

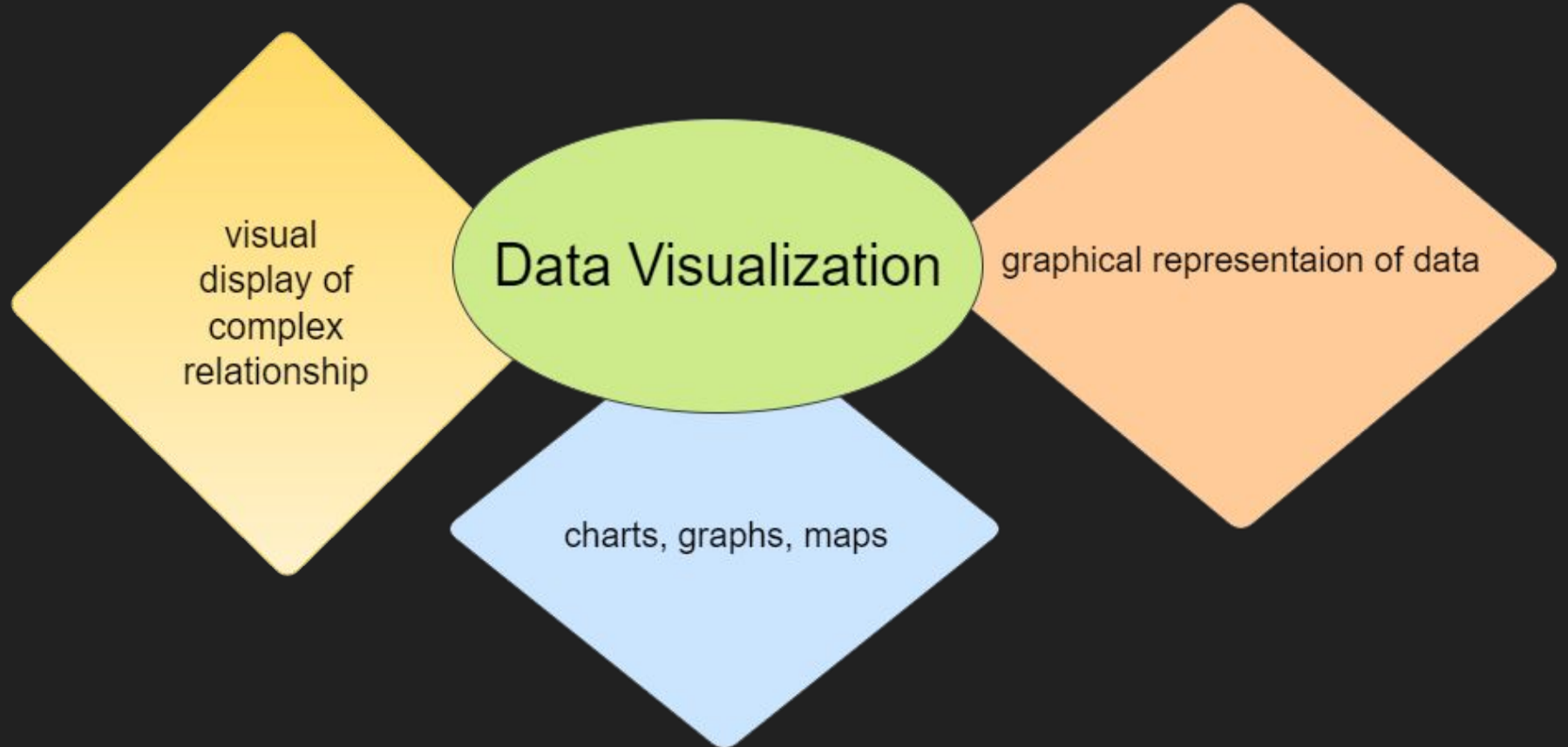
# TOPIC: “Open Source Data Visualization”

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# WHAT IS DATA VISUALIZATION?





## Purpose Of Data Visualization

- Data visualization is essential to analyze massive amounts of information and make data driven decisions.
- Management also applies it to convey organizational structure and hierarchy.
- Data Analysts and Scientists study and explain the trends and pattern.



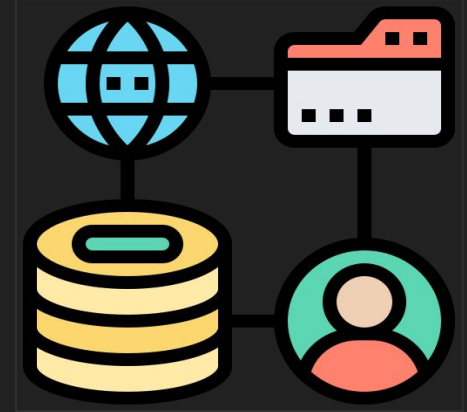
# Why Data Visualization?



Analysis of data

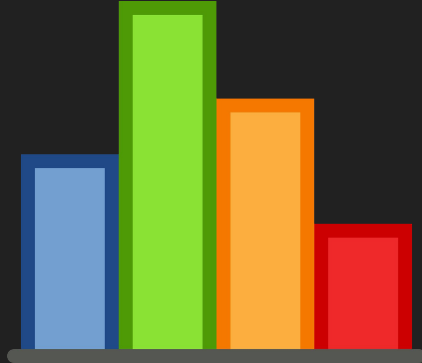


Faster Decision  
making



Make sense of  
complicated data

# Types Of Data Visualization



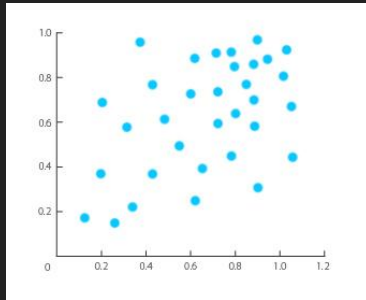
Charts



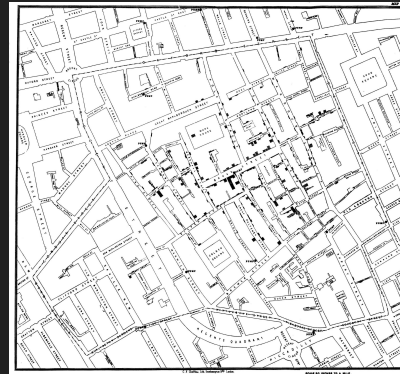
Tables



Dashboards



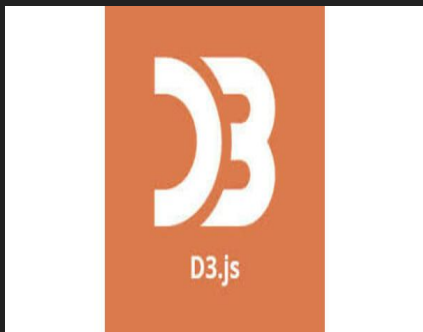
Scattered plot



Maps



# Open Source Data Visualization Tools



D3.js



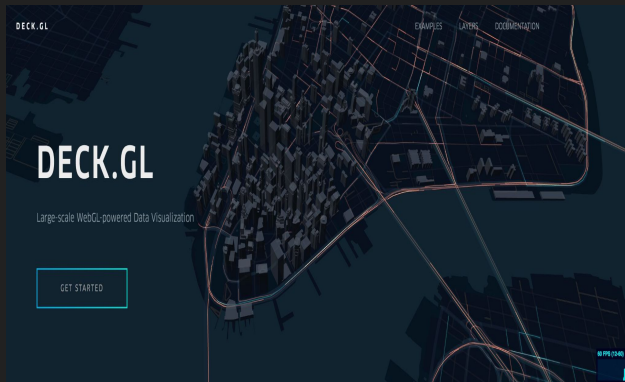
ECharts



Vega



Power BI



deck.gl



# Open Source Data Visualization Tools

Open source libraries provide a way for analysts to present data in an interactive way.

- **D3.js:**

It is a javascript library producing dynamic, interactive visualization in web browsers

- **ECharts:**

A charting library which offers an easy way to add highly interactive and customizable charts.

- **Vega:**

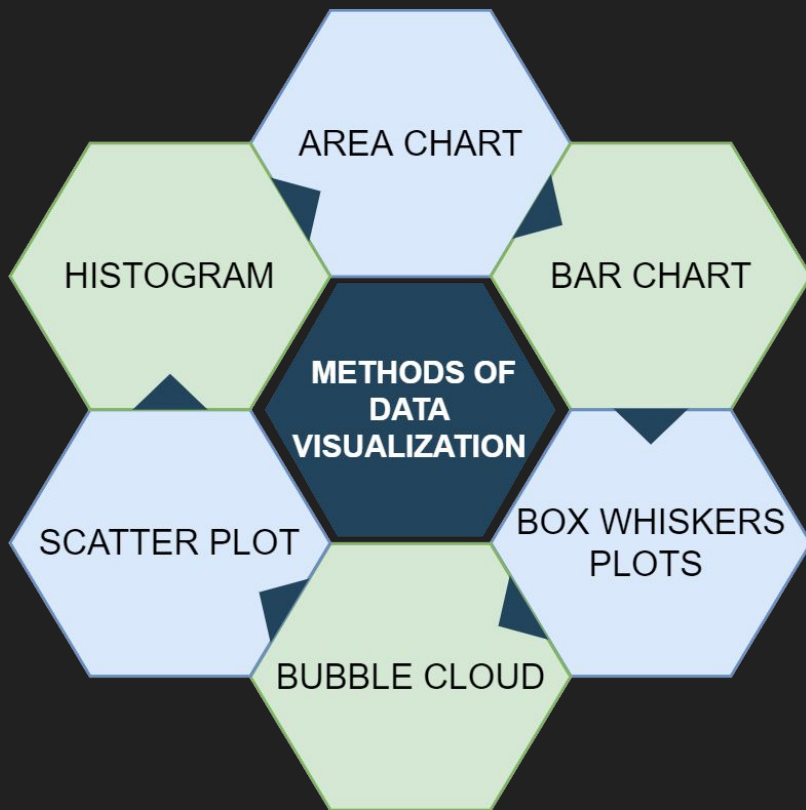
provides support to customize visualization across large dataset which are accessible from web.

- **deck.gl:**

A framework, which is used for exploratory data.



# Some Specific Methods Of Data Visualization.







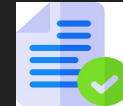
# HOW IT WORKS?

Client/User



imports a file into a  
tool  
Eg: .csv, excel etc

Validate the file  
format and data  
set



Generate the  
appropriate graph  
on dashboards





# PROBLEM STATEMENT

“ We have a client who wants to set up his own restaurant in Bangalore city. He wants to know how it can be profitable to him by setting up the restaurant.”



## SOLUTION

We visualized the given dataset and analyzed the different restaurant's ratings, total votes given, average bill for two people, availability of facilities like- online ordering, table-booking and we tried to build a dashboard so that our client can get a clear idea about setting up his restaurant.



# REQUIREMENTS

- Tool Used: Power BI
- Dataset Used: Zomato.csv file from Kaggle Website



## Power BI

- Power BI is a Business Intelligence and Data Visualization tool for converting data from various data sources into interactive dashboards and analysis reports.
- Power BI offers cloud-based services for interactive visualizations with a simple interface for end users to create their own reports and dashboards.

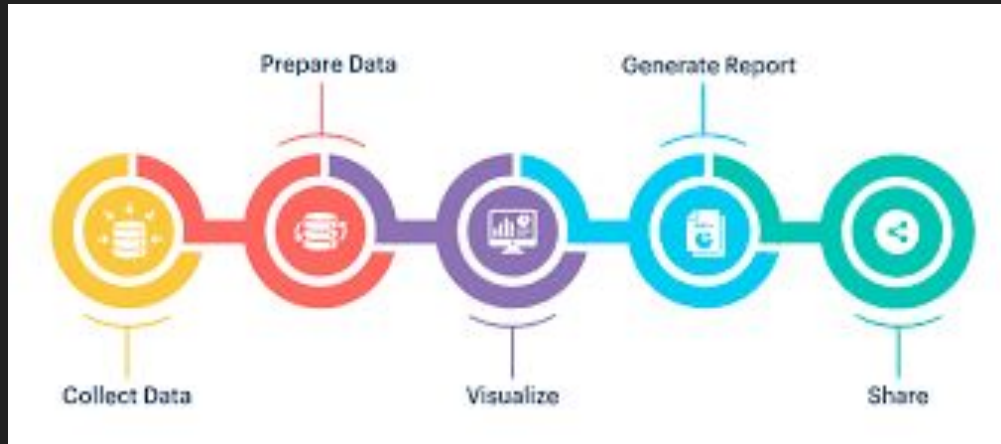


# IMPLEMENTATION

**Step 1:** Load the dataset i.e the zomato.csv file into the power BI tool.

**Step2:** Clean/remove the unnecessary columns from the dataset by transform data option.

**Step3:** Implementing the required fields in our dashboard using appropriate visual forms or graphs.

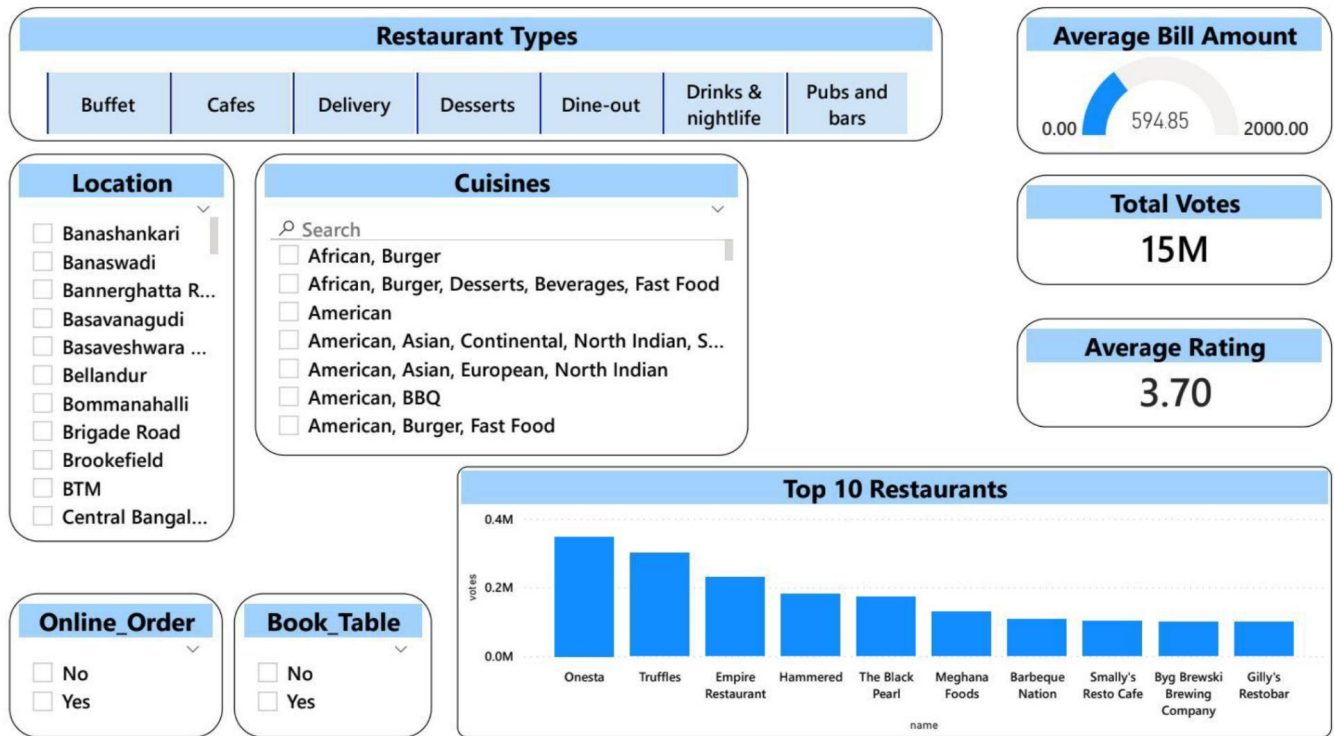




- i) Restaurant Types: It includes various themed restaurants such as Buffet, Cafes, Delivery, Desserts, Dine-out, Drinks & nightlife, Pubs and bars. We used slicer visual form to implement this.
- ii) Average Bill Amount: It includes approximate cost for two people, we have used gauge visual form to represent average bill amount.
- iii) Total Votes: we have used card visual form for this which generally used to represent total of any field, eg: total sales etc.
- iv) Average rating: it gives the average rating(out of 5 from our dataset) of a particular restaurant type.
- v) Location: It contains various locations in bengaluru city with famous restaurants. Here a slicer visual form is used.
- vi) Cuisines: It includes a list of food items from different parts of the world. Here a slicer visual form is used.
- vii) Onilne\_Order: it represents whether a particular restaurant has a facility to order online through zomato or not, slicer visual form is used here.
- viii) Book\_Table: it represents whether a particular restaurant has a facility to book tables or not, a slicer visual form is used here.



# Results:







# REFERENCES

- <https://www.guru99.com/power-bi-tutorial.html>
- <https://www.tableau.com/learn/articles/data-visualization>
- <https://www.kaggle.com/datasets/himanshupoddar/zomato-bangalore-restaurants>

Thank You!

*Any queries?*