



ANALYSING THE PERFORMANCE & EFFICIENCY OF THE RADISSION HOTELS



DATA ANALYTICS IBM NAAN MUDHALVAN PROJECT REPORT

Submitted By

AAKASH R	611220104001
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in partial fulfilment for the award of the degree

of
BACHELOR OF ENGINEERING
in
COMPUTER SCIENCE AND ENGINEERING

KNOWLEDGE INSTITUTE OF TECHNOLOGY,

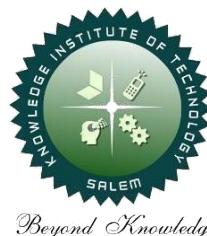
SALEM-637504

**ANNA UNIVERSITY::CHENNAI 600 025
DECEMBER 2023**

IBM



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BONAFIDE CERTIFICATE

Certified that this project report titled “**ANALYSING THE PERFORMANCE & EFFICIENCY OF THE RADISSON HOTELS**” is the bonafide work of “AAKASH R (611220104001), BHUVANESWARI R (611220104024), DEVADHARSHINI A K (611220104029), DHANUSSH ADITYA K (611220104031)” who carried out the project work under my supervision.

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ABSTRACT

The hospitality industry, characterized by its competitive nature and ever-evolving customer expectations, demands a keen focus on performance and efficiency. This analysis delves into the realm of Radisson Hotels, a prominent global hotel chain, to understand the nuances that define their operational success. The hotel industry is a broad category of businesses that provide lodging services for travellers and tourists. This can include a wide range of establishments, from luxury resorts to budget-friendly motels, as well as extended stay hotels, boutique hotels, and more. Hotels can be found in nearly every corner of the world, and are often a major component of the tourism and travel industry in a given area. It involves an in-depth exploration of key performance indicators (KPIs) like occupancy rates, revenue per available room, and guest satisfaction scores. Financial data analysis unveils insights into the company's fiscal health, while scrutinizing operational processes such as inventory management, staff productivity, and sustainability practices offers a holistic view. To overcome this problem, in order to provide hotel of Radisson of revenue and market sales by implementing a comprehensive strategy. This includes pricing optimization, innovative marketing, online presence improvement, diversified distribution, operational efficiency, loyalty programs. These efforts seek to position the hotel as a top choice for travellers and regain prominence in the hospitality industry.

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LIST OF ABBREVIATIONS

ABBREVIATION	EXPANSION
KPI	KEY PERFORMANCE INDICATORS
FR	FUNCTIONAL REQUIREMENTS
NFR	NON-FUNCTIONAL REQUIREMENTS
AR	AUGUMENTED REALITY
VR	VIRTUAL REALITY

INTRODUCTION

CHAPTER 1

INTRODUCTION

1.1 PROJECT OVERVIEW

The project aims to conduct a comprehensive analysis of the performance and efficiency of Radisson Hotels, a renowned global hospitality chain, with a focus on enhancing their operational excellence and customer satisfaction. In this endeavor, we will employ a multidisciplinary approach that integrates data analytics, financial assessment, customer feedback, and market research to evaluate key performance indicators, such as occupancy rates, revenue per available room, cost management, and customer reviews.

The hospitality industry is highly competitive, and Radisson Hotels have established themselves as a prominent player in the global hotel market. As such, understanding and analyzing their performance and efficiency is crucial for both the hotel chain itself and the broader industry. The gathered data will next go through a thorough analysis utilizing statistical methods and tools for data visualization. The evaluation of rivals' pricing tactics, marketing initiatives, value-added services, and user experiences will be the main emphasis of the analysis. To measure consumer happiness and pinpoint trouble points, reviews, ratings, and client comments will also be analyzed.

Furthermore, project aims to delve into the factors affecting the performance and efficiency of Radisson Hotels, conducting an analysis of operational, customer feedback, and market trend

In market analysis of movements and spot opportunities for growth and innovation, this will include keeping an eye on changes in the industry, technology improvements, and consumer preferences. The competition analysis's results will give the Radisson hotel useful information that will help it to improve its value proposition, sharpen its business strategy, and possibly achieve a competitive edge in the fast-moving travel market.

1.2 PURPOSE

Now-a-days, by giving people a quick and easy way to plan and book their vacations, play a crucial role in the travel business. A Radisson hotel main function is to provide a centralized platform that compiles data from multiple travel service providers, including packages, hotels, car rental agencies, and tour operators. By doing this, they make the process of organizing a trip simpler and help users save time and effort.

Users are empowered to evaluate costs, availability, and features of various travel services on these platforms, enabling them to make selections that are in line with their tastes and financial constraints. Additionally, Radisson hotel's offer thorough data about locations, packages, modes of suite room, and attractions to make sure users have access to all the information they need to make informed travel plans. A Radisson hotel goal is to improve user experience by providing convenience, suitable packages, and thorough information, making the process of planning, and booking travel easy and enjoyable.

The purpose of this research would be better to understand the

user experience using Radisson hotel's, identify pain areas in the booking process, and make recommendations for improving the user interface and search capabilities to better fulfil the requirements and expectations of users.

LITERATURE SURVEY

CHAPTER 2

LITERATURE SURVEY

2.1 DATA ANALYSIS FOR HOTEL REVIEWS IN MULTI-LANGUAGE BASED ON FACTOR AGGREGATION OF SENTIMENT POLARIZATION.

Online booking platform eases customer to book hotel easily prior to the arrival date. However, problem arises if customer thinks hotel quality is not as good as promised on online booking platform. Hotel rating which is presented on online booking platform is not sufficient to fully represent hotel quality in terms of services and facilities. On the other hand, hotel’s management also needs to regularly monitor hotel quality perceived by the customer in order to maintain and improve hotel quality. The proposed system uses factor aggregation of sentiment polarization approach in Vader Sentiment and SentiwordNet which uses different methods (Lexicon-based and Rule-based) to calculate sentiment degree of hotel reviews. Before being analyzed using sentiment analysis, multi-language review is standardized automatically into English.

2.2 FEATURE BASED EVALUATION OF HOTEL REVIEWS AND RATINGS FOR DIFFERENTLY ABLED PEOPLE

Hotel industry is an essential in professional as well as casual events.

People with disability face problems as the products and services available focus mostly on general public. This system focuses on the features that are essential to a disabled person for booking a hotel room or service. The user can view the hotels ranks feature wise and select accordingly. People can check whether or not the hotel fulfills their special needs. They can hence decide which hotel to accommodate before they reach the place.

2.3 A BIG DATA ANALYTICS FRAMEWORK FOR ANALZING GLOBAL TOURISM TRENDS OF INDIANS USING SOCIALMEDIA ANALTICS

While planning to visit a place it is very difficult to decide any place based on our preferences that may include, availability of veg food or weather a place is family friendly or not. Searching out such place is really a cumbersome task which involves going around good number of websites and social media platforms and reading never ending reviews. The system extracts these reviews and analyzes with the help of machine learning model based on five factors that are of common concern like Veg_food availability, Family friendliness, destination and hotels around etc., based on user’s true experiences. The system generates likeness score on the scale of 0 to 1, for each destination to visit on the basis of these metrics and an overall rating is represented visually for the ease of future user.

IDEATION & PROPOSED SOLUTION

CHAPTER 3

IDEATION & PROPOSED SOLUTION

3.1 PROBLEM STATEMENT DEFINITION

I am (Customer r)	I'm trying to	But	Because	Which makes me feel
Traveller	Booking a Hotel room through mobile phone	It takes a long time.	1. The website doesn't provide sufficient about the hotel details (i.e., vacancies of room, size of room). 2. Website is not responsive and doesn't have a mobile version.	Dissatisfied

Business Client	Booking a meeting room through mobile phone.	It takes a long time for finding a reliable meeting room for the event.	1. It makes technical issues on the hotel's website or booking platform. 2. Website doesn't provided details (i.e., desired date and time for booking meeting room)	Aggrieved
Traveller	Booking a car rental through mobile phone.	It takes long time for finding a reliable car rent.	1. Travelers may face challenges in securing their needs such as limited budget. 2. They face many fraudulent car rental companies are there and many people got scammed by overrated rental charges.	Disenchanted

Traveller	Booking a special package through mobile phone.	<p>1. It takes lack of personalized recommendations.</p> <p>2. Difficult in finding suitable accommodations and it takes a long time.</p>	<p>1. These packages often include dining credits, spa treatments, local attractions, or other special perks, allowing guests to make it more memorable.</p> <p>2. Lack of transparency in pricing and fees.</p>	Frustrated
Traveller	Booking a suite room through mobile phone.	<p>1. It appears that they are having difficulty understanding the overall expense of their suite room.</p> <p>2. Lack of confidence in the booking procedure</p>	<p>1. Choosing a suite room at Radisson Hotel offers guests a more spacious and luxurious accommodation option.</p> <p>2. These suite rooms often come with a separate living area, enhanced amenities, and additional comfort, making them an ideal choice for travelers seeking a more indulgent and comfortable stay.</p>	Suspicion

			3.Security for the customer data is secure and protected when booking for suite room through online.	
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Data Analytics
Analysing The Performance & Efficiency Of The Radisson Hotels

KIOT

3.2 EMPATHY MAP CANVAS

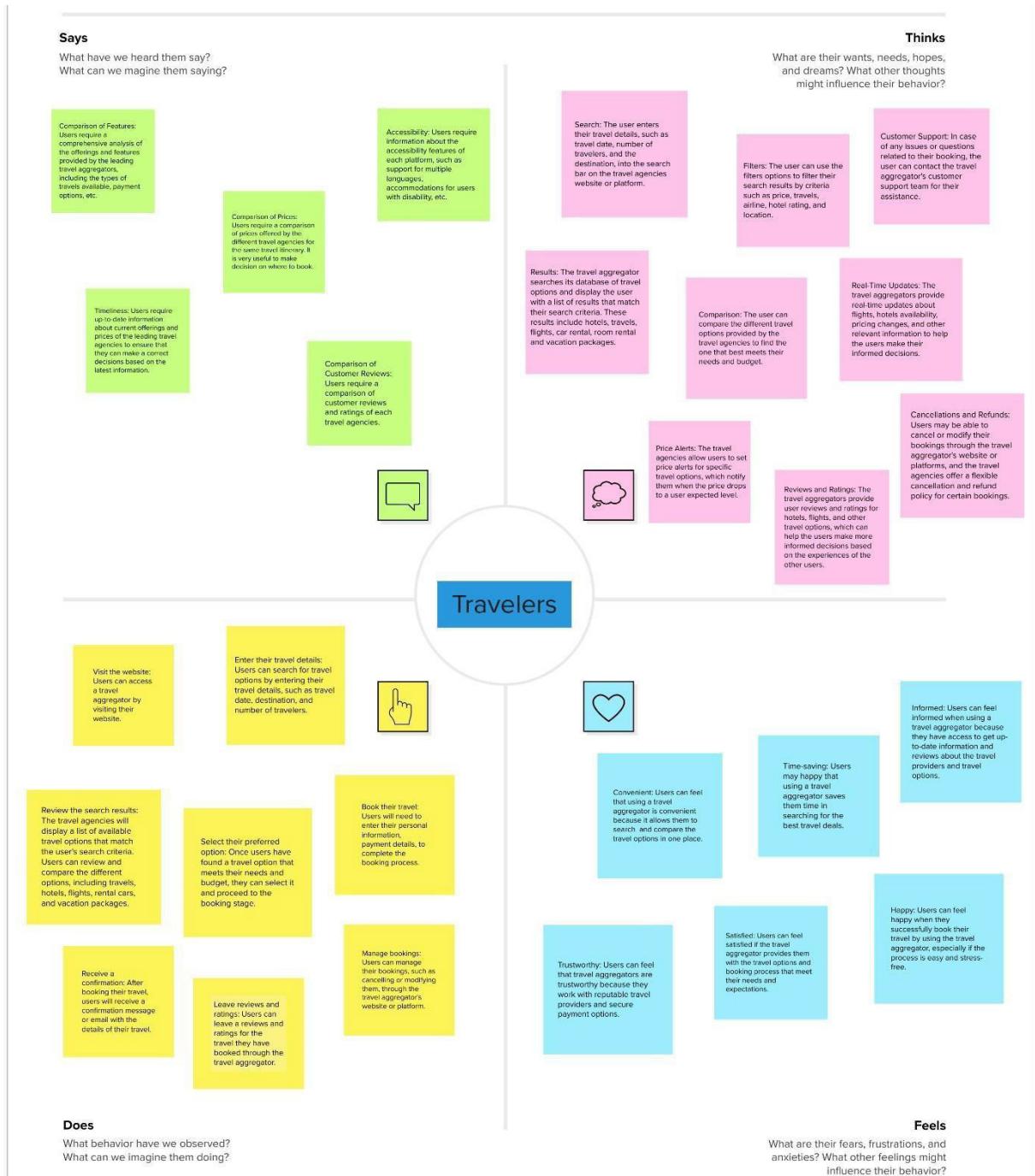


Fig 3.2.1 Empathy Map Canvas

3.3 IDEATION & BRAINSTORMING

Step-1: Team Gathering, Collaboration and Select the Problem Statement

PROBLEM

The hotel industry encompasses a wide array of lodging businesses, from opulent resorts to budget-friendly motels, catering to travelers worldwide. These establishments play a vital role in the tourism and travel sector. Radisson, a longstanding player in the hospitality industry with a century of experience, currently faces challenges in losing market share and revenue in the luxury and business hotel segment due to competitive pressures and managerial shortcomings. To counter this, Radisson's managing director aims to integrate Business and Data Intelligence for improved decision-making. Our mission is to develop an analytics dashboard and narrative that delivers valuable insights to guide enhanced business strategies.

Fig 3.3.1 Problem Statement

Step-2: Brainstorm, Idea Listing and Grouping

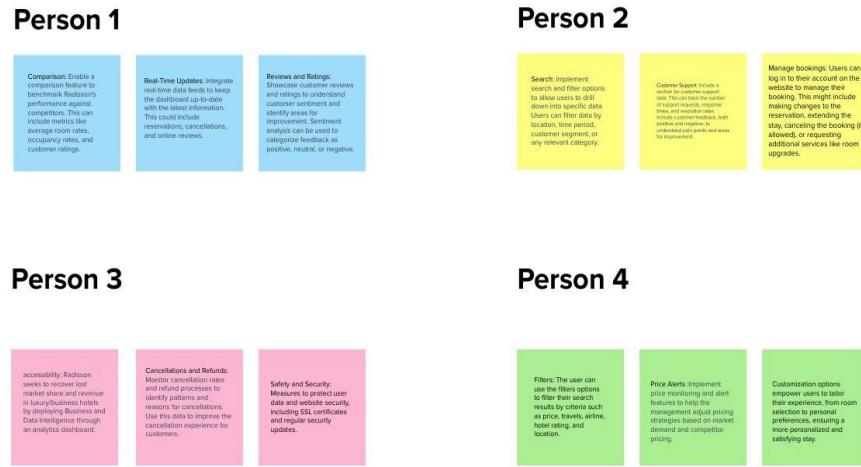


Fig 3.3.2 Brainstorming

Group ideas

In response to our problem statement, we aim to leverage Data Analytics to create a user-centric analytics dashboard and narrative. This will facilitate better decision-making by offering features like search, filter, real-time updates, price alerts, customer support, result comparison, reviews, ratings, and cancellations, ensuring that Radisson can regain market share and revenue in the luxury/business hotels category through informed strategies.

Step-3: Idea Prioritization



Fig 3.3.3 Idea Prioritization

3.4 PROPOSED SOLUTION

S. No	Parameter	Description
1.	Problem Statement (Problem to be solved)	<p>The problem statement is to analyze the leading Radisson Hotel using data analytics and python. A website needs to be built which is integrated with python, IBM Cognos, IBM DB2. The solution should satisfy the following user requirements:</p> <ul style="list-style-type: none"> • User friendly interface • Provide detailed information. • Day to Day prices and offers update. • Predictive analysis
2.	Idea / Solution description	<p>A Radisson hotel is a user-friendly website that allows users to search and compare prices and offers for package, hotels, vacation rentals provided by various Radisson hotel. The website contains extra features for customer such as review, ratings, and images to assist customers in making informed decisions. We can analyze these details by python and IBM Cognos.</p>
3.	Novelty / Uniqueness	<ul style="list-style-type: none"> • Evaluate the breadth and depth of package offerings. • Reviews and Ratings.

		<ul style="list-style-type: none"> • Day to Day Updates. • Search, Filter and Compare options. • Cancellations and refunds.
4.	Social Impact / Customer Satisfaction	<p>Fraudulent activities can be prevented.</p> <p>Customers are satisfied in all aspects such as safety and security, trustworthy website, Time saving by search and filter options, Day to Day updates, and Reviews and Ratings</p>
5.	Business Model (Revenue Model)	<p>Most of the time, Radisson hotel generate revenue by charging commissions to the travel providers whose products and services are featured on their website.</p> <p>Some also earn revenue through advertising, or by offering some additional services such as package, suite room, rental, etc.</p>
6.	Scalability of the Solution	<p>The website can further extend to provide Application Programming Interface (API) which can be used by third party organizations such as Cloud computing, Automation, Insurance companies, Travel agencies, etc.</p>

REQUIREMENT ANALYSIS

CHAPTER 4

REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Website Registration through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP Confirmation via Phone Call Confirmation via Social Media Integration
FR-3	User Dashboard	Evaluate Services and Features Pricing and Deals Analysis View User History and Ratings
FR-4	User profile and Preferences	Create and manage their profile. Allow users to change their privacy preferences and profile information as necessary.
FR-5	Output Generation	Report Generation Content Generation Itinerary Generation Visual Representation

4.2 NON-FUNCTIONAL REQUIREMENTS

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	User-friendly Interface to facilitate the user with easy processing. Model provides Analyze and Compare Model provides Data Gathering Model provides Evaluation Criteria Model provides Visual Representation of Prediction
NFR-2	Security	Authentication-User can have his/her own private dashboard to have secured access
NFR-3	Reliability	The model can run numerous samples simultaneously and handle massive amounts of data
NFR-4	Performance	As the model is a combination of python programming, the accuracy is high
NFR-5	Availability	The website is portable and mobile-responsive as well. To run on any device, it simply needs the most minimum requirements

NFR-6	Scalability	It can be extended further to provide API which can be used by third party organizations such as Logistics companies, etc.
NFR-7	Compliance	It makes sure that all legal criteria are met, and this includes travel industry rules as well as payment card industry standards

PROJECT DESIGN

CHAPTER 5

PROJECT DESIGN

5.1 DATA FLOW DIAGRAMS

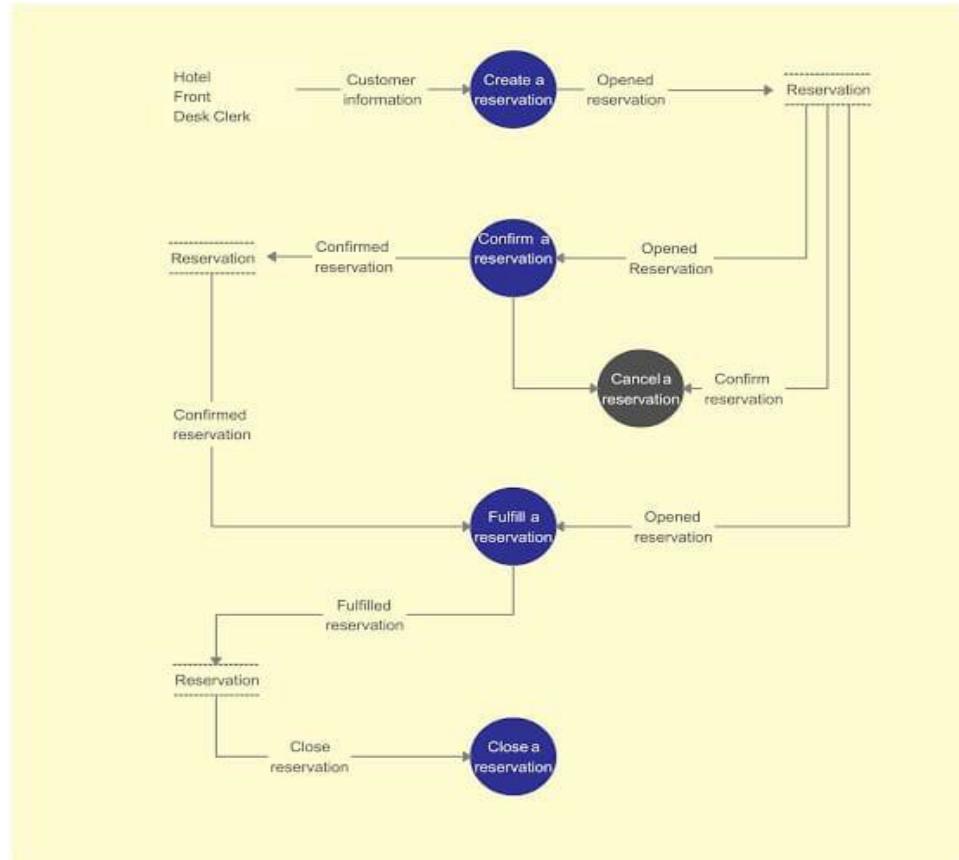


Fig 5.1 Data Flow Diagram of Radisson Hotel

5.2 SOLUTION AND TECHNICAL ARCHITECTURE

5.2.1 Solution Architecture

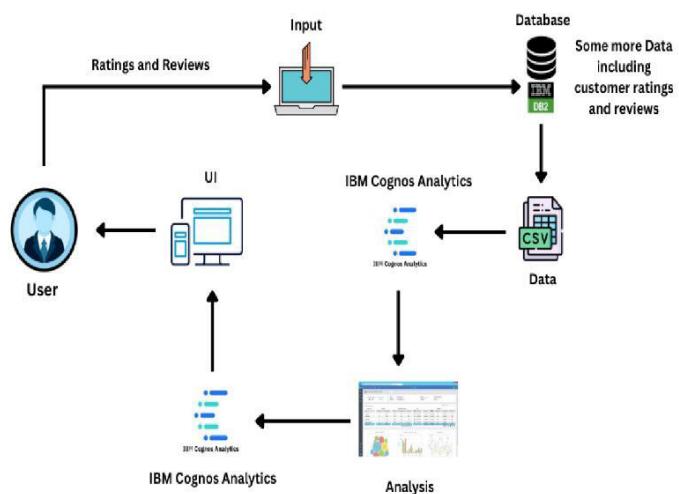


Fig 5.2.1 Solution Architecture of Radisson Hotel

5.2.2 Technical Architecture

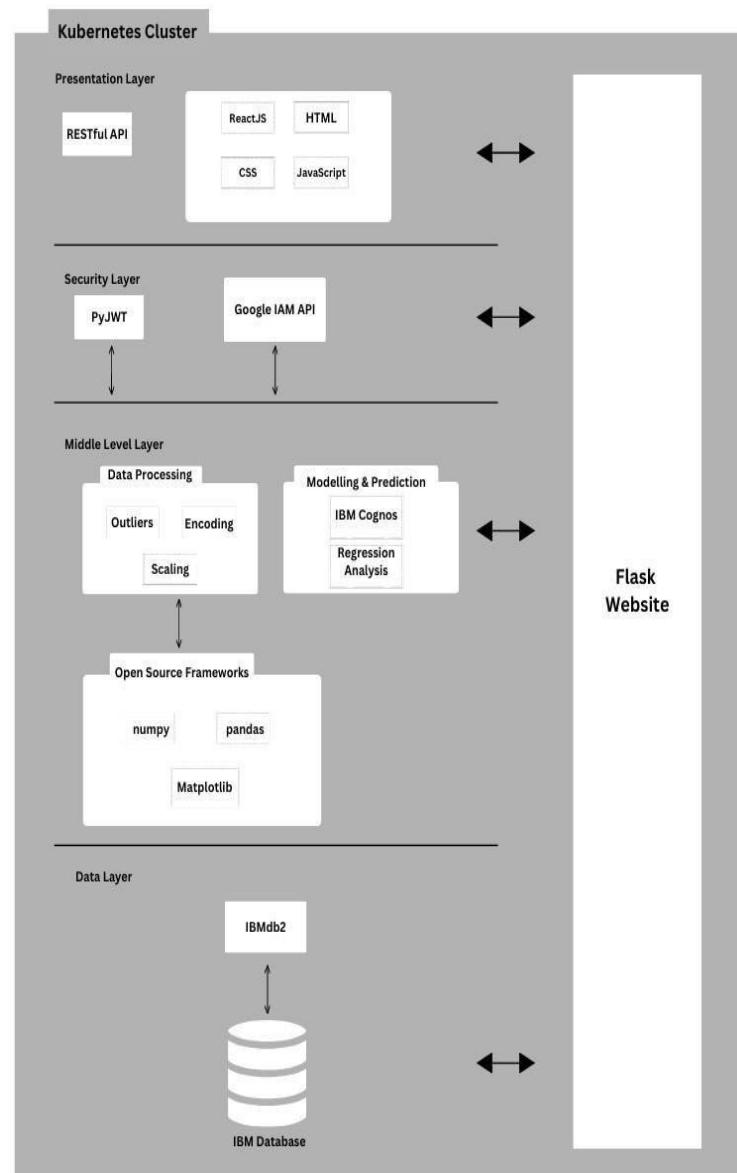


Fig 5.2.2 Technical Architecture of Radisson Hotel

5.3 USER STORIES

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer	Registration/ Login	USN-1	I can login to the dashboard through authentication.	I can access the dashboard	High	Sprint-3
	Dashboard	USN-2	Once, I enter the dashboard, I can enter my personal details	I can view the special package offer details	High	Sprint-1
		USN-3	As a customer I can select the special packages	I can select concierge services	Medium	Sprint-2
		USN-4	As a Traveler, I want to access a loyalty program for exclusive perks and discounts.	I can enter the registration process for loyalty program details	High	Sprint-1
		USN-5	I can view the hotel profiles	I can book the hotel as	Medium	Sprint-1

			near the destination place	per my convenience		
Admin		USN-6	Once, I completed all the process I can move to the booking confirmation	Admin confirms the booking transaction	Medium	Sprint-1,2,3,4
Customer	Ratings	USN-7	As a customer, after booking confirmation I can give ratings about the user experience.	Ratings and customer booking details are stored in a data base by the admin	Low	Sprint-4
Developer		USN-8	I can access the dashboard and view the ratings from the customer	Package details, concierge services, hotel profiles are updated according to the ratings	Medium	Sprint-4
		USN-9	As a developer, I can update the package	I can request access for data base from the	High	Sprint-4

			details & ratings to the data base and make the data	admin and update the data as soon as possible		
--	--	--	--	---	--	--

CODING & SOLUTIONING

CHAPTER 6

CODING & SOLUTIONING

6.1 FEATURE-1

Dashboard

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Dashboard</title>
<link href="\static\css\style.css" rel="stylesheet">
</head>
<body>
<section id="dashboard" class="services section-bg">
<div class="container" data-aos="fade-up">
<div class="section-title">
<h2>Dashboard</h2>
</div>
<div class="row">
<iframe src="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2Fhotel%2Bdashboard&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&mode=dashboard&subView=model0000018b4bcb9c9d_00000002" width="1600" height="700" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>
```

```
</div>
</div>

</section>

</body>

</html>
```

6.2 FEATURE-2

Report

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Report</title>
<link href="\static\css\style.css" rel="stylesheet">
</head>
<body>
<section id="report" class="services section-bg">
<div class="container" data-aos="fade-up">
<div class="section-title">
<h2>Report</h2>
</div>
<div class="row">
<iframe src="https://us3.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2FHotel%2BReport&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=run&prompt=false" width="1300" height="700" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>
</div>
</div>
</section>
</body>
</html>
```

6.3 FEATURE-3

Story

```
<!DOCTYPE html>
<html lang="en">

<head>
<meta charset="UTF-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Story</title>
<link href="\static\css\style.css" rel="stylesheet">
</head>
<body>

<section id="story" class="services section-bg">

<div class="container" data-aos="fade-up">

<div class="section-title">
<h2>Story</h2>
</div>

<div class="row">

<iframe src="https://us3.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders%2Fhotel%2Bstory&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&sceneId=model0000018b4c3a2792_00000000&sceneTime=1700" width="1300" height="700" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>

</div>
</div>

</section>

</body>
</html>
```

6.4 DATABASE SCHEMA

The screenshot shows the IBM Db2 on Cloud interface for managing database schemas. At the top, there's a navigation bar with links for Load Data, Load History, Tables, Views, Indexes, Aliases, MQTs, Sequences, and Application objects. Below the navigation bar, there are tabs for Source (selected), Target, Define, and Finalize. A message indicates that the file 'Bookings.csv' is being loaded. On the left, there's a sidebar with icons for Home, SQL, and other tools. The main area is titled 'Select a load target' and shows two tables: 'Schema' and 'Table'. The 'Schema' table contains one entry: 'YKW27661'. The 'Table' table contains two entries: 'BOOKINGS' and 'SESSIONS'. At the bottom right, there are 'Back' and 'Next' buttons.

Fig 6.4 Database Schema

RESULTS

CHAPTER 7

RESULTS

7.1 PERFORMANCE METRICS

7.1.1 Amount of data rendered to DB2.

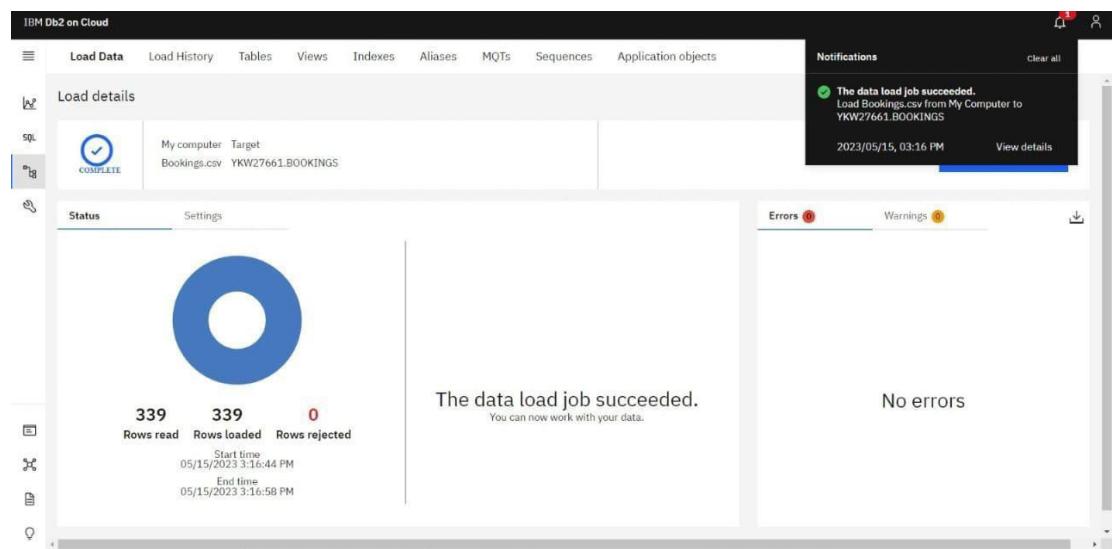


Fig 7.1.1 Amount of data rendered to DB2.

7.1.2 Utilization of Data filters

Dashboard

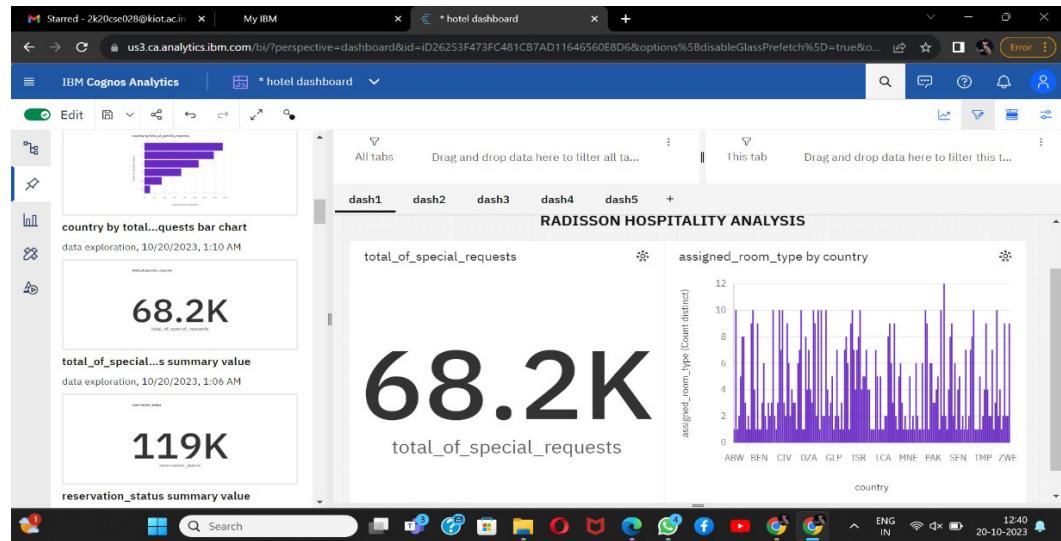


Fig 7.1.2.1 Dashboard of Analysis the Performance & Efficiency of the Radisson hotels.

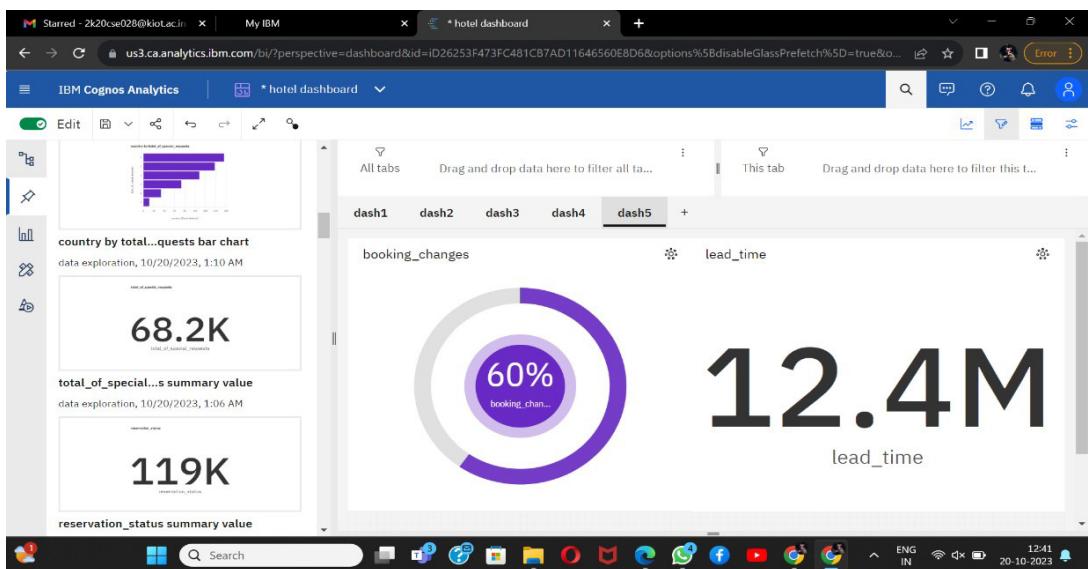


Fig 7.1.2.2 Dashboard of Analysis the Performance & Efficiency of the Radisson hotels.

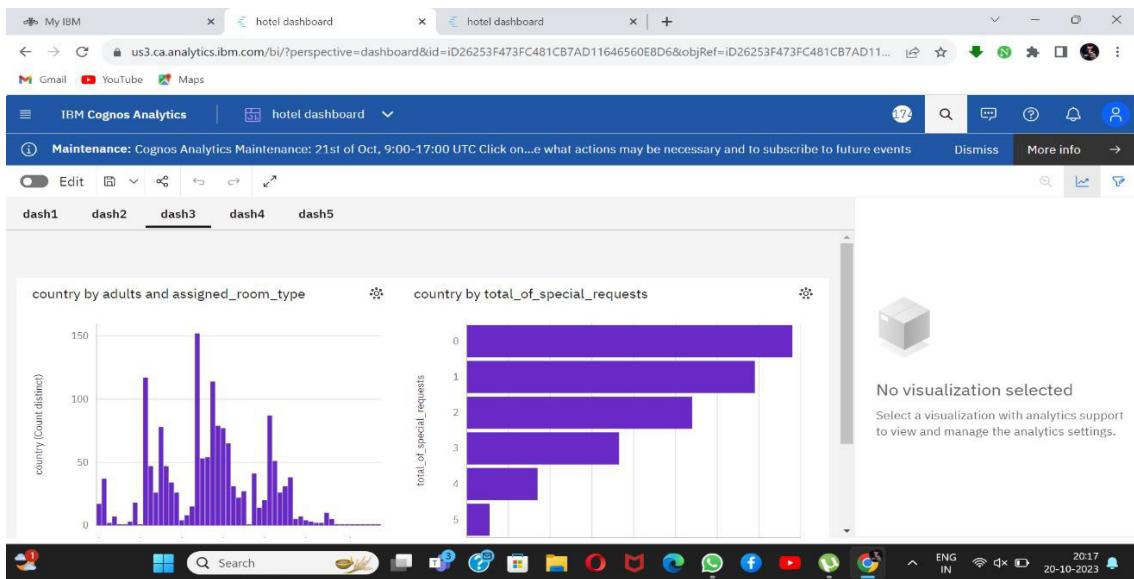


Fig 7.1.2.3 Dashboard of Analysis the Performance & Efficiency of the Radisson hotels.

Story

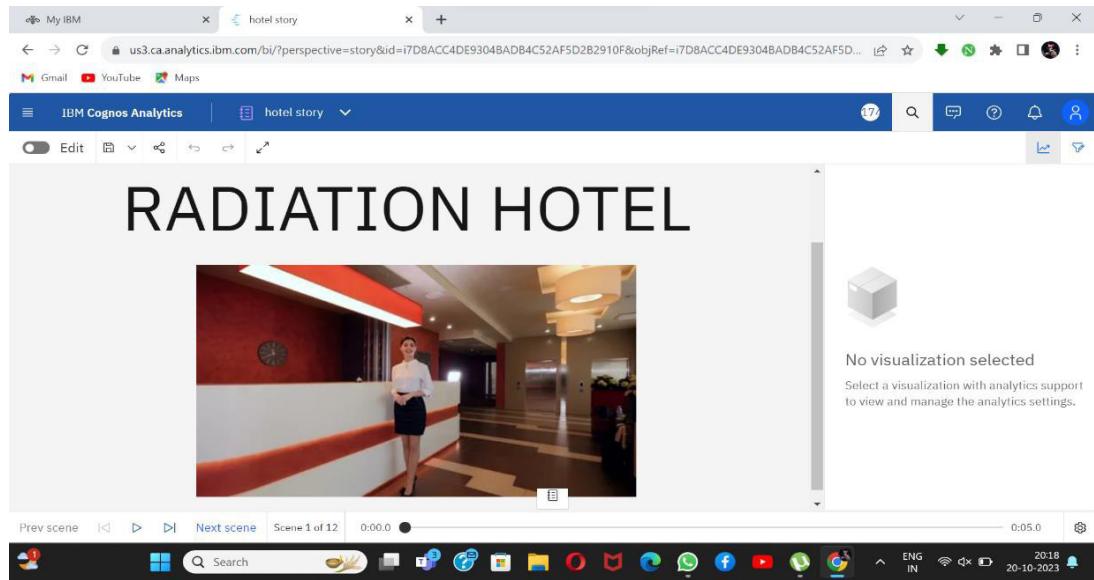


Fig 7.1.2.4 Story of Analysis the Performance & Efficiency of the Radisson hotels.

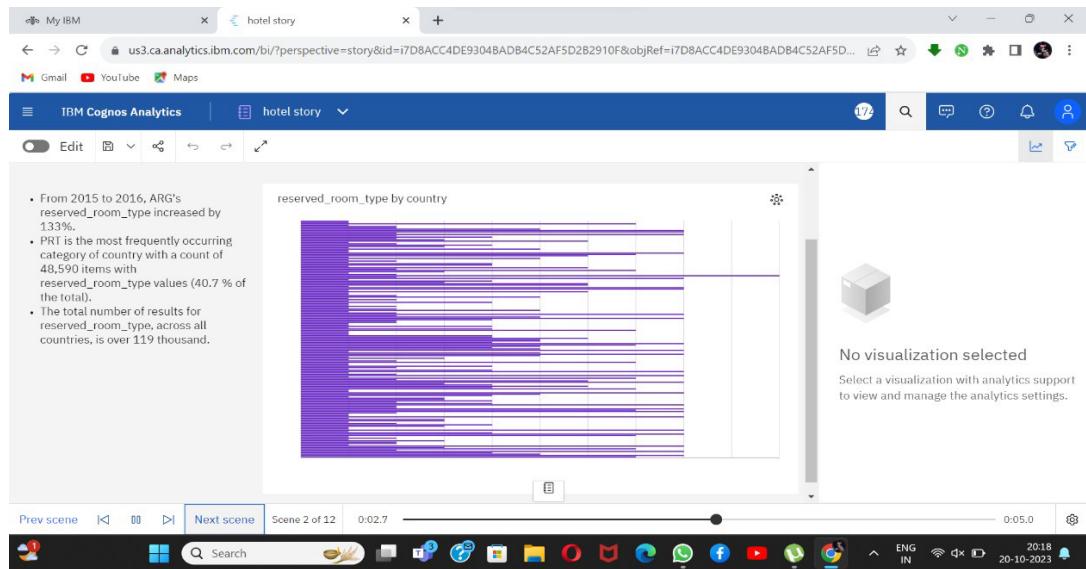


Fig 7.1.2.5 Story of Analysis the Performance & Efficiency of the Radisson hotels.

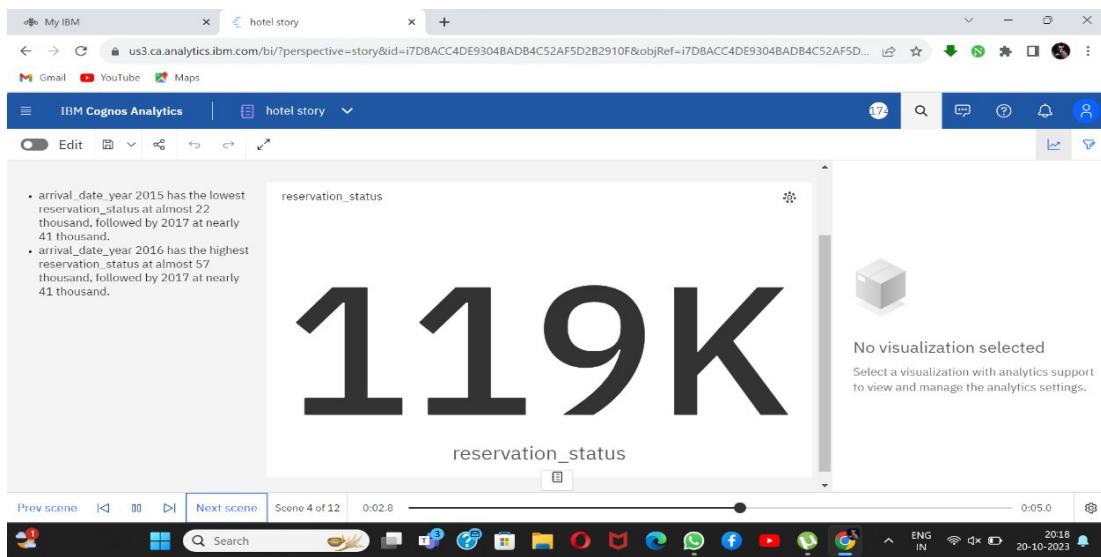


Fig 7.1.2.6 Story of Analysis the Performance & Efficiency of the Radisson hotels.

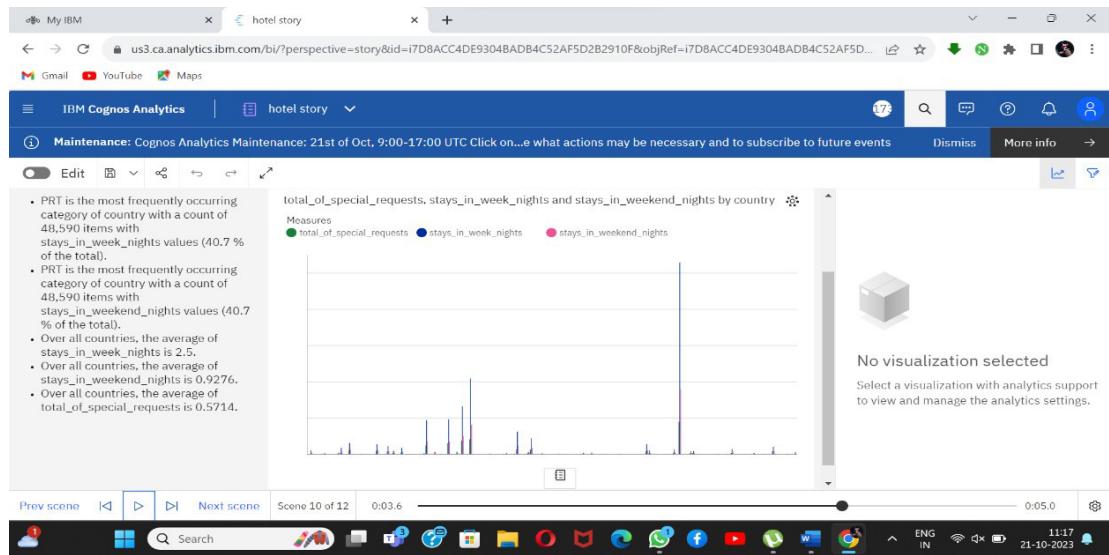


Fig 7.1.2.7 Story of Analysis the performance & Efficiency of Radisson hotels.

Report

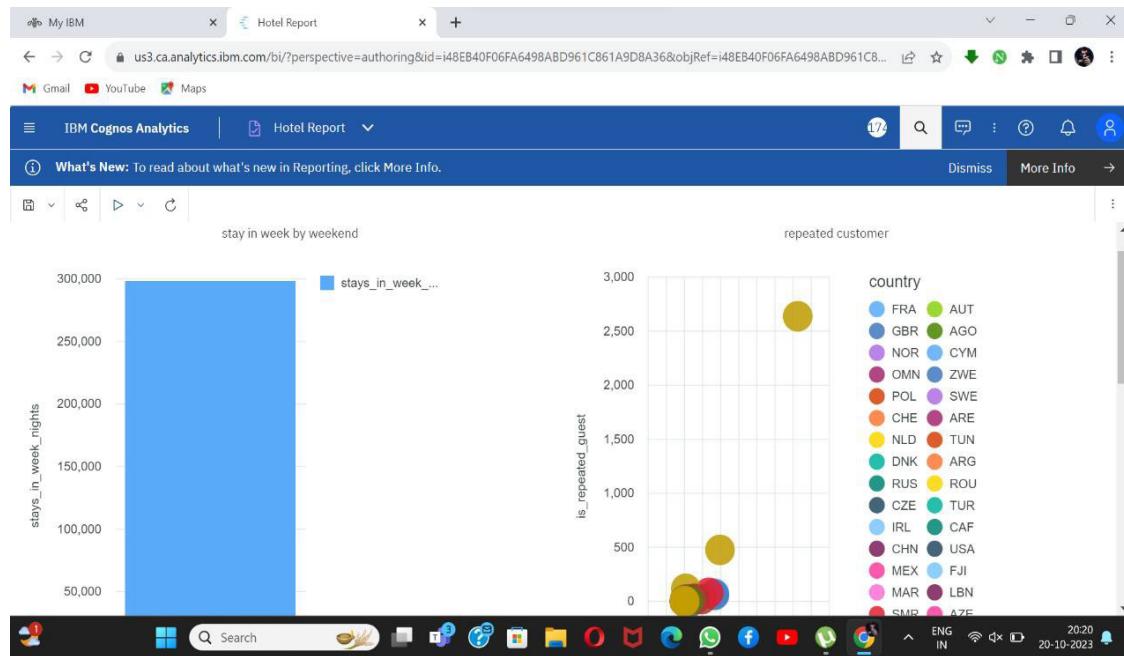


Fig 7.1.2.8 Report of Analysis the Performance & Efficiency of Radisson hotels.

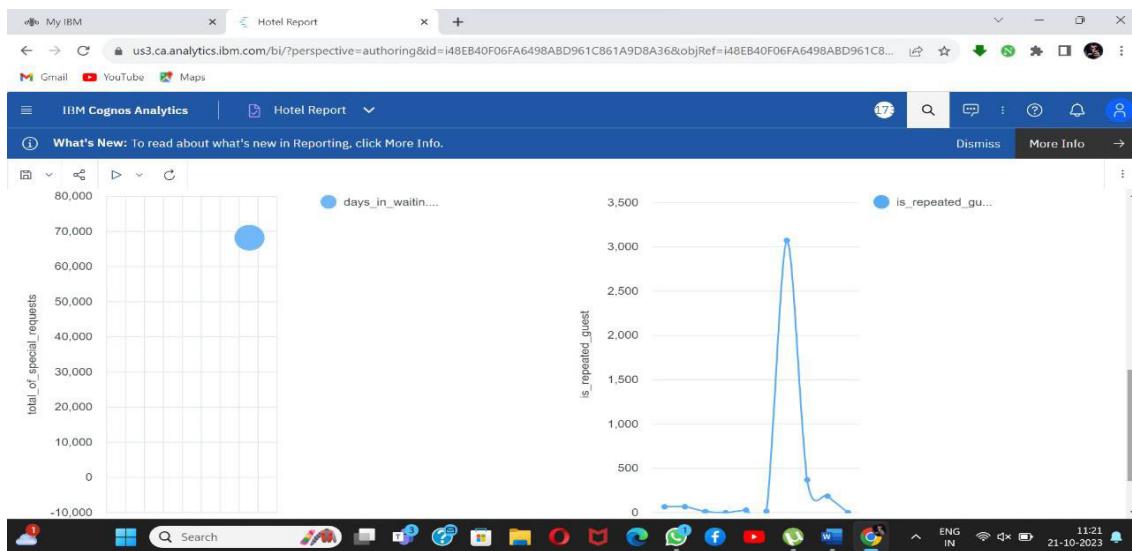


Fig 7.1.2.9 Report of Analysis the Performance & Efficiency of Radisson hotels..

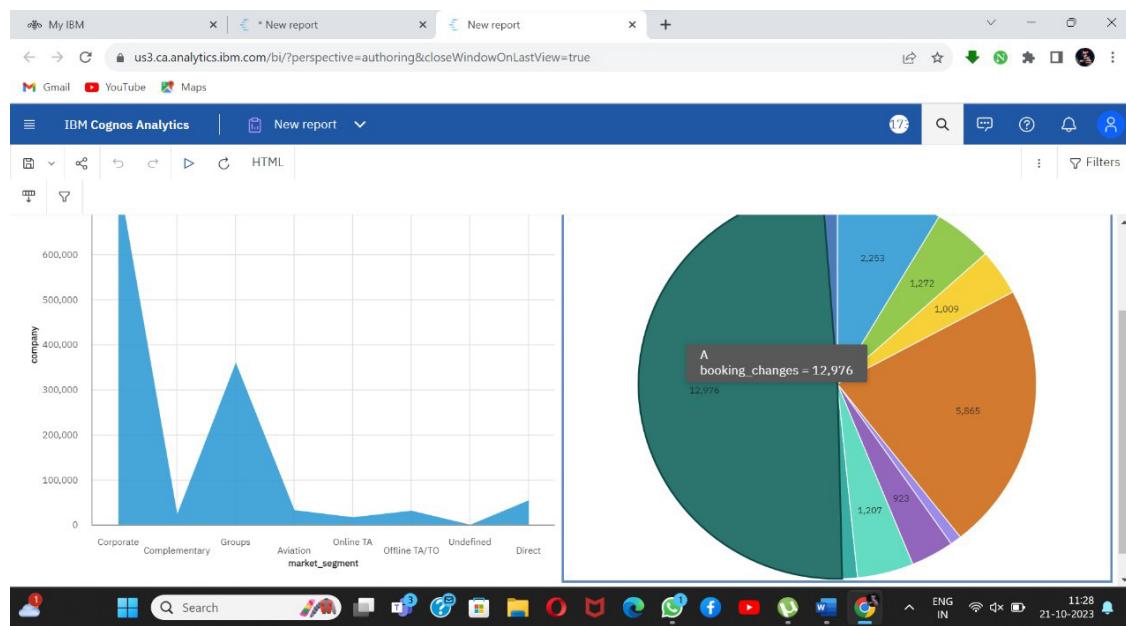


Fig 7.1.2.10 Report of Analysis the Performance & Efficiency of Radisson hotels.

7.1.3 No. of Calculation Fields

The screenshot shows the IBM Cognos Analytics interface. On the left, there's a sidebar titled 'Data module' with a search bar and a tree view of calculation fields under 'reserved...om_type'. The main area is a grid titled 'Grid' showing data for 'Row Id', 'hotel', 'is_canceled', 'lead_time', 'arrival_date_year', and 'arriva...'. The first few rows show data for 'Resort Hotel' with various cancellation status and lead times. The bottom right corner shows system status: ENG IN, 11:42, 21-10-2023.

Fig 7.1.3 No. of Calculation Fields

7.1.4 No. of Visualizations/Graphs

The screenshot shows the IBM Cognos Analytics interface with an exploration titled 'total_of_special_requests'. A large digital sign visualization displays the value '68.2K' for 'total_of_special_requests'. To the left, there's a sidebar with pinned items, one of which is also a digital sign showing '119K'. The top navigation bar shows 'My IBM' and 'New exploration'. The bottom right corner shows system status: ENG IN, 11:23, 20-10-2023.

Fig 7.1.4.1 Total of Special Request.

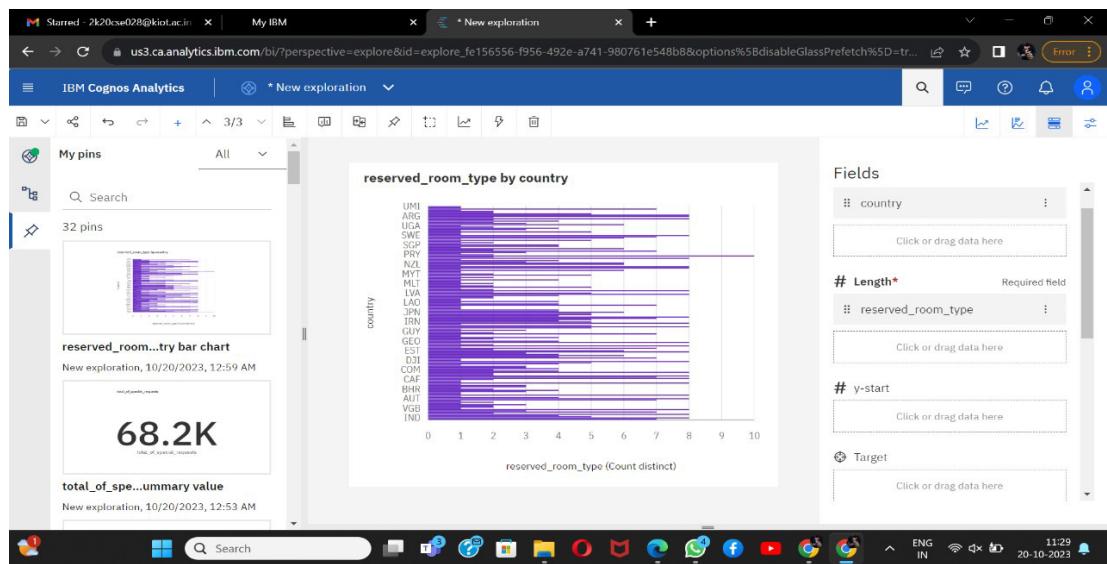


Fig 7.1.4.2 Total Room Reserved by the customer in country.

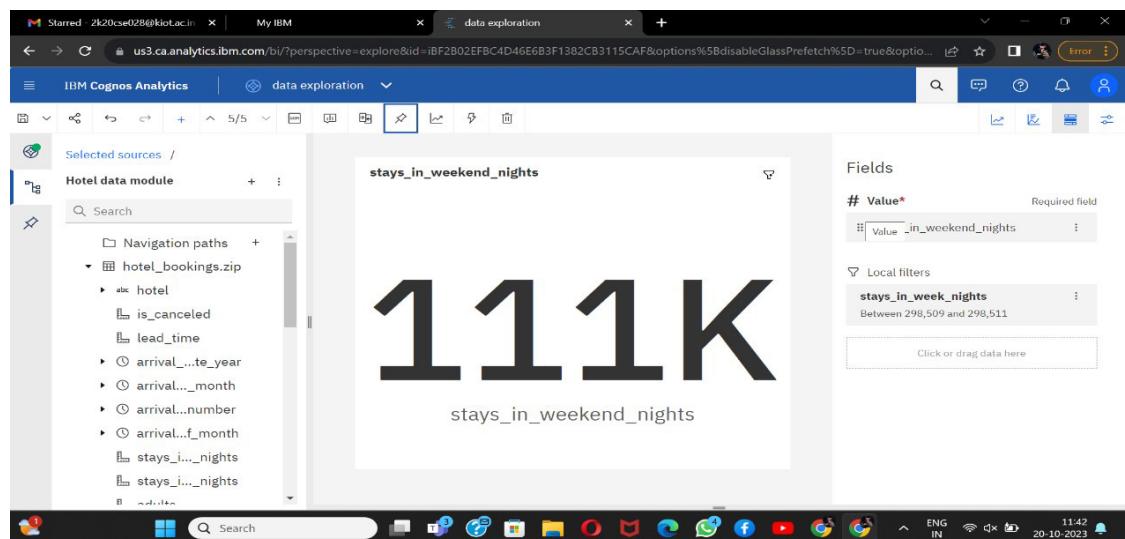


Fig 7.1.4.3 Customer Analysis according to the day

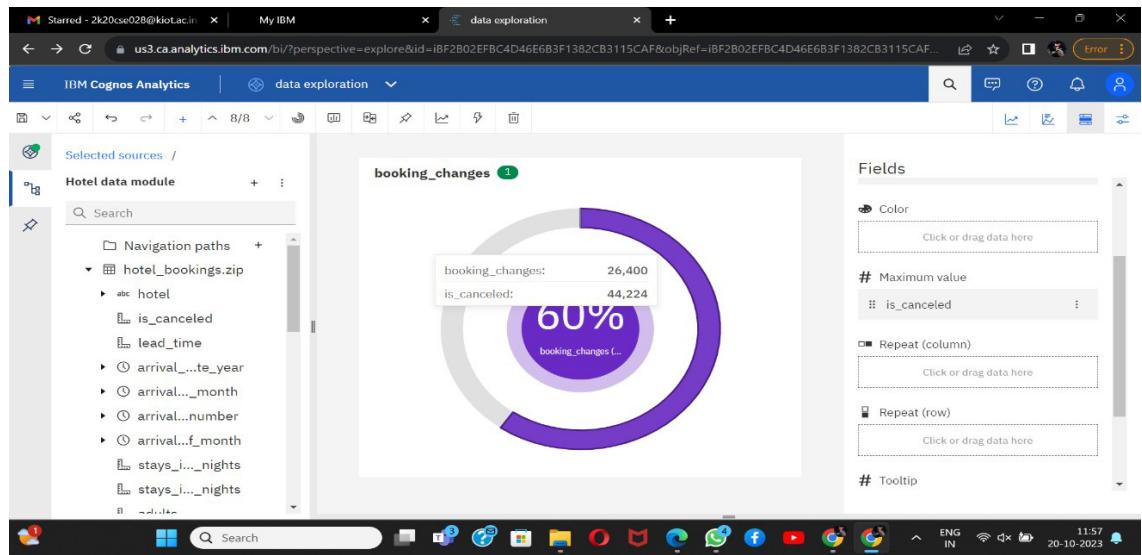


Fig 7.1.4.4 Overall Room Booking & Canceled Details.

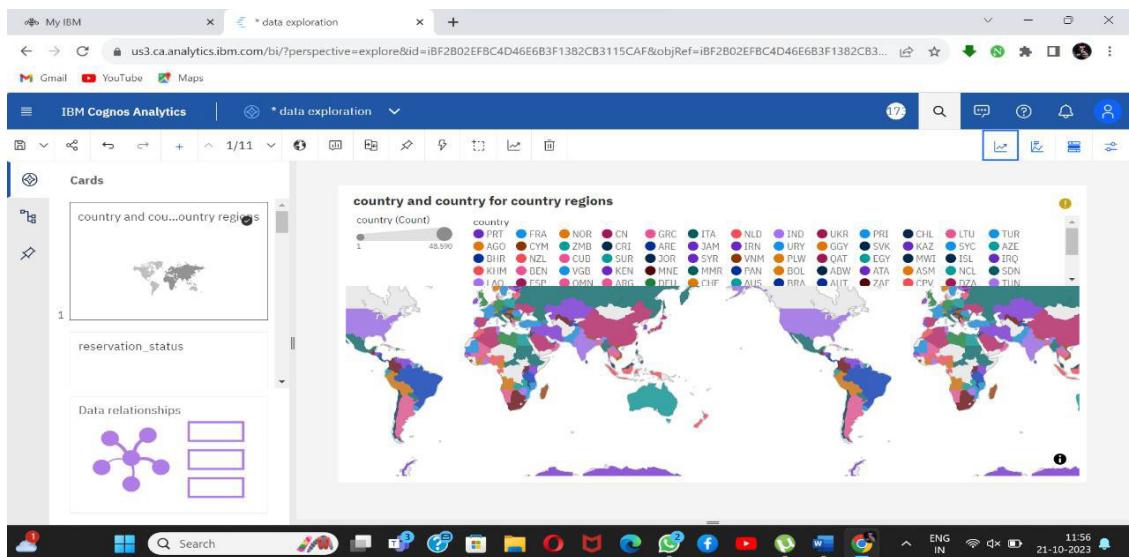


Fig 7.1.4.5 Customer Analysis as per Destination Country

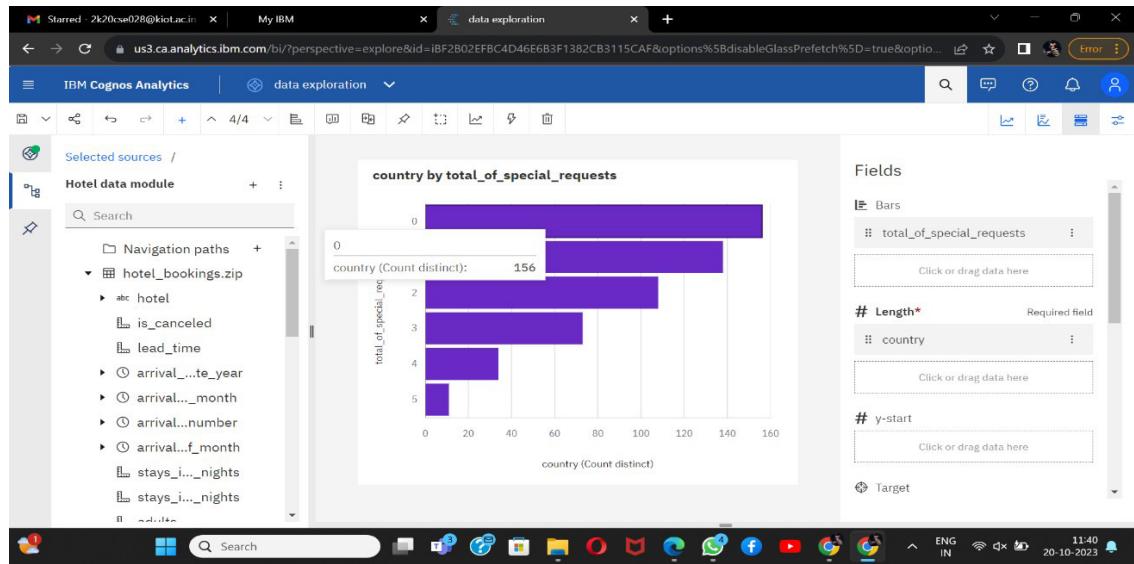


Fig 4.7.1.6 Total of Special Request by Country.

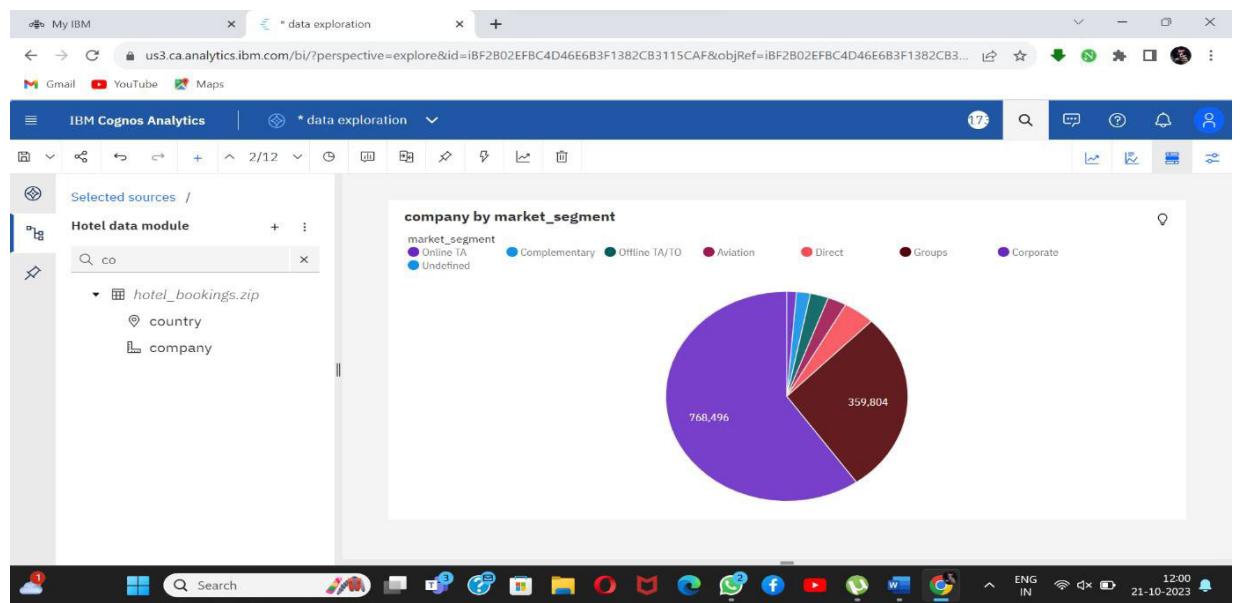


Fig 7.1.4.7 Overall Analysis of Market Segment.

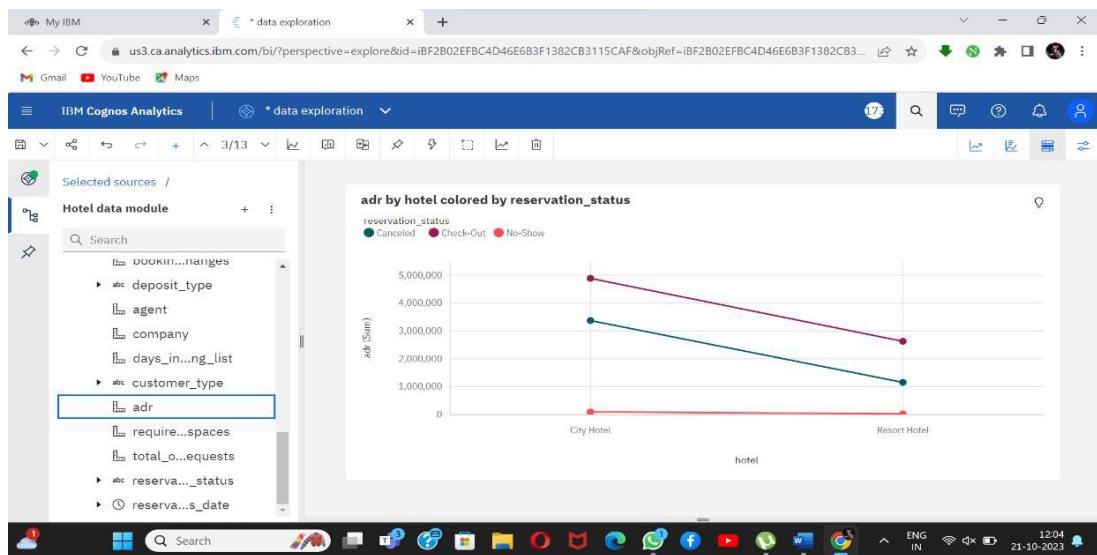


Fig 7.1.4.8 Hotel Analysis by Booking Status.

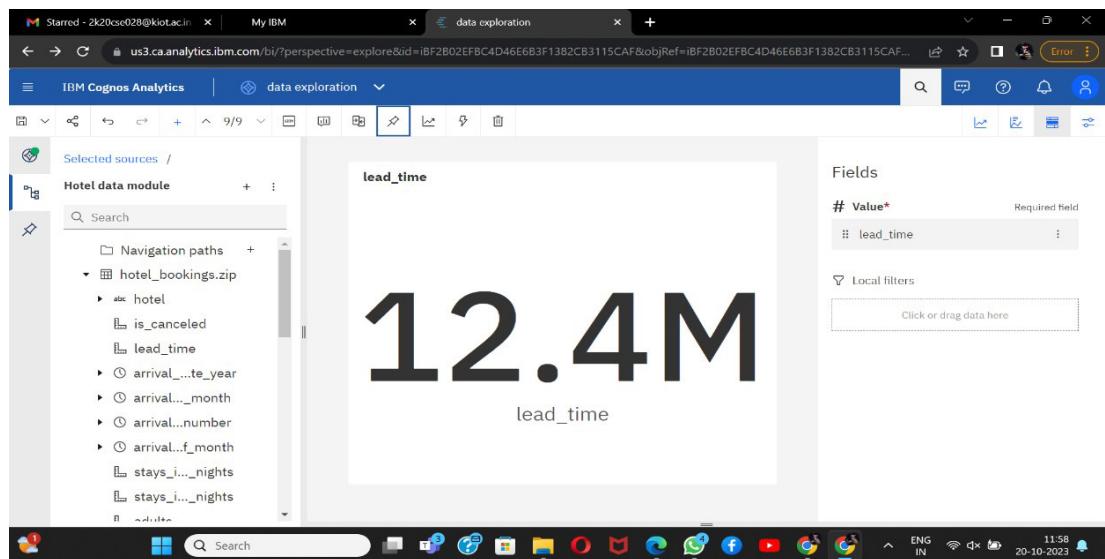


Fig 7.1.4.9 Total Time Generated According to day wise.

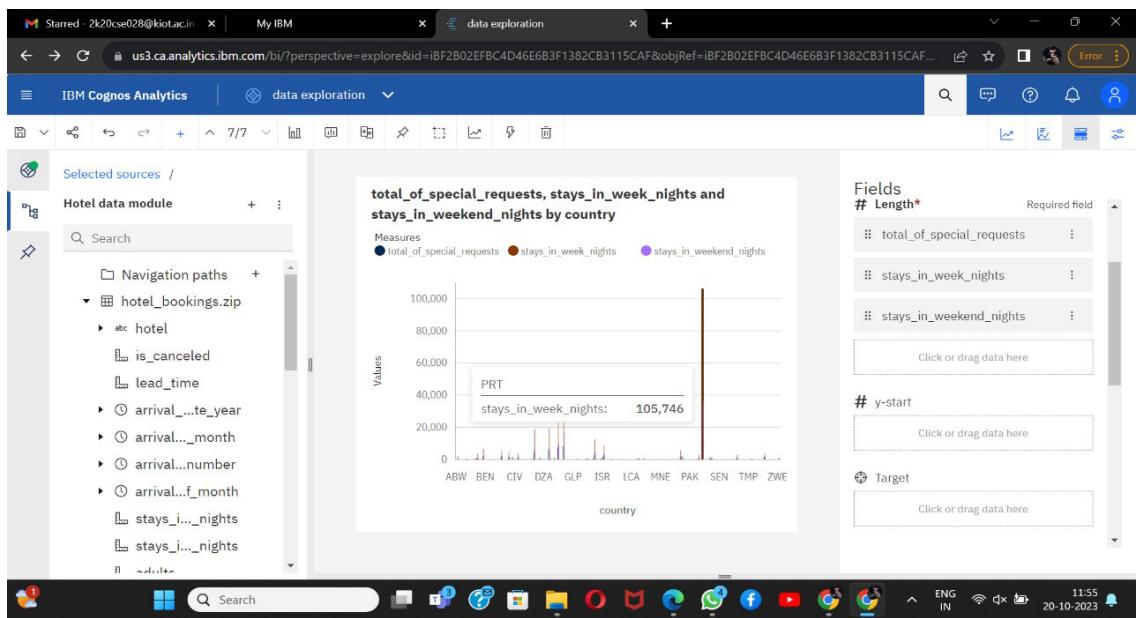


Fig 7.1.4.10 Passenger Bookings Platform Analysis

ADVANTAGES AND DISADVANTAGES

CHAPTER 8

ADVANTAGES AND DISADVANTAGES

8.1 ADVANTAGES

1. Data-Driven Decision Making: Analyzing the performance and efficiency of Radisson Hotels provides the advantage of basing decisions on hard data rather than assumptions. This enables the company to pinpoint areas that need improvement and make strategic choices that are more likely to yield positive results. It fosters a culture of informed decision-making.
2. Operational Optimization: One of the primary advantages is the potential for operation optimization. By identifying inefficiencies in various processes, such as supply chain management, room turnover times, and energy consumption, the company can reduce costs and enhance resource allocation, leading to increased profitability.
3. Enhanced Customer Experiences: Analyzing customer feedback and preferences can result in improved guest satisfaction and loyalty. By addressing common complaints or concerns, Radisson Hotels can tailor their services and amenities to meet customer expectations, which can lead to higher occupancy rates and repeat business.

4. Industry Insights: The research findings can be valuable not only for Radisson Hotels but also for the broader hospitality industry. Sharing insights and best practices can contribute to elevating industry standards, fostering innovation, and fostering healthy competition.

8.2 DISADVANTAGES

1. Data Collection Challenges: One major drawback is the challenge of gathering and compiling, especially if Radisson Hotels have a large and diverse portfolio of properties. This may require dedicated data collection tools and personnel.
2. Resistance to Change: Implementing recommended changes based on the analysis might face resistance from existing staff and management. Staff may be resistant to altering established procedures, and management may be hesitant to invest in changes with uncertain outcomes, potentially slowing down the process of operational improvement.
3. Cost: Making operational improvements based on the analysis can involve substantial investments, affecting short-term profitability. Upgrading facilities, staff training, and implementing new technologies can be expensive. The return on these investments may not be immediate, which can pose financial challenges.

CONCLUSION

CHAPTER 9

CONCLUSION

In conclusion, the comprehensive analysis of Radisson Hotels' performance and efficiency is a pivotal endeavor with a wide range of advantages. This project has provided valuable insights into the data-driven decision-making process that can lead to substantial improvements. By addressing operational inefficiencies and enhancing customer experiences, Radisson Hotels can position themselves for long-term success and competitiveness within the hospitality industry.

However, it's essential to acknowledge the challenges associated with this analysis. Data collection and integration can be complex and resource-intensive, making it imperative for organizations to have robust data management systems. Resistance to change within the organization can be a significant hurdle, requiring careful change management strategies and effective communication to gain buy-in from all stakeholders.

Looking ahead, the future scope of Radisson Hotel is promising. Advancements in technology, such as enhanced personalization, AR/VR integration, blockchain and smart contracts, and a mobile-first approach, can enhance the user experience and offer more seamless and secure travel bookings. Furthermore, the industry can embrace sustainability, community-driven features, and cater to emerging markets to meet the evolving needs and preferences of travelers.

However, it's essential to acknowledge the challenges associated with this analysis. Data collection and integration can be complex and resource-intensive, making it imperative for organizations to have robust data management systems. The financial investments needed for operational improvements may affect short-term profitability, but it's crucial to view these expenses as investments in long-term success.

Furthermore, the constantly evolving market dynamics underline the need for ongoing analysis and adaptation. The analysis's effectiveness is subject to the ever-changing external environment, and the project must remain flexible and open to adjustments to address unforeseen challenges effectively with a strategic approach and a commitment to innovation, this analysis can foster long-term growth and success for both the company and the industry as a whole.

FUTURE SCOPE

CHAPTER 10

FUTURE SCOPE

1. Enhanced personalization: Radisson Hotel are likely to invest more in advanced algorithms and artificial intelligence to provide personalized travel recommendations. By analyzing user preferences, behaviors, and past bookings, aggregators can offer tailored suggestions and options that match individual traveler preferences, making the booking process more convenient and efficient.
2. Augmented Reality (AR) and Virtual Reality (VR): Radisson Hotel is committed to enhancing the traveler's experience by embracing cutting-edge technologies such as Augmented Reality (AR) and Virtual Reality (VR). By integrating these immersive technologies, we aim to offer travelers virtual tours, 360-degree views of our accommodations, and interactive experiences.
3. Blockchain and Smart Contracts We are exploring the integration of blockchain technology and smart contracts to enhance the security and trust in our booking processes. By leveraging blockchain, we aim to streamline payments, reduce fraud, and enable direct and secure communication between our guests and our service providers. Smart contracts will play a pivotal role in automating and enforcing terms and conditions, ensuring a seamless and worry-free booking experience for all our guests.
4. Integration of ancillary services: At Radisson Hotel, we understand that a seamless and enjoyable travel experience goes beyond just accommodation. We are dedicated to enhancing our guests' journeys by expanding our services to include seamless integration with local transportation providers, assisting with restaurant reservations, offering access to event tickets, and providing a comprehensive range of travel-related services.

5. Sustainability and eco-friendly travel: With increasing awareness and emphasis on sustainability, Radisson Hotel can promote eco-friendly travel options. They can highlight accommodations with green certifications, carbon offset programs for flights, encouraging travelers to make conscious.

APPENDIX

CHAPTER 11

APPENDIX

A.1 SOURCE CODE

Flask code

app.py

```
from flask import Flask, render_template
from flask_cors import CORS

app = Flask(__name__)
CORS(app)

@app.route("/")
def ibm():
    return render_template("ibm.html")

@app.route("/dashboard")
def dashboard():
    return render_template("dashboard.html")

@app.route("/story")
def story():
    return render_template("story.html")

@app.route("/report")
def report():
```

```
return render_template("report.html")
```

```
if __name__ == "__main__":
    app.run(debug=True)
```

ibm.html

```
<header id="header" class="fixed-top ">
<div class="container d-flex align-items-center">

    <h1 class="logo me-auto"><a href="index.html">ABDA</a></h1>
    <!-- Uncomment below if you prefer to use an image logo -->
    <!--<a href="index.html" class="logome-auto"></a>-->

<nav id="navbar" class="navbar">
    <ul>
        <li><a class="nav-link scrollto active" href="#hero">Home</a></li>
        <li><a class="nav-link scrollto" href="#about">About</a></li>
        <li><a class="nav-link scrollto" href="#services">Services</a></li>
        <li><a class="nav-link scrollto" href="#portfolio">Portfolio</a></li>
        <li><a class="nav-link scrollto" href="#team">Team</a></li>
        <li class="dropdown"><a href="#"><span>Drop Down</span> <i
class="bi bi-chevron-down"></li></a>
    <ul>
```

```

<li><a href="/dashboard">Dashboard</a></li>

<ul>
    <li><a href="/dashboard">Dashboard</a></li>
    <li><a href="/story">Story</a></li>
    <li><a href="/report">Report</a></li>
</ul>
</li>

<li><a href="/story">Story</a></li>
    <li><a href="/report">Report</a></li>
</ul>
</li>
<li><a class="nav-link scrollto" href="#contact">Contact</a></li>
<li><a class="getstarted scrollto" href="#about">Get Started</a></li>
</ul>
<i class="bi bi-list mobile-nav-toggle"></i>
</nav><!-- .navbar -->

</div>
</header>

```

dashboard.html

```

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

```

```
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Dashboard</title>
<link href="\static\css\style.css" rel="stylesheet">
</head>
<body>
<section id="dashboard" class="services section-bg">
<div class="container" data-aos="fade-up">
<div class="section-title">
<h2>Dashboard</h2>
</div>
<div class="row">

<iframe src="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2Fhotel%2Bdashboard&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&mode=dashboard&subView=model0000018b4bcb9c9d_00000002" width="1600" height="700" frameborder="0" gesture="media" allow="encrypted-media" allowfullscreen=""></iframe>
```

```
</div>
</div>
</section>
</body>
</html>
```

story.html

```
<!DOCTYPE html>

<html lang="en">

<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Story</title>
<link href="\static\css\style.css" rel="stylesheet">
</head>
<body>
<section id="story" class="services section-bg">

<div class="container" data-aos="fade-up">
<div class="section-title">

<h2>Story</h2>
</div>
<div class="row">

<iframe src="https://us3.ca.analytics.ibm.com/bi/?perspective=story&pathRef=.my_folders%2Fhotel%2Bstory&closeWindowOnLastView=true&ui_appbar=false&ui_navbar=false&shareMode=embedded&action=view&sceneId=model0000018b4c3a2792_00000000&gt;
```

```
sceneTime=1700" width="1300" height="700" frameborder="0" gesture="media"
allow="encrypted-media" allowfullscreen=""></iframe>
</div>
</section>
</body>
</html>
```

report.html

```
<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta http-equiv="X-UA-Compatible" content="IE=edge">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Report</title>

<link href="\static\css\style.css" rel="stylesheet">

</head>

<body>

<section id="report" class="services section-bg">

<div class="container" data-aos="fade-up">
<div class="section-title">

<h2>Report</h2>

</div>

<div class="row">

<iframe src="https://us3.ca.analytics.ibm.com/bi/?pathRef=.my_folders%"
```

```
2FHotel%2BReport&closeWindowOnLastView=true&ui_appbar  
=false&ui_navbar=false&shareMode=embedded&action=run  
&prompt=false" width="1300" height="700" frameborder="0" gesture=  
"media" allow="encrypted-media" allowfullscreen=""></iframe>  
</div>  
</div>  
</section>  
</body>  
</html>
```

A.2 GITHUB & PROJECT VIDEO DEMO LINK

GitHub

Link: [https://github.com/Aakash07122002/NM2023TMID02631
-DATA-ANALYTICS-RADISSON](https://github.com/Aakash07122002/NM2023TMID02631-DATA-ANALYTICS-RADISSON)

Project Demo Video

Link: [IBM Project Demo Video.mp4](#)