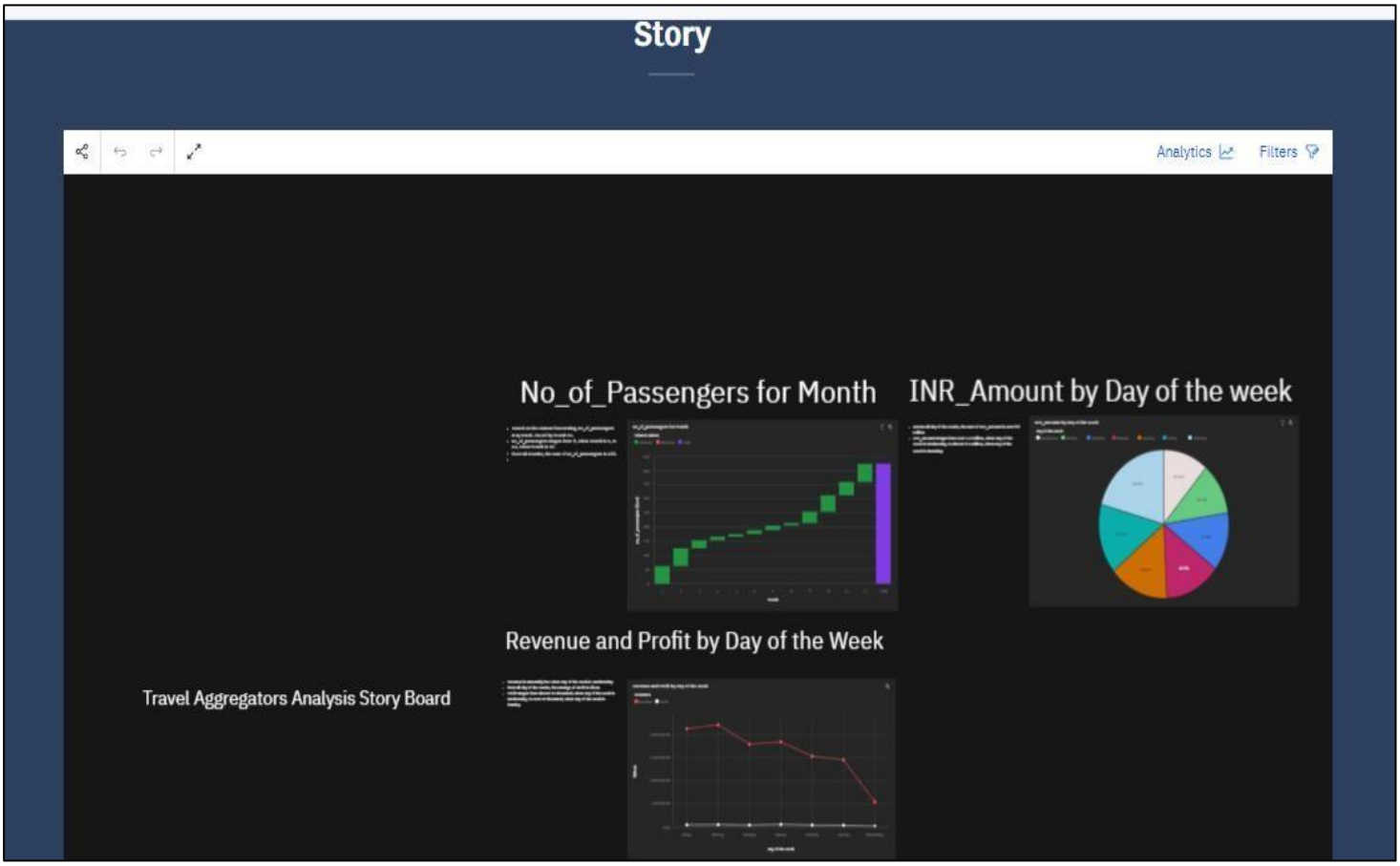


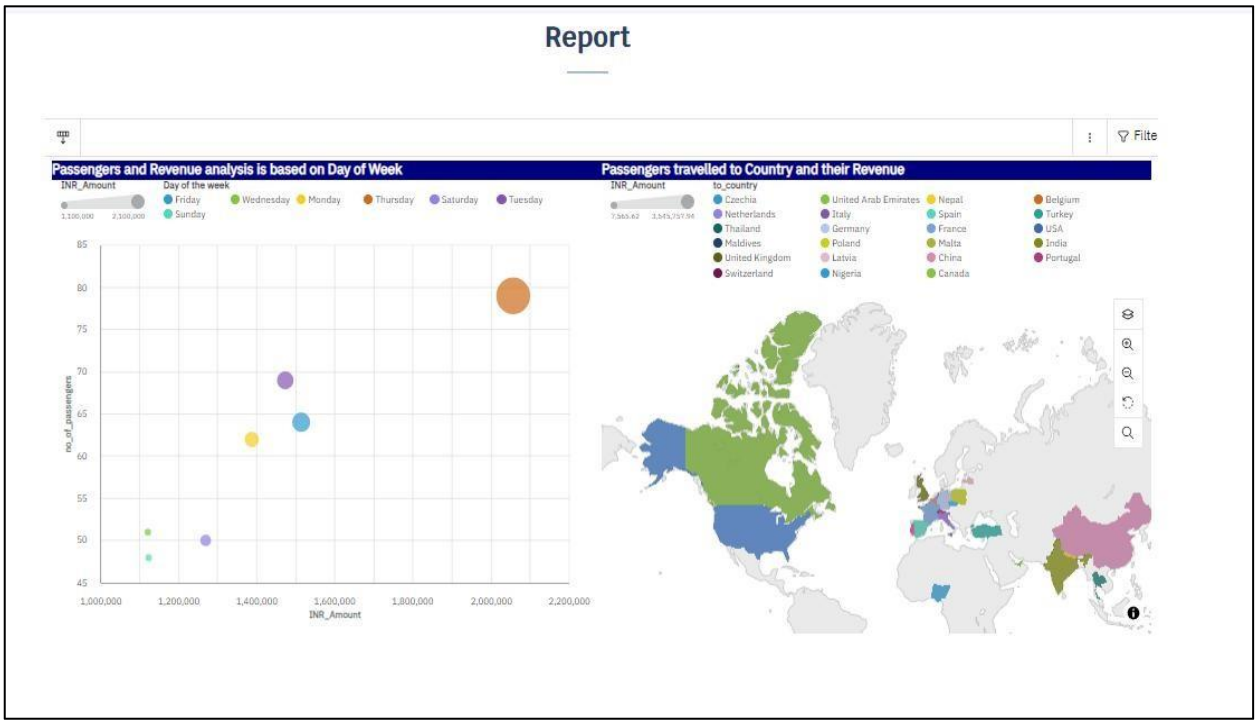
WEB INTEGRATION:

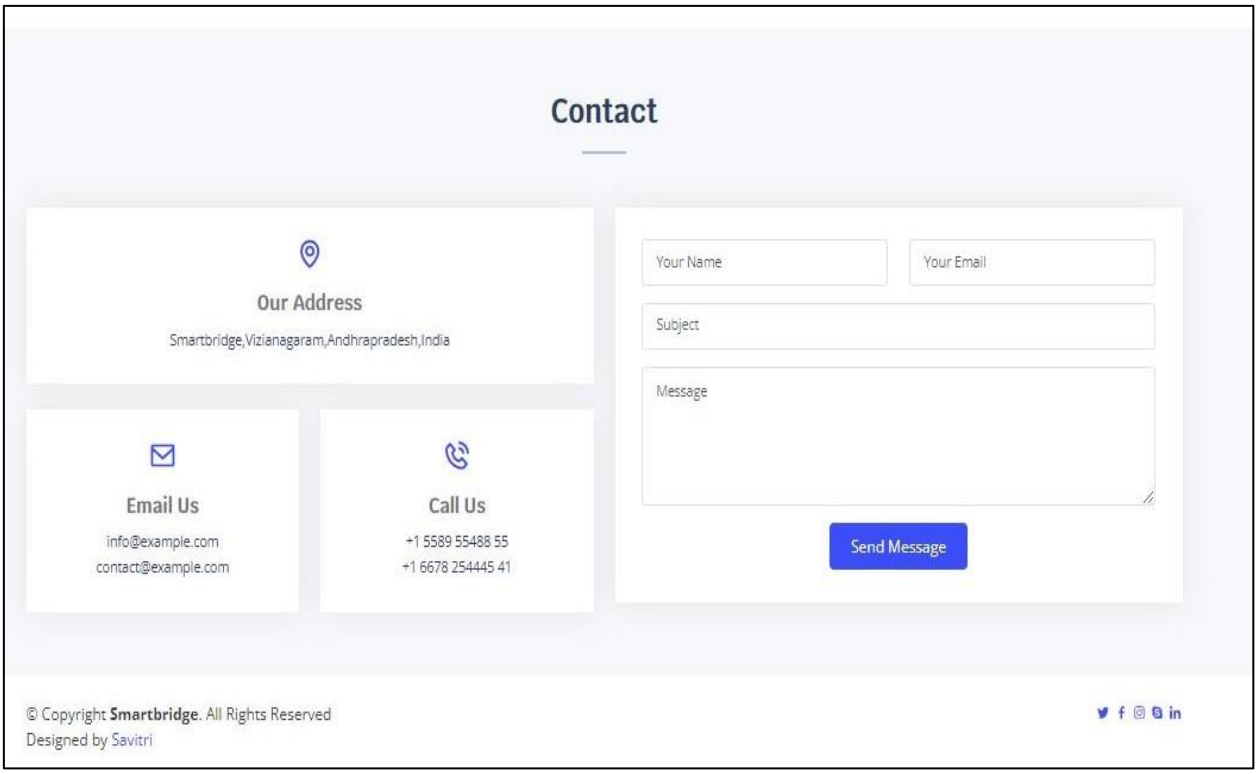





Tab 1
INR_Amount
9.94M
INR_Amount
no_of_passengers
423
no_of_passengers
distance_km
4.57K
distance_km
service_name
service_name
GOIBIBO
MMT
YATRA
INR_Amount by Day colored by Day
Day
INR_Amount (Sum)
distance_km and no_of_passengers with
distance_km and device_type_used for INR_Amount
distance_km (Ave...
device_type_used
Android
Desktop
iOS
MobileWeb
Tablet
no_of_passengers (Sum)


Story
Analytics
Filters
No_of_Passengers for Month
INR_Amount by Day of the week
Revenue and Profit by Day of the Week
Travel Aggregators Analysis Story Board





- Project Demonstration Video Link:

  https://drive.google.com/drive/folders/1aFPuWuV29haofFVKXhTZCupkmmNNfVSM?usp=drive_link

5.ADVANTAGES & DISADVANTAGES:

Advantages

- Convenient and Hassle Free. One of the top reasons why people choose travel agents over self planning is definitely convenience. ...
- Time Saving. ...
- Money Saving. ...
- 24*7 Service. ...
- Expert Guidance. ...
- Tailor-made Holidays. ...
- Visa & Travel Formalities. ...
- Currency Exchange.

Disadvantages

- You're Not The One Planning Your Travel. While not planning your travel is a pro to some, for other travelers, it's a major con. ...
- You Add Another Person To The Equation. ...
- You Actually Have To Find The Agent. ...
- They're Not Great For Spur-Of-The-Moment Changes.
- You'll Likely Pay More. ...
- You May Not Get the Exact Trip You Want. ...
- You May Have to Compromise on Your Itinerary. ...
- You May Not Get the Best Deal. ...

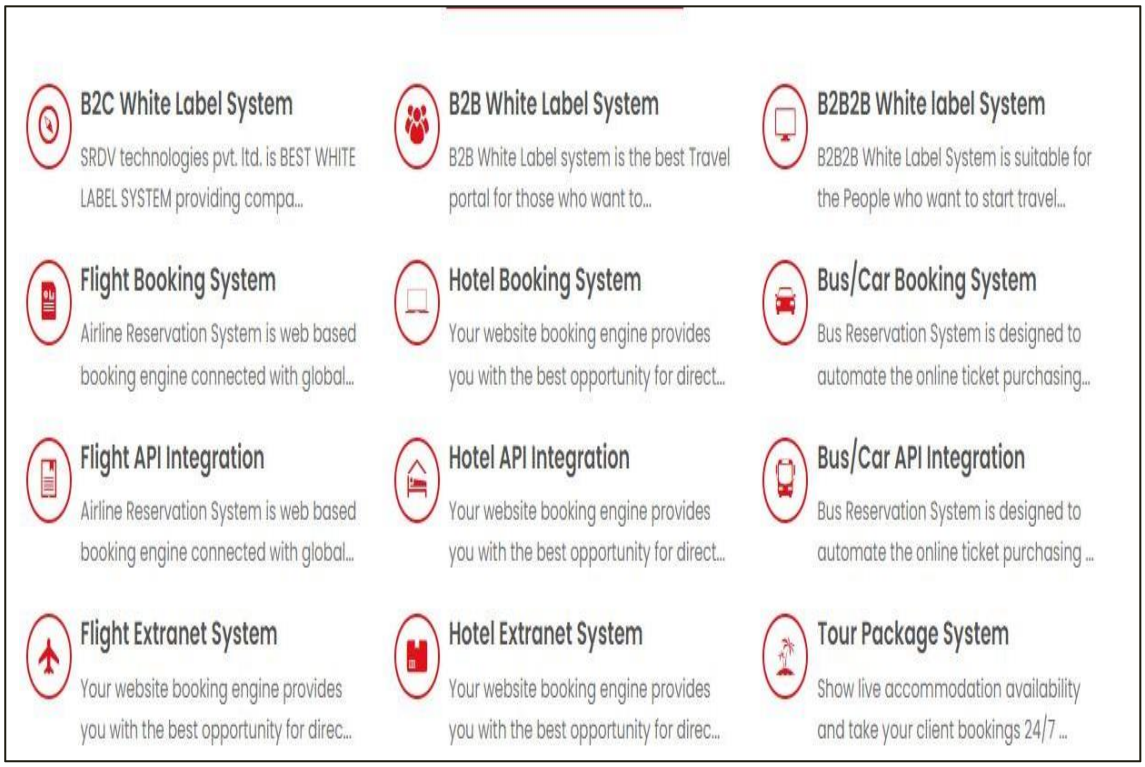
- You May Not Save Any Time. ...
- You May Have to Do Some Legwork Yourself.

6.APPLICATIONS:

Travel Applications means the use of the Software for all applications involving the travel industry, including, but not limited to, air travel, bus travel, train travel, cruises, travel agencies, on-line bookings, hotels, rental cars, travel attractions, tours, and related travel services.

As the leading OTA in India, we still have MakeMyTrip with a 60% market share. Its biggest competitors are major international OTAs, including Booking.com, Expedia, Agoda, and Airbnb. Their domestic competitors would be Cleartrip, Yatra, and Via.com.

- Skyscanner is an aggregator site—it uses a metasearch engine to compare prices from all OTAs, airlines, hotels, and car rental companies. Skyscanner often finds the best prices and helps travelers make big savings on flights and accommodation.
- **Flight** Booking System, **Hotel** Booking System, Bus & Car Booking System, Tour Package System. **Flight** API Integration, **Hotel** API Integration, Bus API Integration, Car API Integration. Start Income From Today. All in One **Travel** Portal.



7.CONCLUSION:

The main objective of this study was to analyse and visualize the various factors which have contributed to the Evolution of the Travel Aggregator over the years. This type of analysis is very helpful as this type of analysis can be performed by any Country or City which can help them in analysing their performance so that they can improve their performance by changing their strategies.

We have used a technique named Exploratory Data Analysis which enables you to encapsulate the primary factors of a dataset into a visual format. We selected Python language to implement our work because it is one of the best language suitable for Data Analysis and is the platform where we have performed this Analysis.

A project dashboard is a project management tool businesses use to track key performance indicators for various projects.We have to create the dashboard for performance metrics, display progress reports and highlight

areas that require attention.They can help monitor the success of specific campaigns, processes and projects.

After that we have to create the story in our project it helps to the team members to achieve cross-team clarity on what to build, for whom, why, and when. Since they are easy to define, understand, and revise, they can become the standard way to communicate.

We have to create the report in our project. Project reports are important tools to both project teams and stakeholders. Through these reports, we track the current progress of the project and compare it against the original plan. They can identify risks early on, and take corrective action.

Lastly we have to create the web integration in the python folder. Download the bikin file and run the index.html in spyder.

8. FUTURE SCOPE:

Travel Aggregator Analysis is an integrated software developed for booking, travelling companies. The main aim of this project is to help the travel agency companies to manage their customers, vehicles, and agents. It makes all operation of the travel company easy and accurate. The statndalone platform makes travel agencies easy by handling agencies requests and providing servers for the customers located at different parts of the various cities.

Our Project contains some imperfections and weakness. We plan to overcome some of these weakness in future ans see these limitations as future scope. These are

- No prediction is done – We have used the data related to Travelling and analyzed it thoroughly but have not predicted anything. So we can feed this analyzed data to Machine Learning Algorithms to Predictive something related to the same.

- We can update the live travelling reports for users.