

# **LOW LEVEL DESIGN DOCUMENT**

**(Swiggy Bangalore Data Analysis)**

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VERSION: 1.0

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## **Document Version Control:**

### **Swiggy Bangalore Data Analysis – Business Intelligence Project**

<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Change</b>
1.0	09/07/2022	Shivendra Pratap Shahi	First Version of Complete LLD

## **Abstract**

The hotel and restaurant business domain, as a vital part of the overall supply chain, is expected to highly evolve in the upcoming years via the developments, which are taking place on the side of the Future Internet. This paper presents a novel business-to-business collaboration platform from the hotel-restaurant sector perspective, which aims to facilitate the collaboration of numerous stakeholders belonging to associated business domains, in an effective and flexible manner.

This dataset provides a huge amount of information on who the best hotels and best cuisines in Bangalore, India by rating and by price. Based on the Information the ultimate goal would be to predict best hotels for common people and find important insights highlighting key indicators and metrics that influence the customer choice.

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## 1.Introduction:

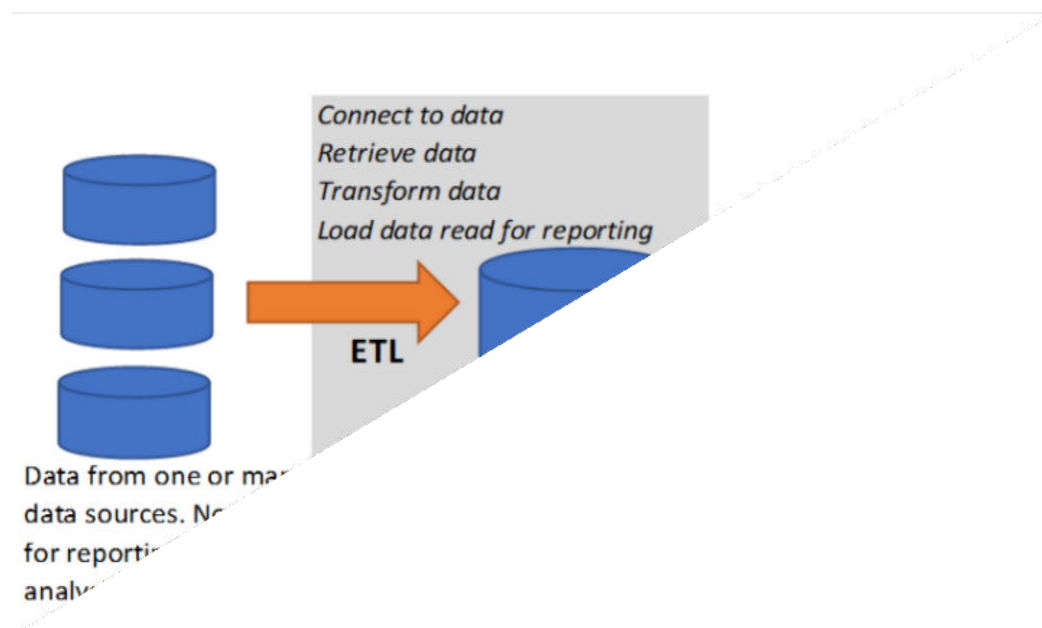
### 1.1. Why this Low-Level Design Document?

The goal of the LDD or Low-level design document (LLDD) is to give the internal logic design of the actual program code for the Bank Marketing Campaign Analysis. LDD describes the class diagrams with the methods and relations between classes and programs specs. It describes the modules so that the programmer can directly code the program from the document.

### 1.2. Scope

Low-level design (LLD) is a component-level design process that follows a step-by-step refinement process. The process can be used for designing data structures, required software architecture, source code and ultimately, performance algorithms. Overall, the data organization may be defined during requirement analysis and then refined during data design work.

## 2. Architecture:



ETL (extract, transform and load) in Power BI uses preparation of data sets for analysis by removing irregularities in the data. It also involves data visualization to draw meaningful patterns and insights.

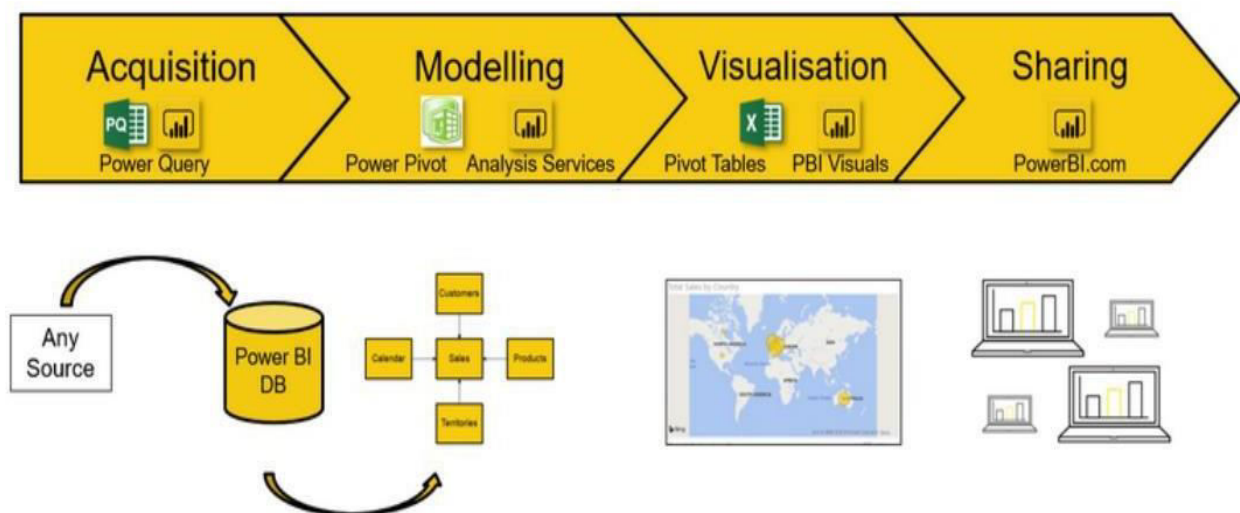
## Low Level Design (LLD)

Based on the results of ETL, companies also make business decisions, which can have repercussions later.

- If ETL is not done properly then it can damage the business a lot in many ways such as loss of client which we are working for, the decision making will go completely wrong and many more issues.
- If done well, it may improve the efficacy of everything we do next.

Below are following steps to follow for ETL:

1. Data Sourcing
2. Data Cleaning
3. Data Modelling
4. Data Visualization



## 3. Architecture Description:

### 3.1 Data Sourcing:

The dataset is in csv (comma separated values) format. MS Excel is used to load the data.

### Citation Request:

This Dataset is publicly available for research, Available at <https://drive.google.com/drive/folders/1FkmFVL8wlJmQWP1z52TD8PlhOJhitTyI?usp=s> named as Swiggy Bangalore Outlet Details.csv.

1. Title - Swiggy Bangalore Outlet Details
2. Source - <https://drive.google.com/drive/folders/1FkmFVL8wlJmQWP1z52TD8PlhOJhitTyI?usp=s>

### 3.2. Data Overview –

- ❖ The Data includes single .csv file with all examples.
- ❖ The Number of Instance - 119 for Swiggy Bangalore Outlet Details.csv
- ❖ Number of attributes – 5 attributes

### 3.2 Data Description –

- ❖ Shop\_Name - Name of hotels in Bangalore (categorical : ‘Shanti Sweets’, ‘Mumbai Tiffin’, ‘Sri Krishna Sagar’, ‘Al Daaz’, ‘Beijing Bites’, ‘Kitchens of Punjab’, ‘99 VARIETY DOSA AND PAV BHAJ’, ‘La Pino'z Pizza’, ‘Hotel Manu’, ‘Yumlane Pizza’, ‘Ambur Star Briyani’, ‘Cake Box’, ‘Meghana Foods’, ‘Momoz’, ‘A2B - Adyar Ananda Bhavan’, ‘Shawarma Inc’, ‘WarmOven Cake & Desserts’, ‘Sri Lakshmi Dhaba’, ‘Falahaar & Kota Kachori’, ‘Shree Khana Khazana’, ‘Just Bake’, ‘Maa Di Hatti’, ‘Hotel Godavari’, ‘Rolls On Wheels’, ‘New Udupi Grand’, ‘Swad Punjab da’, ‘Rice Bowl’, ‘High N Hungry’, ‘Burger King’, ‘Nandhana Palace’, ‘Easy Bites’, ‘Bengali Fun Foods’, ‘Madurai Idly Shop’, ‘Oottupura’, ‘Taco Bell’, Etc)
- ❖ Cuisine - Name of Cuisines corresponding to hotels, shop name (Categorical: ‘North Indian, South Indian, Chinese’, ‘Andhra, Biryani, Chinese, Desserts, Fast Food, Seafood, South Indian’, ‘American, Fast Food’, ‘Biryani, Seafood, North Indian, Chinese, Desserts, Andhra, South Indian’, ‘Snacks, American’, ‘South Indian’, ‘Mexican’, ‘North Indian, Chinese, Biryani’, ‘Turkish, Portuguese, American’, ‘Biryani’, ‘South Indian, Snacks, North Indian, Chinese’, ‘Desserts, Fast Food, Sweets, Chaat’, ‘Chinese, South Indian, Andhra, Hyderabad’, ‘Biryani, Mughlai, South Indian’, ‘Pizzas, Fast Food’, ‘Chinese, Asian’, ‘North Indian, Chinese, South Indian’, ‘Italian, Desserts, Pizzas’, ‘Biryani, Andhra, South Indian’, ‘Pizzas, Chinese, Pastas, Salads, American, Continental’, ‘Andhra, Biryani’, ‘Fast Food, Beverages’, ‘Beverages, Chinese’, Etc)
- ❖ Locations - Complete Address of the hotels or shop name (Categorical: ‘Koramangala’, ‘Sector 5, HSR’, ‘HSR, HSR’, ‘BTM 2nd Stage, BTM’, ‘3rd

## Low Level Design (LLD)

main, BTM' , '3rd Sector, HSR' , 'Mico Layout, BTM' , '4th Cross, Koramangala' , '8TH BLOCK, Koramangala' , 'SG palaya, BTM' , Etc.)

- ❖ Rating - It refers to the rating starting from 3.6 to 4.8 (Numerical: '3.6' , '3.7' , '3.8' , '3.9' , '4' , '4.1' , '4.2' , '4.3' , '4.4' , '4.5' , '4.6' , '4.7' , '4.8')
- ❖ Cost\_for\_Two - It simply refers to the bill amount for 2 persons (Numerical: '150' , '200' , '250' , '300' , '400' , '450' , '500' , '550' , '600' , '650' , '700' , '750' , '800')

## 3.4 Data loading in Power BI Query Editor

Power Query is the data connectivity and data preparation technology that enables end users to seamlessly import and reshape data from within a wide range of Microsoft products, including Excel, Power BI, Analysis Services, data verse, and more with the following characteristics:

- ❖ There can be multiple rows and columns in the data.
- ❖ Each row represents a sample of data,
- ❖ Each column contains a different variable that describes the samples (rows).
- ❖ The data in every column can be a different type of data – e.g. numbers, strings, dates, Boolean etc.



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Swiggy Bangalore Data Analysis - Power Query Editor

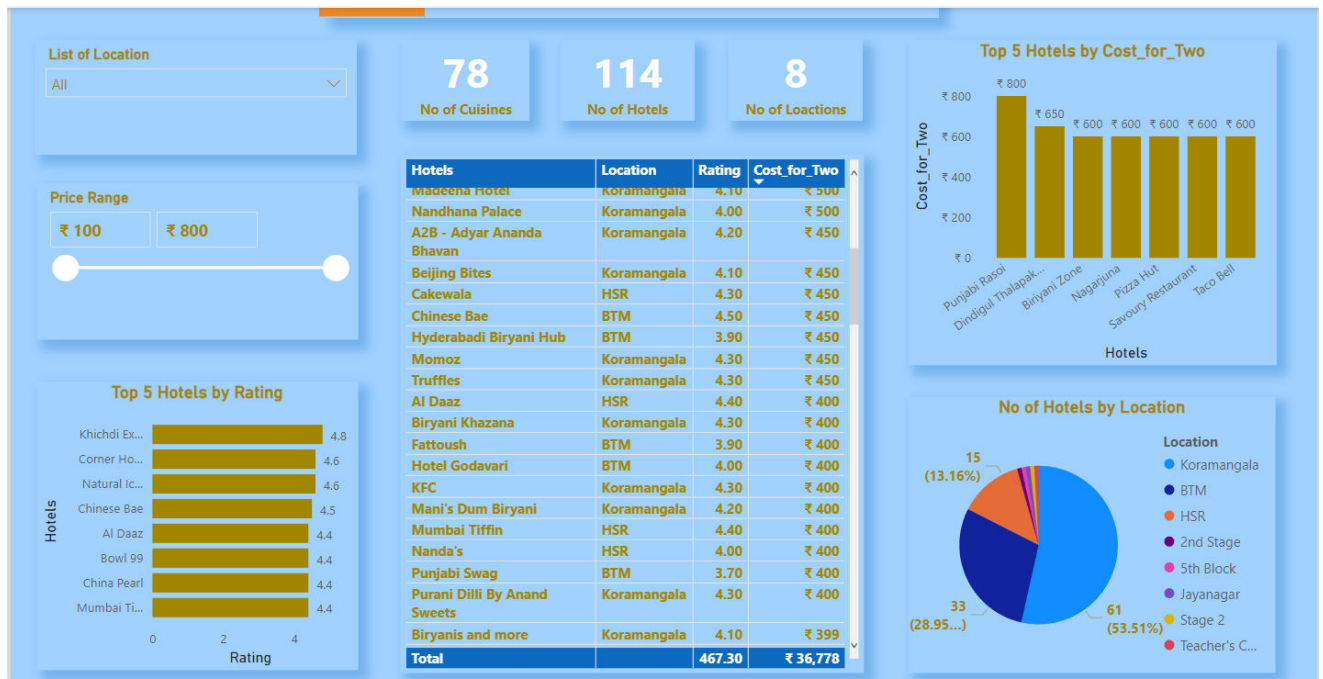
Table: RenameColumns("#Changed Type1",{"Area", "Hotel Address"})

Hotels	Cuisine	Hotel Address
1 Kanti Sweets	Sweets	Koramangala, Koramangala
2 Mumbai Tiffin	North Indian, Home Food, Thalys, Combo	Sector 5, HSR
3 Sri Krishna sagar	South Indian, North Indian, Fast Food, Beverages, Jain	6th Block, Koramangala
4 Al Daaz	American, Arabian, Chinese, Desserts, Fast Food, Mughlai, North Indian	HSR, HSR
5 Beijing Bites	Chinese, Thai	5th Block, Koramangala
6 Kitchens of Punjab	North Indian	Koramangala 4th Block, Koramangala
7 99 VARIETY DOSA AND PAV BHAJI- Malli Mane Food Court	Fast Food, North Indian, Chinese	BTM 2nd Stage, BTM
8 La Pino's Pizza	Italian	BTM, BTM
9 Hotel Manu	South Indian, Kerala, Chinese, North Indian	HSR, HSR
10 Yumlane Pizza	Pizzas, Italian, Mexican	9th Main road, Koramangala
11 Ambur Star Briyani	Chinese, South Indian, North Indian, Desserts, Fast Food, Kerala, Andh...	outer ring road, BTM
12 Cake Box	Desserts	Koramangala, Koramangala
13 Meghana Foods	Chinese, Andhra, Biryani, Seafood	5th Block, Koramangala
14 Momoz	Chinese	5th Block, Koramangala
15 A2B - Adyar Ananda Bhavan	South Indian, Chinese, Desserts, North Indian	7th Block, Koramangala
16 Shawarma Inc	Arabian, Fast Food	1st Main, Koramangala
17 WarmOven Cake & Desserts	Desserts, Beverages	Koramangala, Koramangala
18 Sri Lakshmi Dhaba	North Indian	Bommanahalli, BTM
19 Falahaar & Kota Kachori	North Indian	6th Block, Koramangala
20 Shree Khana Khazana	Indian, Rajasthani	Sector 4, HSR
21		

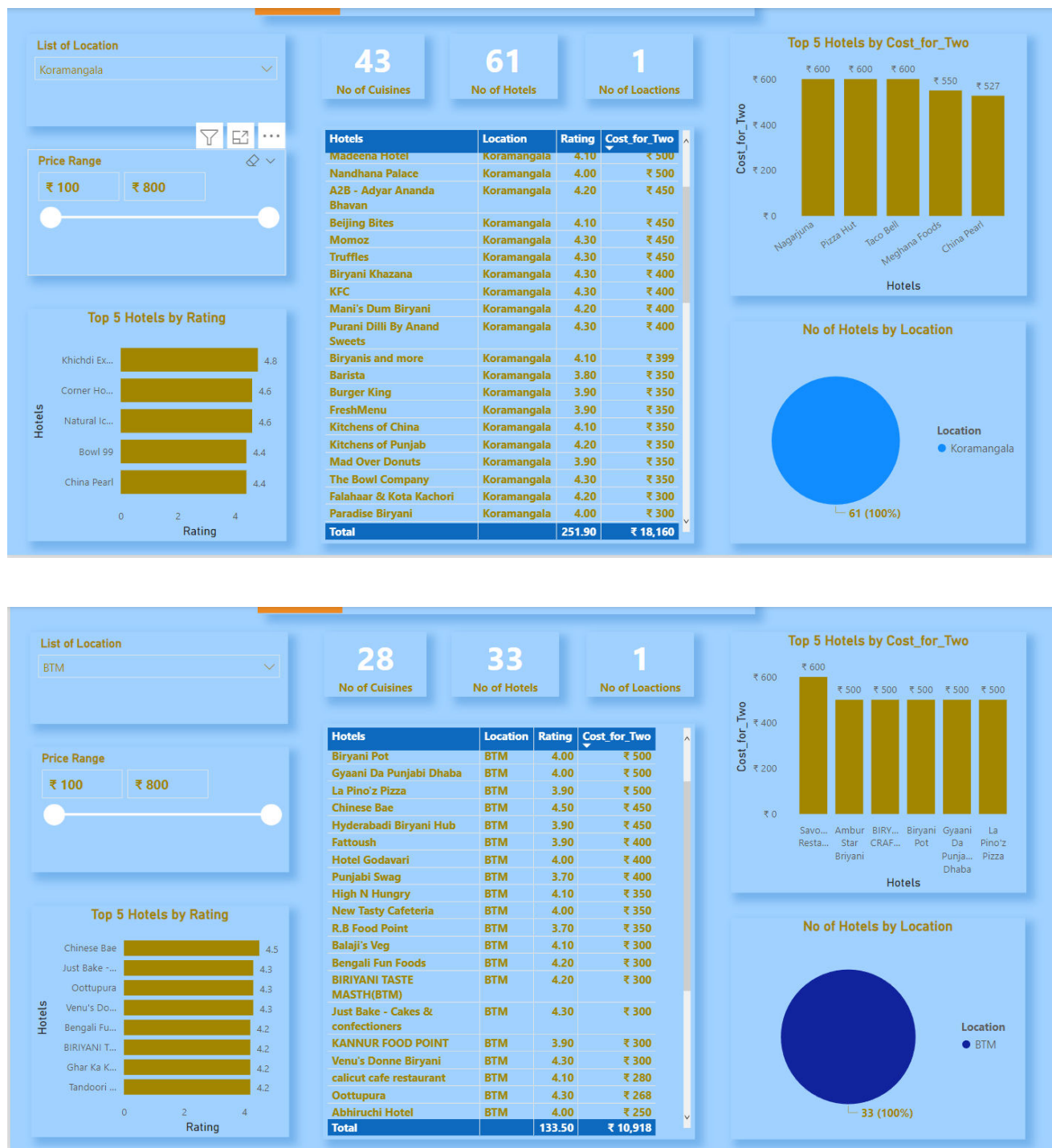
6 COLUMNS, 114 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 18:58

## 3.5 Data to Insights through Visualizations and Excel Data Analysis



## Low Level Design (LLD)



## 3. Deployment to Power BI Service

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Full Stack Data Science Nov'21 | Power BI

app.powerbi.com/groups/me/list

Power BI My workspace

My workspace

+ New

View Filters Search

All Content Datasets + dataflows

Name	Type	Owner	Refreshed	Next refresh
Swiggy Bangalore Data Analysis	Report	Shivendra Pratap shahi	7/3/22, 1:40:12 PM	—
Swiggy Bangalore Data Analysis	Dataset	Shivendra Pratap shahi	7/3/22, 1:40:12 PM	N/A

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Full Stack Data Science Nov'21 | Swiggy Bangalore Data Analysis

app.powerbi.com/groups/me/reports/ad512730-4093-4b99-8466-d18f26b2985d/ReportSection

Power BI My workspace Swiggy Bangalore Data ... Data updated 7/3/22

File Export Share Chat in Teams Get insights

Swiggy Bangalore Data Analysis

List of Location: All

Price Range: ₹ 100 ₹ 800

78 No of Cuisines 114 No of Hotels 8 No of Locations

Hotels	Location	Rating	Cost_for_Two
Punjabi Rasoi	HSR	4.00	₹ 800
Dindigul Thalapakatti	HSR	4.10	₹ 650
Biryani Zone	HSR	4.10	₹ 600
Nagarjuna	Koramangala	4.30	₹ 600
Pizza Hut	Koramangala	4.00	₹ 600
Savoury Restaurant	BTM	4.10	₹ 600
Taco Bell	Koramangala	4.30	₹ 600
Junior Kuppanna	HSR	4.00	₹ 550
Meghana Foods	Koramangala	4.30	₹ 550
China Pearl	Koramangala	4.40	₹ 527
Ambur Star Biryani	BTM	4.10	₹ 500
BIRYANI CRAFTS	BTM	4.10	₹ 500
Biryani Pot	BTM	4.00	₹ 500
Gyani Da Punjabi Dhaba	BTM	4.00	₹ 500
Kritunga	Koramangala	3.90	₹ 500

Top 5 Hotels by Rating

Top 5 Hotels by Cost\_for\_Two

No of Hotels by Location

15 (13.16%) Location: Koramangala, BTM, HSR

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