

# Tech Saksham

## Case Study Report

### Data Analytics with Power BI

## **“360-Degree Business Analysis of Online Delivery Apps Using Power BI”**

**“Sivanthi Arts and Science College for Women”**

NM ID	NAME
89D81C150DAE8EA80884A087A0C937F6	C.SNEHA LAKSHMI

Trainer Name:R.UMAMAHESWARI

Master Trainer:R.UMAMAHESWARI

# ABSTRACT

**This abstract highlights the comprehensive nature of the 360 degree business analysis showcasing how Power BI can be leveraged to gain actionable insights and drive strategic initiatives in the competitive online delivery apps market. The development of interactive dashboards and automated reports in Power BI enables stakeholders to monitor key metrics and kpis facilitating data driven decision making strategic recommendations encompass areas for improvement, innovation revenue, growth and operational excellence within the online delivery ecosystem.**

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Problem Statement**

**In today's highly competitive online delivery app market, business face challenges in understanding and optimizing various aspects of their operations to stay ahead. These challenges include analyzing customer behavior, optimizing delivery logistics managing inventory effectively and making data driver decisions to improve overall performance and profitability.**

#### **1.2 Proposed Solution**

**By implementing solutions using Power BI, business can gain a comprehensive understanding of their online delivery operations, optimize processes, improve customers satisfaction drive revenue growth and stay competitive in the rapidly evolving digital market place.**

### 1.3 Feature

- **Data collection and integration:** Gather data from various sources such as transactional databases, CRM systems website analytics and customer feedback platforms.
- **Financial analysis:** Analyze financial data including revenue, costs, profitably by product service, region, or customer segment.
- **Collaboration and sharing:** Publish dashboards and reports to Power BI service for sharing with stakeholders.
- **Operational Analysis:** Analyze operational metrics such as delivery times, order fulfillment rates, inventory, turnover and work force efficiency.

### 1.4 Advantages

- **Comprehensive data integration:** Power BI can integrate data from various sources such as sales transactions, customer feedback delivery items, inventory levels and more.
- **Real time monitoring:** With power BI's real time monitoring capabilities, business can track key metrics like order volumes, delivery times, customer satisfaction sources and inventory levels in real time.
- **Interactive dashboards:** Power BI allows you to create interactive and visually appealing dashboards that can be customized based on specific kpis.

## **1.5 Scope**

**Track sales performance over time. Analyze revenue streams from different products on services. Segment customers based on demographics behavior or purchasing patterns. By leveraging Power BI's capabilities for data visualization, data modeling and advanced analytics business can gain comprehensive insights in to their online delivery operations and make data driven decisions to improve performance, enhance customer satisfaction and drive business growth.**

## CHAPTER 2

### SERVICES AND TOOLS REQUIRED

#### 2.1 Services Used

- **Data Collection:**

Gather data from various sources such as transaction data bases, user feedback app analytics customer services, delivery metrics etc. Ensure data quality and compatibility for analysis in Power BI.

- **Dashboard and reports creation:**

Create interactive dashboards and reports in Power BI using the prepared data model. Use visualizations like charts, graphs, maps, and tables to present data insights effectively.

#### 2.2 Tools and Software used

##### Tools:

- **ETL Tools:**

Depending on the complexity and volume of data you may need extract, transform load tools like microsoft power query on the ETL Tools to clean and prepare the data for analysis.

- **SQL:**

For more advanced data modeling requirements, you can leverage SSAS to creates tabular models and deploy them for use in Power BI.

##### Software Requirements:

- **PowerBI Desktop:**

This is the primary tool for creating, designing and publishing Power BI reports and dashboards. It's available as a free download from the microsoft website.

- **PowerBI Service:**

If you plan to share and collaborate on reports within your organization you will need Power BI pro licenses and access to the Power BI service for publishing reports creating dashboards and setting up data refresh schedules.

- **Microsoft Excel:**

Excel can be used along side Power BI for data preparation, especially if you take complex data transformations on calculation that are easier to perform in excel.



## CHAPTER 3

### PROJECT ARCHITECTURE

#### 3.1 Architecture

1. **Data Collection and Integration:**

Use Power BI data connections to integrate and transforms the data into a suitable format for analysis.

2. **Data Modeling:**

Define measures and calculated column to derive performance indicators relevant to online delivery apps.

3. **Dashboard and Report Creation:**

Design interactive dashboards using Power BI visuals like charts, graphs, maps and tables to represent key business metrics.

4. **Key metrics and Analysis:**

Perform trend analysis comparisons between different time periods or regions and identify patterns on anomalies in the data.

5. **Security and Governance:** Implement appropriate security measures to ensure data privacy and access control with in the Power BI environment.

## **CHAPTER 4**

### **MODELING AND RESULT**

#### **Manage relationship**

**You can effectively manage relationship and create a robust analytical framework for conducting a 360 degree business analysis of online delivery apps using Power BI. Adjust the specifics according to your data sources, business requirements and analysis objectives.**



This is the manage relationship for the given data about business analysis of online delivery apps using Power BI.

## Manage relationships

Active	From: Table (Column)	To: Table (Column)
<input checked="" type="checkbox"/>	Zomato Africa (Restaurant ID)	KPIs (Restaurant ID)
<input checked="" type="checkbox"/>	Zomato Asia (Restaurant ID)	KPIs (Restaurant ID)
<input checked="" type="checkbox"/>	Zomato Europe (Restaurant ID)	KPIs (Restaurant ID)
<input checked="" type="checkbox"/>	Zomato NAM (Restaurant ID)	KPIs (Restaurant ID)
<input checked="" type="checkbox"/>	Zomato Oceania (Restaurant ID)	KPIs (Restaurant ID)
<input checked="" type="checkbox"/>	Zomato SAM (Restaurant ID)	KPIs (Restaurant ID)

## Create relationship

we create relationship between Country Master and Zomato Oceania by using Restaurant ID, Country Code, City, Restaurant Name, Address, Locality and etc.

## Create relationship

Select tables and columns that are related.

Country Master
▼

Country Code	Country
94	Indonesia
94	Indonesia
null	null

Zomato Oceania
▼

Restaurant ID	Country Code	City	Restaurant Name,Address	Locality	Locali
16611114	14	Gympie	Whitebull Hotel,117 Marsh St, Armidale, NSW	Armidale	Armidale
16608864	14	Taree	Taste of Balingup,63 South Western Hwy, Balingup, WA	Balingup	Balingup
16604911	14	Geelong	Bridge Road Brewers,Old Coach House 50 Ford St, Beec...	Beechworth	Beechwo

Cardinality

Many to many (\*:\*)
▼

Cross filter direction

Both
▼

☒ Make this relationship active

☐ Apply security filter in both directions

☐ Assume referential integrity

It is a table transform column types by promoted Headers, Restaurant ID, Country Code, City, Restaurant Name, Address, Locality, Locality Verbose, Longitude, Latitude, cuisines.

`= Table.TransformColumnTypes("#Promoted Headers",{{"Restaurant ID", Int64.Type}, {"Country Code", Int64.Type}, {"City", type text}, {"Restaurant Name,Address", type text}, {"Locality", type text}, {"Locality Verbose", type text}, {"Longitude", type number}, {"Latitude", type number}, {"Cuisines", type text}})`

	Restaurant ID	Country Code	City	Restaurant Name,Address	Locality
1	6900714	215	Birmingham	Pepe's Piri Piri,254-256 Alum Rock Road, Alum Rock, Birmingham B8 3...	Alum Rock
2	6900883	215	Birmingham	Ju Ju's Cafe,1 Canal Square, Brindleyplace, Birmingham B16 8EH	Brindleyplace
3	6900374	215	Birmingham	Bank,4 Brindleyplace, Brindleyplace, Birmingham B1 2JB	Brindleyplace, Broad Street
4	6900224	215	Birmingham	Chaophraya,Middle Mall, Bullring Shopping Centre, Special street, Bull...	Bullring Shopping Centre, Southside
5	6900160	215	Birmingham	Handmade Burger Co.,Unit 3, St Martin Square, Bullring Shopping Cent...	Bullring Shopping Centre, Southside
6	6900050	215	Birmingham	Jamie's Italian,Middle Mall, Bullring Shopping Centre, Bullring, Birming...	Bullring Shopping Centre, Southside

Here we removed columns and changed types for Restaurant ID, Country Code, City, Restaurant Name, Address.

`= Table.RemoveColumns("#Changed Type",{"Restaurant ID", "Country Code", "City", "Restaurant Name,Address"})`

	Locality	Locality Verbose	Longitude	Latitude	Cuisines
1	Albany	Albany, Albany	-84.221535	31.610387	BBQ, Burger, Seafood
2	Albany	Albany, Albany	-84.207095	31.608743	American, BBQ
3	Albany	Albany, Albany	-84.154	31.5772	null
4	Albany	Albany, Albany	-84.2194	31.6158	Mexican
5	Albany	Albany, Albany	-84.206944	31.622412	Coffee and Tea, Sandwich
6	Albany	Albany, Albany	-84.1759	31.5882	null
7	Albany	Albany, Albany	-84.2193	31.616	Fast Food
8	Albany	Albany, Albany	-84.2091458	31.6155186	Asian, Chinese, Vegetarian
9	Albany	Albany, Albany	-84.205718	31.604905	Pizza, Bar Food, Sandwich

It is a table transform column types by promoted Headers, Restaurant ID, Country Code, City, Restaurant Name, Address, Locality, Locality Verbose, Longitude, Latitude, cuisines.

Table.TransformColumnTypes(#"Promoted Headers",{{"Restaurant ID", Int64.Type}, {"Country Code", Int64.Type}, {"City", type text}, {"Restaurant Name,Address", type text}, {"Locality", type text}, {"Locality Verbose", type text}, {"Longitude", type number}, {"Latitude", type number}, {"Cuisines", type text}})

	123 Restaurant ID	123 Country Code	A8C City	A8C Restaurant Name,Address	A8C Locality
1	18395463	189	Cape Town	The Butcher's Wife,15 Belgravia Road, Athlone, Cape Town	Athlone
2	18337845	189	Cape Town	Coco Safar,Ground Floor, Cavendish Square, Claremont, Cape Town	Cavendish Square, Claremont
3	6401732	189	Cape Town	La Parada,107 Bree Street, CBD, Cape Town	CBD
4	6401060	189	Cape Town	Jason Bakery,185 Bree Street, CBD, Cape Town	CBD
5	6400421	189	Cape Town	Truth Coffee,36 Buitenkant Street, CBD, Cape Town	CBD
6	6402177	189	Cape Town	Salushi,25 Protea Road, Claremont, Cape Town	Claremont
7	6401198	189	Cape Town	Origin Coffee Roasting,28 Hudson Street, De Waterkant, Cape Town	De Waterkant

It is a table transform column types by Restaurant ID, Average cost for two currency, Has table booking, Has online delivery, Price Range, Aggregation Rating, Rting Text, Votes.

Table.TransformColumnTypes(#"Promoted Headers",{{"Restaurant ID", Int64.Type}, {"Average Cost for two", Int64.Type}, {"Currency", type text}, {"Has Table booking", type text}, {"Has Online delivery", type text}, {"Price range", Int64.Type}, {"Aggregate rating", type number}, {"Rating text", type text}, {"Votes", Int64.Type}})

	123 Restaurant ID	123 Average Cost for two	A8C Currency	A8C Has Table booking	A8C Has Online delivery	123 Price range	1.2 Aggre
1	18395463	294	Rand(R)	No	No		3
2	18337845	300	Rand(R)	No	No		4
3	6401732	360	Rand(R)	No	No		4
4	6401060	180	Rand(R)	No	No		2
5	6400421	150	Rand(R)	No	No		2

## Replacing values

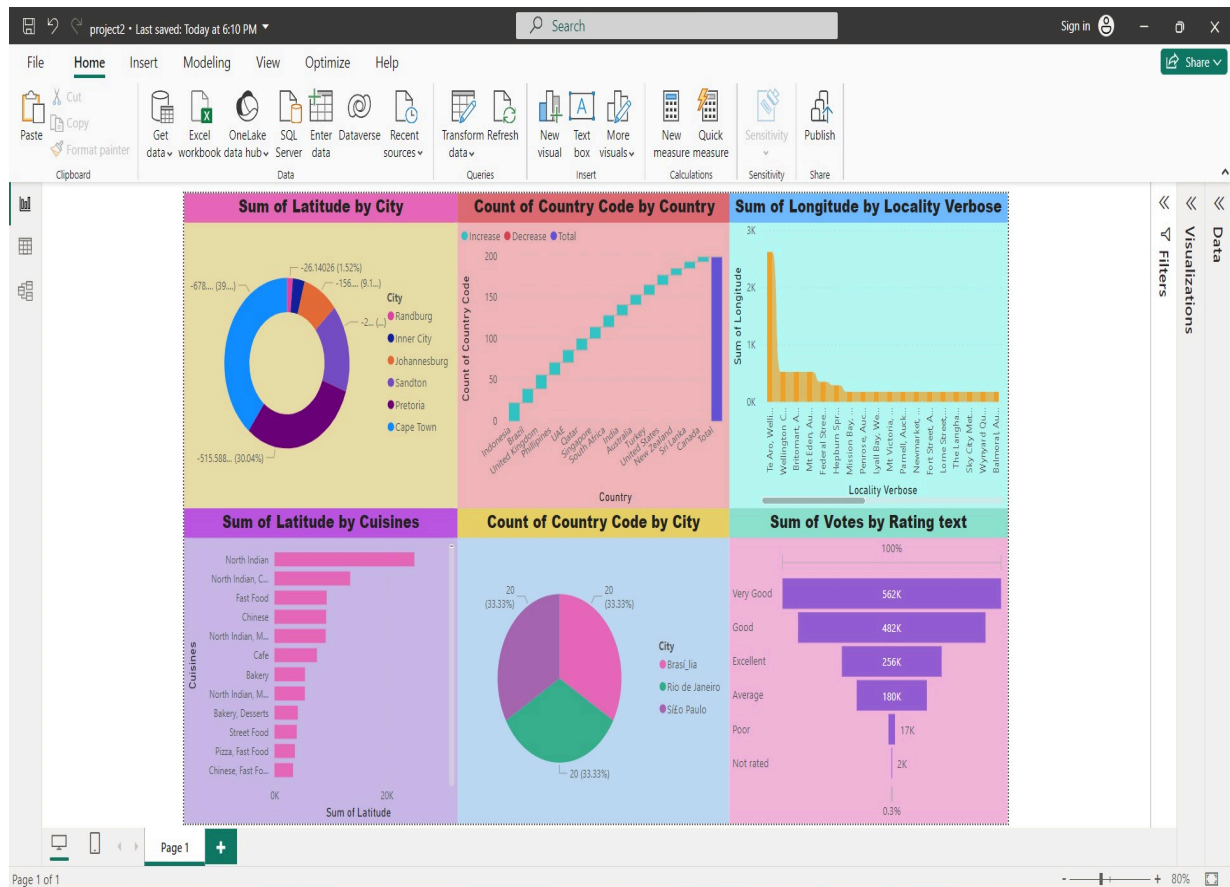
Here we replace values by replacing one value with another in the selected columns. Typing Very Good in values to find and has table booking in replace with boxes.

The screenshot shows the Power BI Desktop interface with a data table. A 'Replace Values' dialog box is open, allowing the user to replace 'Very Good' with 'has table booking' in the selected 'Has Table booking' column. The background table has the following data:

Restaurant ID	Average Cost for two	Currency	Has Table booking	Has Online delivery	Price range	Aggregate rating	Rating text	Votes
1	No		No					
2	No		No					
3	No		No					
4	No		No					
5	No		No					
6	No		No					
7	No		No					
8	No		No					
9	No		No					
10	No		No					
11	No		No					
12	No		No					
13	No		No					
14	Yes		No					
15	No		No					
16	No		No					
17								



# Dashboard



## CONCLUSION

**Using Power BI for a 360 degree analysis of online delivery apps provides actionable insights for strategic decision making. It helps in understanding customer behavior, optimizing operations improving marketing strategies and enhancing overall business performance. By leveraging data-driven-insights online delivery apps can stay competitive drive growth and enhance customer satisfaction in a dynamic market environment.**

## **FUTURE SCOPE**

**The future of 360 degree business analysis for online delivery apps. Using Power BI lines in leveraging emerging technologies like AI, IOT, AR/ VR and block chain to enhance decision making, optimize operations and deliver exceptional customer experiences while adhering to ethical and regulatory standards continuous innovation and adoption to technological advancement will be lay drivers for success in the evolving online delivery industry.**

## REFERENCES

<https://powerbi.pl/en/ms-power-bi/360-degree-analytics>



**LINK**