



BUSINESS INTELLIGENCE IN ONLINE FOOD DELIVERY



Team Presentation

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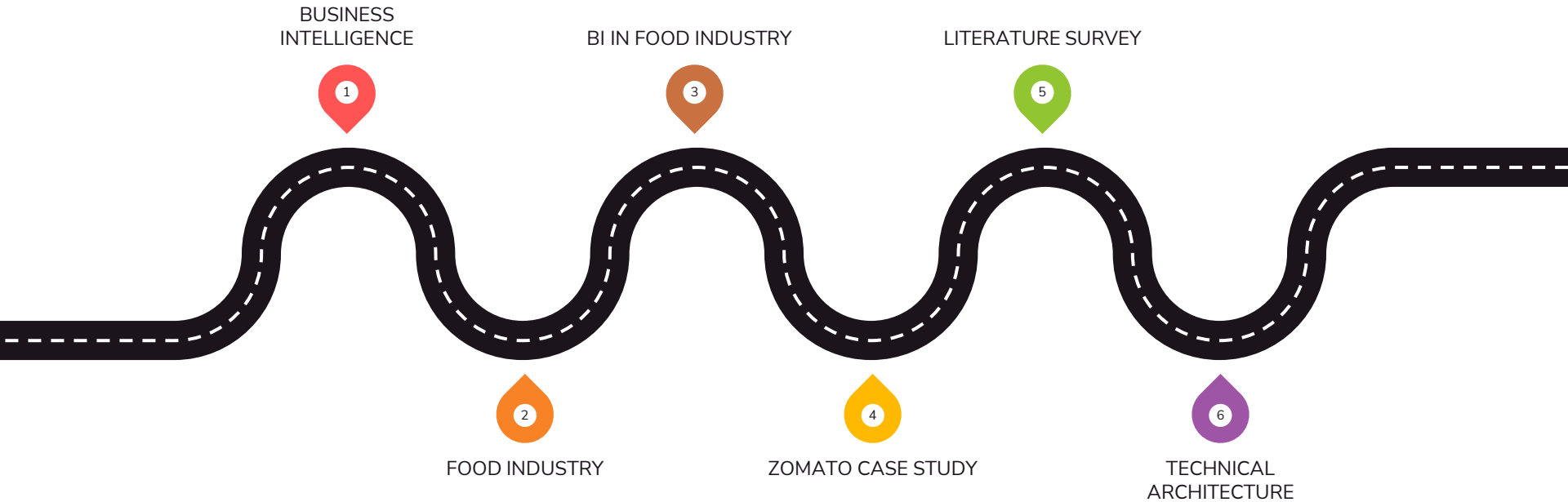
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Agenda



- Analysis of food sales
- Abstract
- BI Life Cycle
- Literature survey
- Implementation using Tableau
- Technical Architecture
- Conclusion

Roadmap



A still from a movie showing two men behind a large platter of food. The man on the left, wearing a purple shirt, has a shocked expression with wide eyes and an open mouth. The man on the right, wearing a white shirt and glasses, has a more composed expression. The platter in front of them is overflowing with a large serving of rice, several pieces of fried chicken, and a pile of golden-brown fried snacks on the left. The background is a simple indoor setting with a light blue wall and a small hanging lantern on the right.

INTRODUCTION

SRI BALAJI VI

BI(Business Intelligence) is a set of processes, architectures, and technologies that convert raw data into meaningful information that drives profitable business actions.

BI tools perform data analysis and create reports, summaries, dashboards, maps, graphs, and charts to provide users with detailed intelligence about the nature of the business.

BI helps companies make smarter and makes data driven decisions.

It analyzes the customer behavior and identify the ways to increase the food sales.

Online Food Delivery



Online food ordering is the process of ordering food, for delivery or pickup, from a website or other application. The product can be either ready-to-eat food (e.g., direct from a home-kitchen, restaurant, or a ghost kitchen) or food that has not been specially prepared for direction consumption (e.g., vegetables direct from a farm/garden, fruits, frozen meats. etc.).

The major food delivery platforms are Zomato, Swiggy, Uber Eats

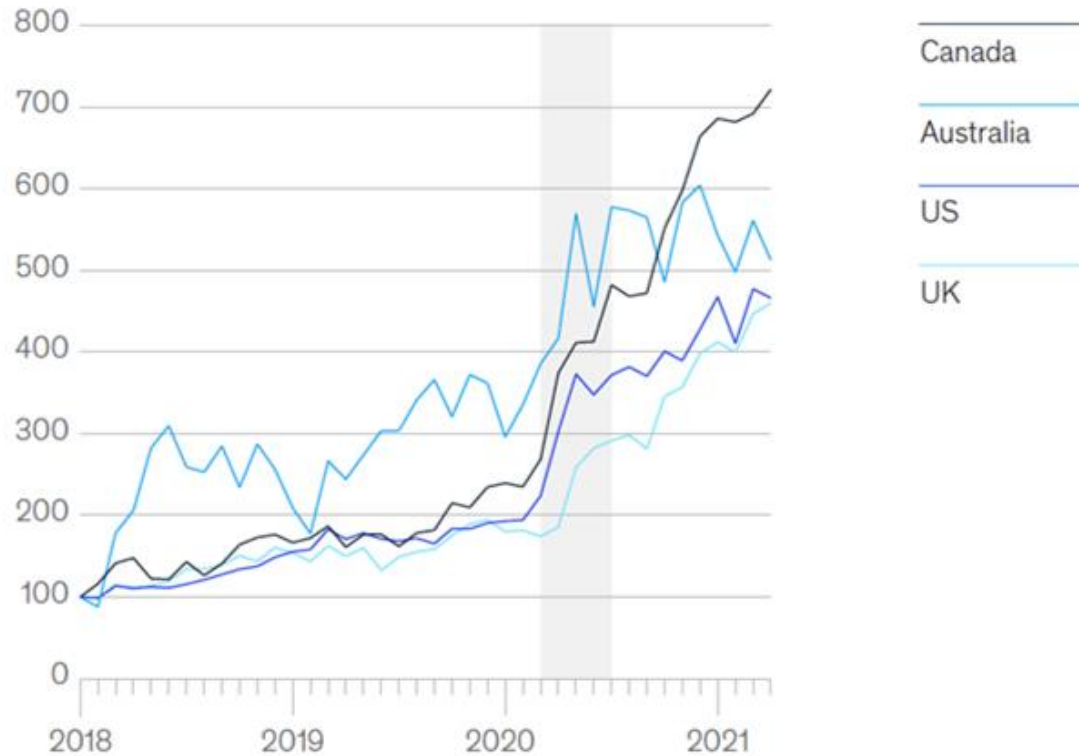
WHY BI HERE?

Using the past data we should predict the user's interest of their future purchase.

By the Customer's Feedback, we can constantly improve the quality of food delivery and eventually improve the rating of the application

And studies have proved that companies (like uber eats, food panda) used BI and got efficient results became successful in the market.

Normalized
delivery-platform
sales growth, index
(Jan 2018 = 100)



Source: Edison Trends

Impact of COVID on Food Delivery

2020 MAR-JUL



CHALLENGES FACED

- Shifting customer preferences
- Unstable market prices
- Improper food handling
- Finding appropriate advertisements
- Reaching customer expectations
- Difficult to engage and retain customers

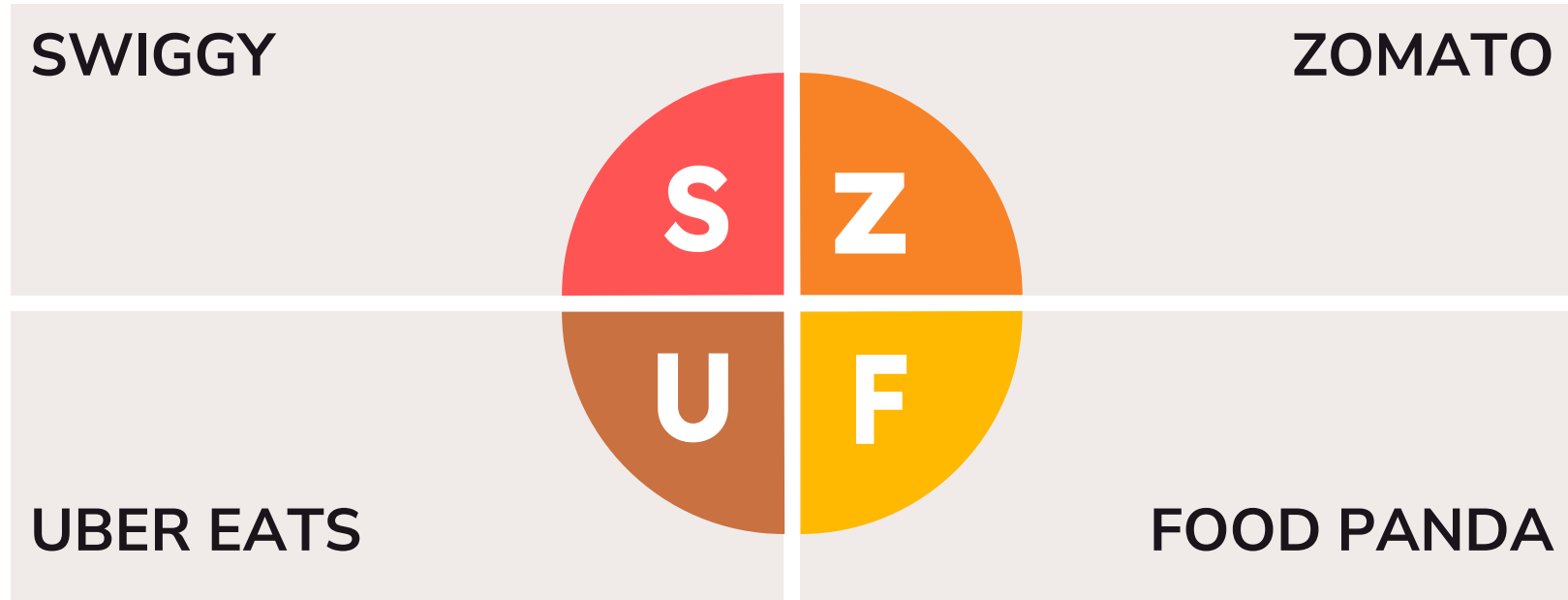


ABSTRACT

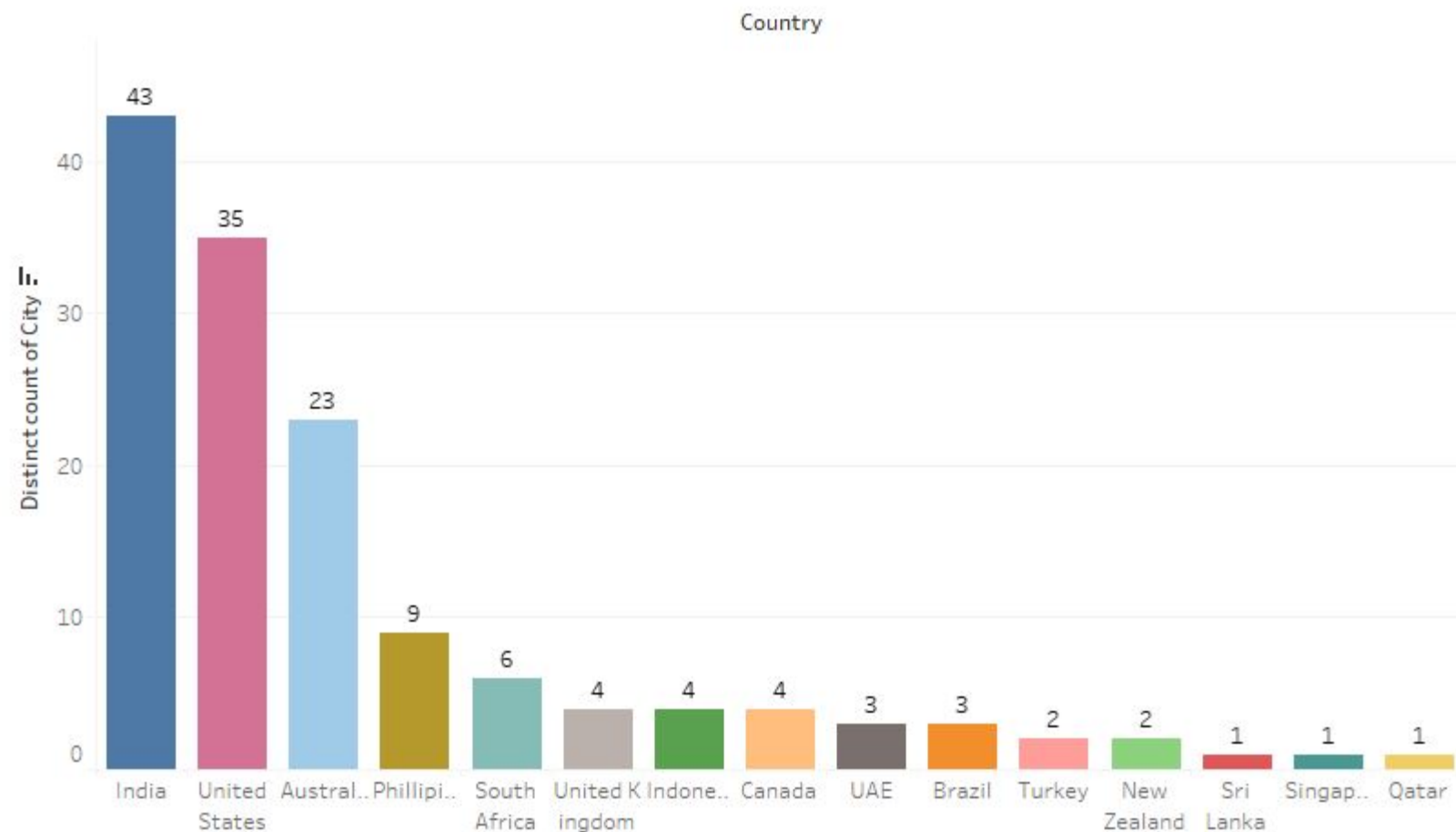
In our day-to-day life food is the most important thing and to experience tasty food we used to go to restaurants and have the experience, but with increased amount of work life and laziness eventually online food delivery companies arised.

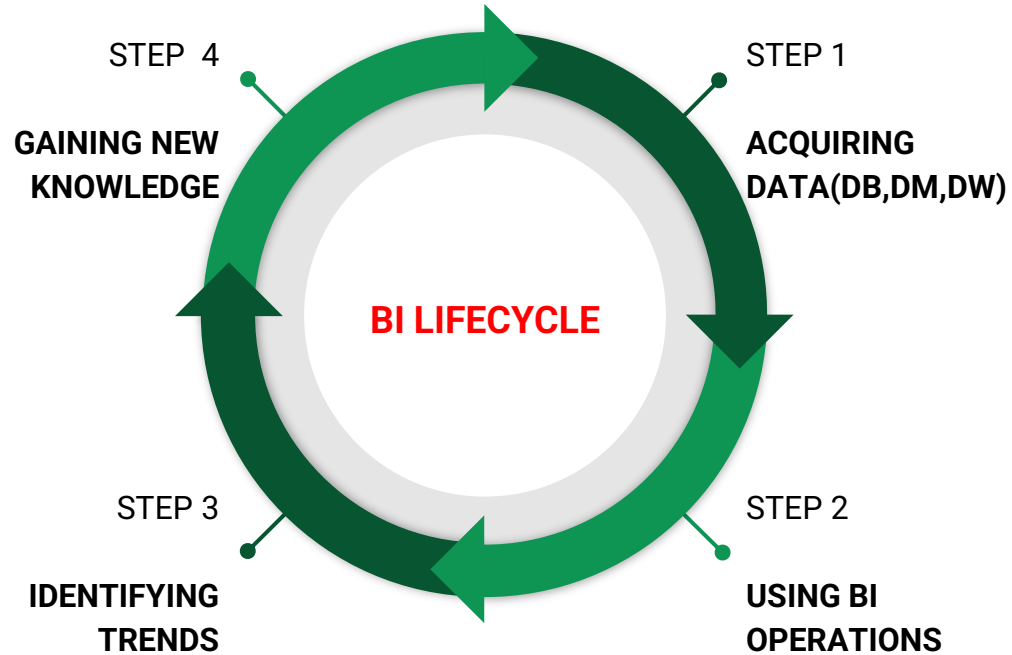
These companies are using BI in order to get to know about their customers and during covid times as everyone were locked in homes it was the perfect time for these companies to boost their economy. Different companies implemented different strategies using BI to get profits.

REAL-TIME Applications



India Has Largest # Restaurants, so will Analyse India





Data Acquisition:

There are four methods of acquiring data:

1. collecting new data
2. converting/transforming legacy data
3. sharing/exchanging data
4. purchasing data

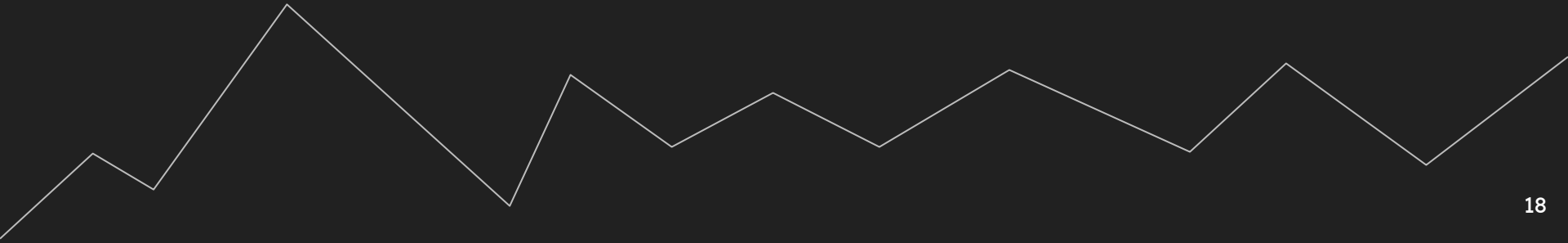


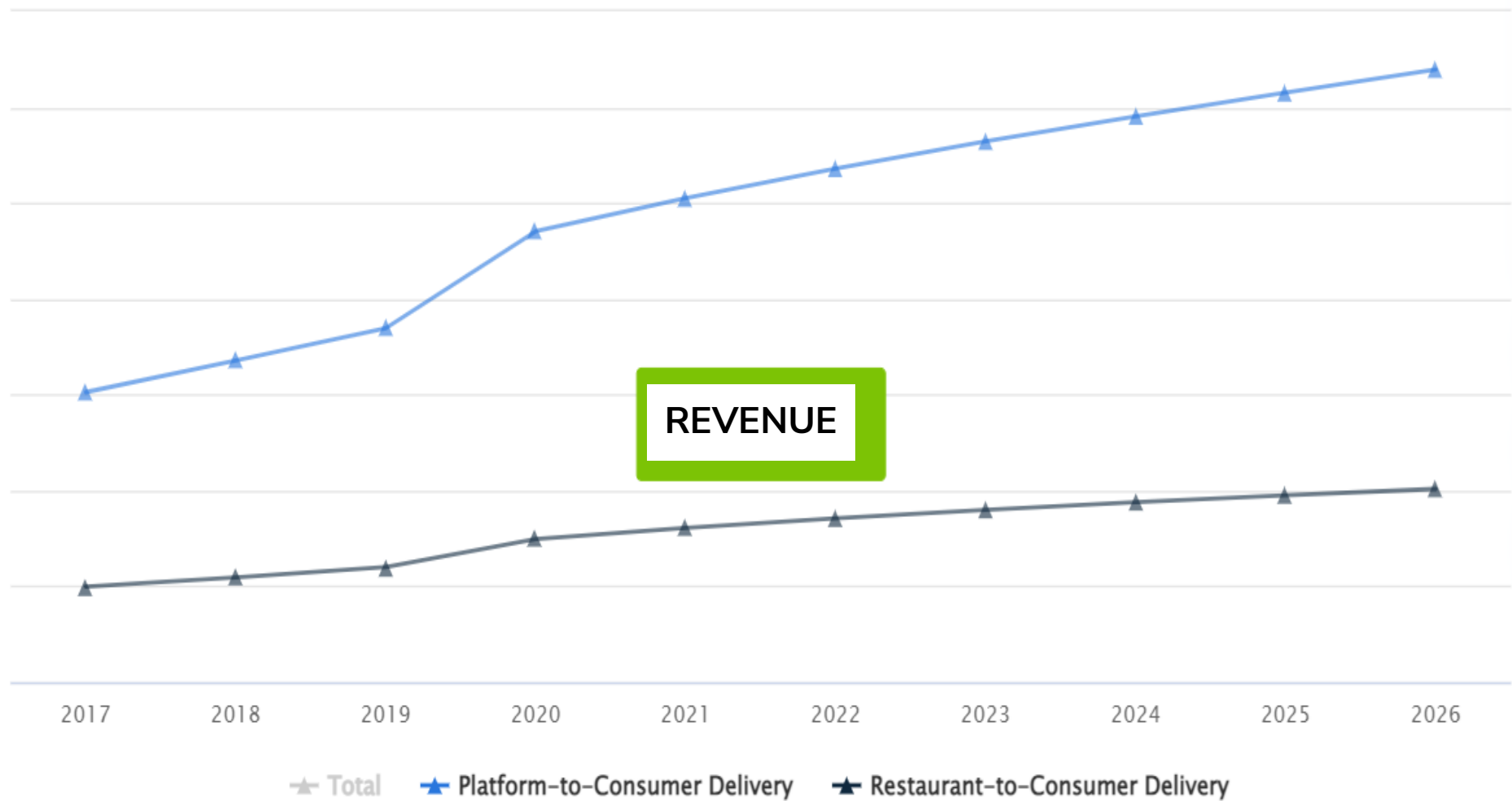
Applying BI operations:

We apply BI operations to find the customers food interests, recommendations according to the wishlist and previous purchase history of the customer.

Identifying Trends

(India)

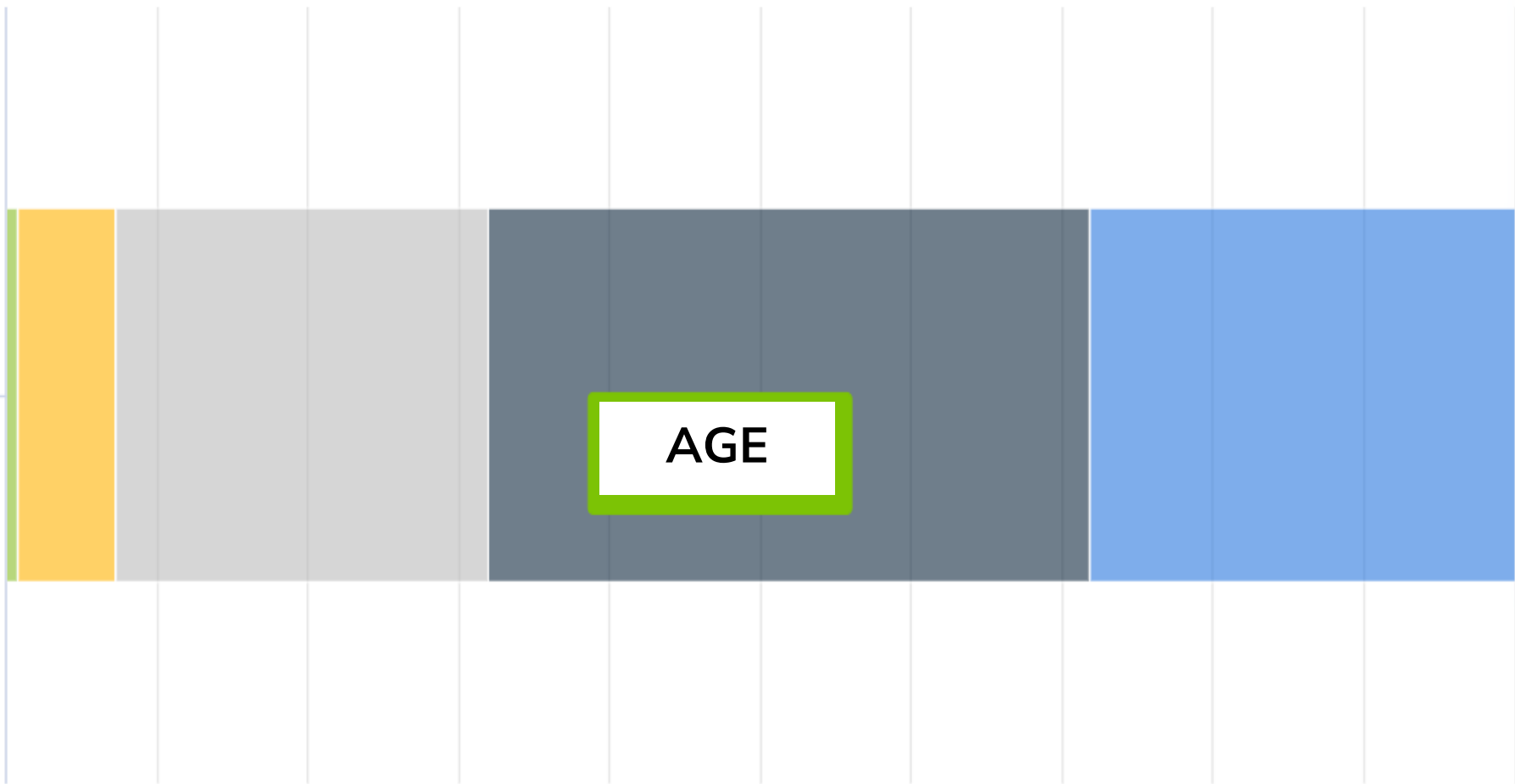




2021

AGE

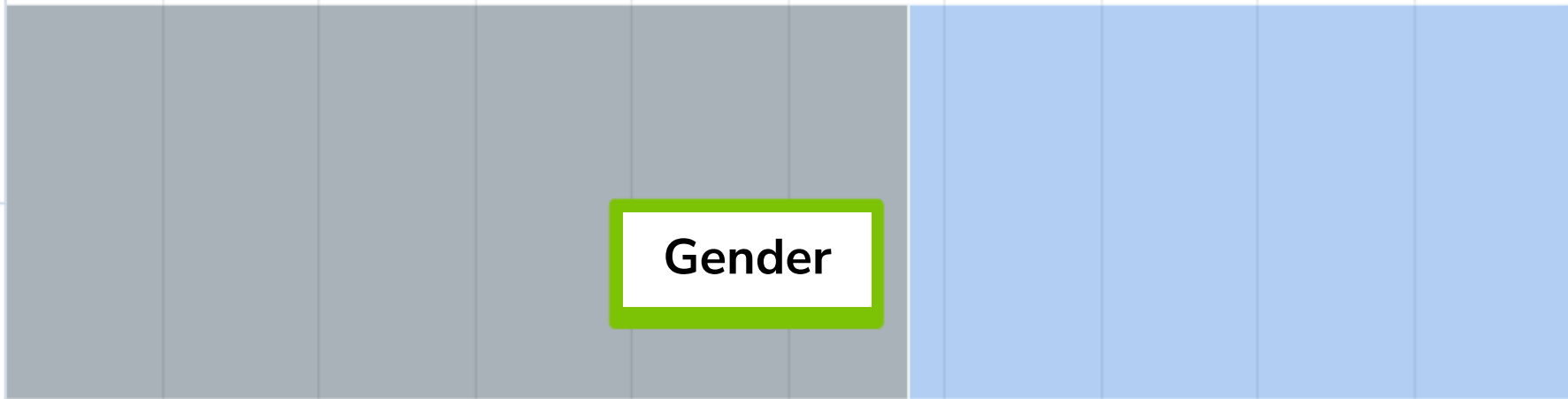
● 18–24 years ● 25–34 years ● 35–44 years ● 45–54 years ● 55–64 years



2021

Gender

● female ● male



North Indian

Chinese

North Indian,
Mughlai,
Chinese

Bakery,
Desserts

Street
Food

North Indian, Mughlai

Pizza,
Fast Food

Chinese,
Fast
Food

Mithai,
Street
Food

South
Indian

TYPES OF CUISINES MOSTLY ORDERED BY INDIANS

Fast Food

Bakery

Bakery, Fast
Food

Ice
Cream,

Ice

North

Chinese, North
Indian

Mithai

North

Mughlai

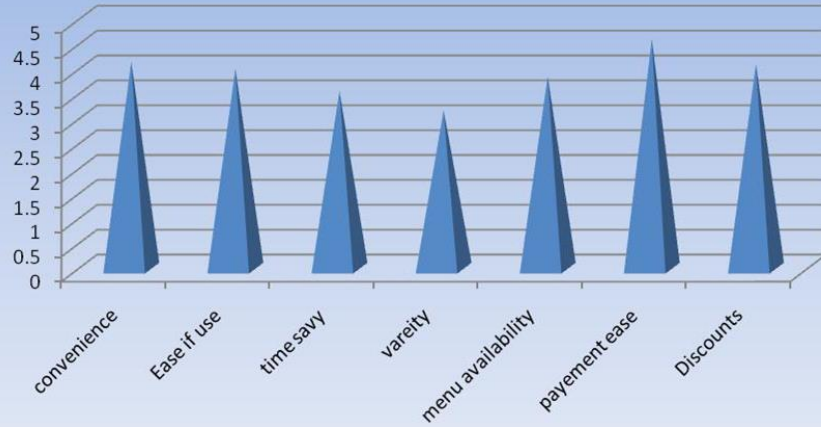


Literature Survey

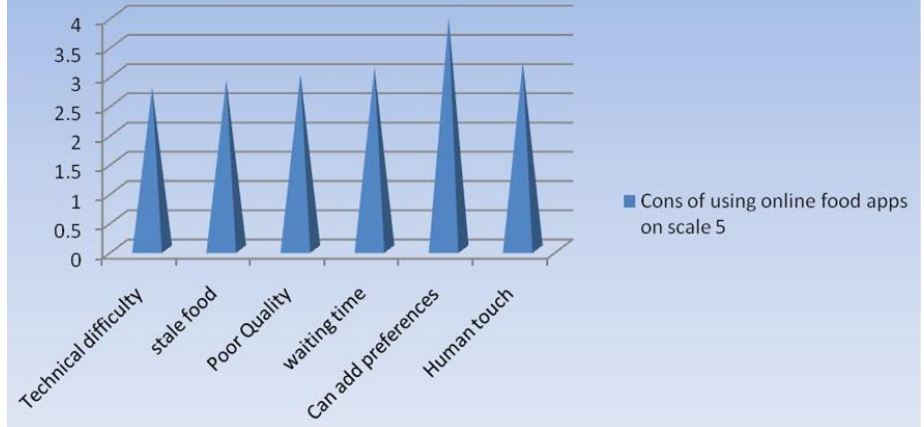


Title	Publishing Details	Findings
ONLINE FOOD ORDERING SYSTEM	<p>Research Gate</p> <p>Article in SSRN Electronic Journal</p> <p>December 2018</p>	<ul style="list-style-type: none">→ Various issues related to Mess/Tiffin Service will be solved by these system.→ This system will allow hotels and restaurants to increase online food ordering business. The customers can select food menu items just few minutes.→ It provides efficiency for the restaurant by reducing time consuming, minimize human errors or delivery and providing good quality.

Pros of using app on scale 5



Cons of using online food apps on scale 5





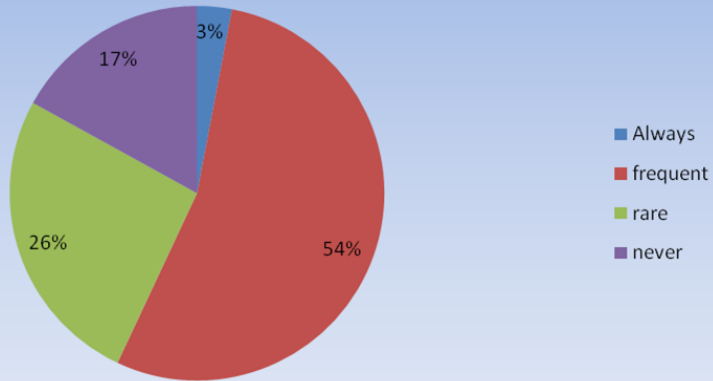
Title	Publishing Details	Findings
An Analysis of Online Food Ordering Applications in India: Zomato and Swiggy	IEEE Journal April 2019	<ul style="list-style-type: none">→ There is no human intervention involved which gives it more privacy. Apps are having number of restaurant, chefs kitchens listed with their menu specifically. So the consumers need not to carry pamphlets and menu list for further orders.→ The feature that attracts consumers the most is Doorstep Delivery at any place at anytime.→ Consumers are mostly motivated when they receive any Rewards & Cashbacks followed by loyalty points or benefits.



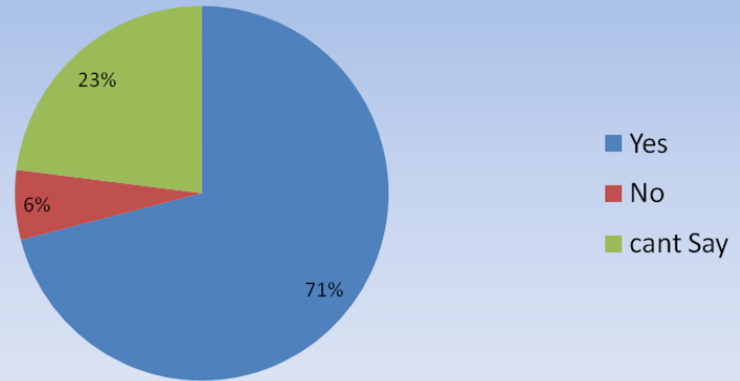
Title	Publishing Details	Findings
Trend in Ordering Food using Smartphones	IEEE Journal May 2018	<ul style="list-style-type: none">→ Apps can be directly downloaded which give them more accessibility, Creating profile on apps includes their address and payment information.→ Apps are having different modes of payment like credit cards, debit cards and pay on delivery.→ The use of smartphone mobile interface for consumers to view order and live location has helped the restaurants in delivering orders from consumers immediately.→ The increase in uses of smartphones and computers are giving platform for service industry.

71% people believes that future of online food is bright.

Use of ordering food online



Future of online ordering apps





Title	Publishing Details	Findings
An Optimization Framework for On-Demand Meal Delivery System	IEEE journal June 23, 2021	<ul style="list-style-type: none">→ The success of an on-demand meal delivery business depends on the cost-effectiveness, speed, and timely delivery of orders.→ An online food ordering system involves the primary challenge of delivering food in a shorter time but at minimal delivery cost. This situation calls for a trade-off between the CX(customer experience) and the CPD(cost per delivery).→ The goal of CPD reduction comprises two primary challenges:<ul style="list-style-type: none">(i) First-Mile (FM) delivery challenge(ii) Last-Mile (LM) delivery challenge.



Title	Publishing Details	Findings
<p>POPULARITY OF ONLINE FOOD ORDERING AND DELIVERY SERVICES-A COMPARATIVE STUDY BETWEEN ZOMATO, SWIGGY AND UBER EATS IN LUDHIANA</p>	<p>IEEE Journal</p> <p>03 may 2020</p>	<ul style="list-style-type: none">→ This paper aims to study the day perception of customer ordering food through online food delivery apps via zomato, swiggy and uber eats.→ Online strategies are based on online marketing which suits demands at today customers.→ This paper concludes that zomato has most active online food delivery service valing maximum promotional offers in terms of discount and supportive customer care.

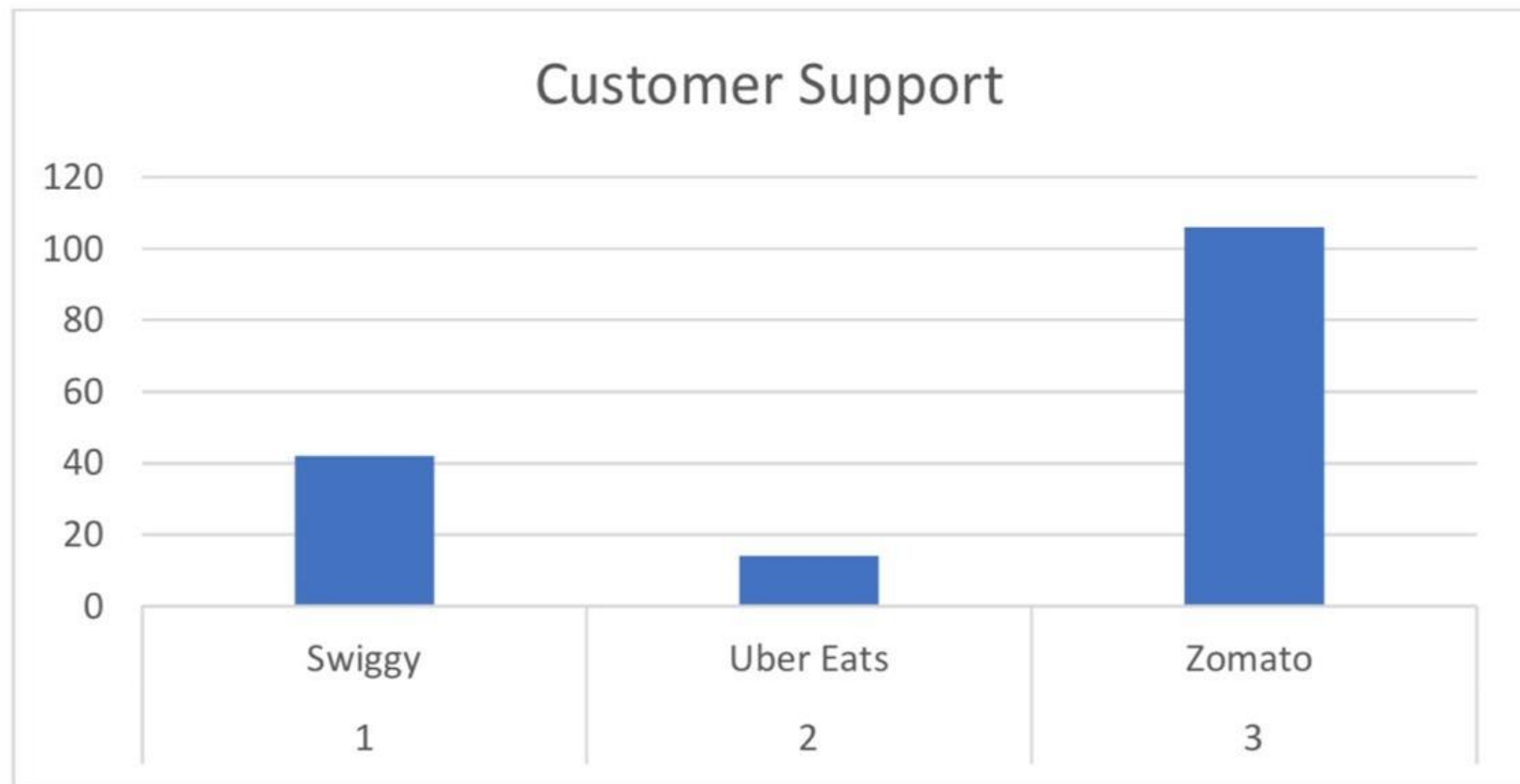



Figure 1.4



Title	Publishing Details	Findings
Impact of Business Intelligence on Business Performance of Food Delivery Platforms in Sri Lanka	Global Journal of Management and Business Research 2000	<ul style="list-style-type: none">→ The purpose of this research is to determine if BI has an impact on the business performance of food delivery platform in sri lanka.→ The study shows the success actors on the BI has a significant impact on the BI of FCP evident in the results from the employee perspective.→ The future study can also be conducted on methods that are used in tech companies for instance, for technologies, for sentiment analysis etc.

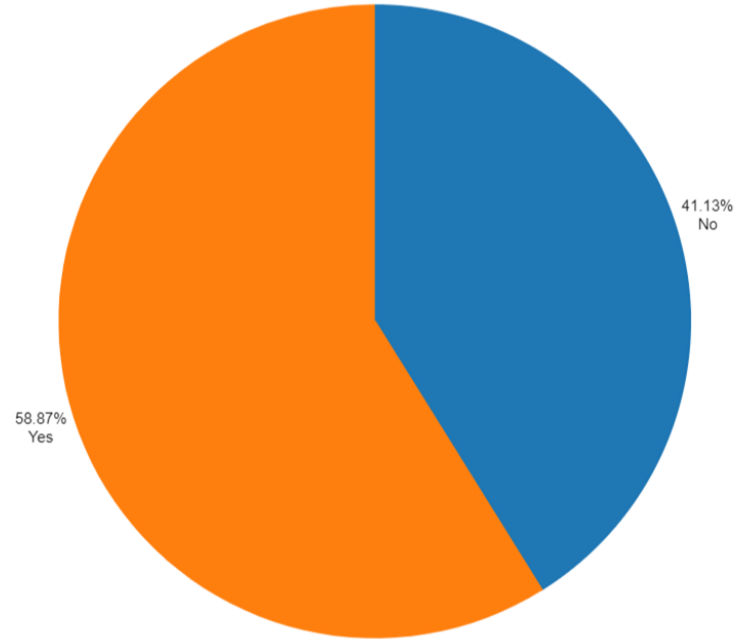


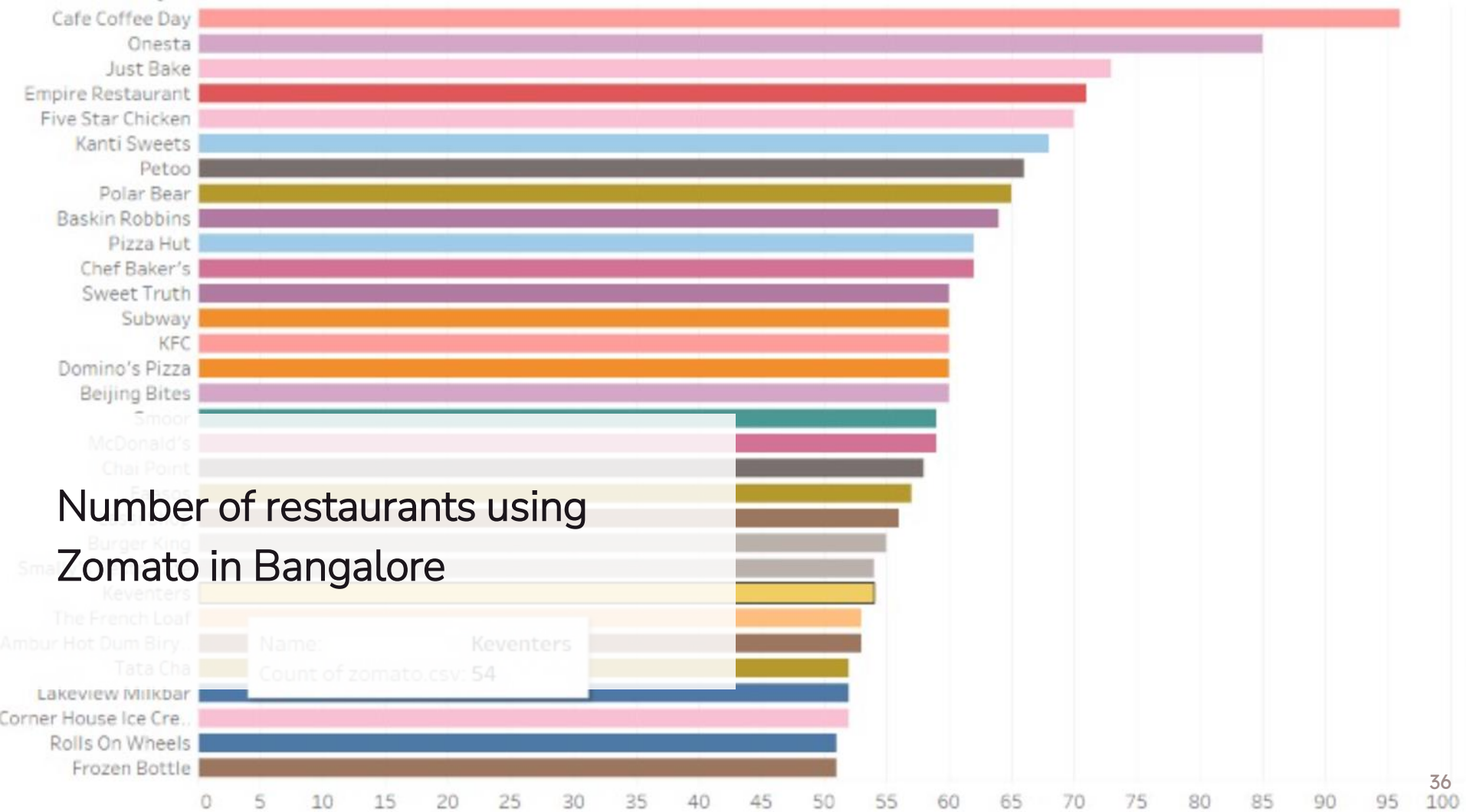
Title	Publishing Details	Findings
Business Intelligence solution for Food Industry	<p>Journal of Basic and Applied Sciences</p> <p>2017</p>	<ul style="list-style-type: none"> → This paper presents a BI system for food industry and developed using real time data. → This paper discuss a BI system for the food manufacturing industry, national food canada along with characteristics, data, methodology as well as tools used in the system. → Many advanced techniques give risk to efficient methods and ways to provide a robust and effective environment for implementing BI systems in food industry.

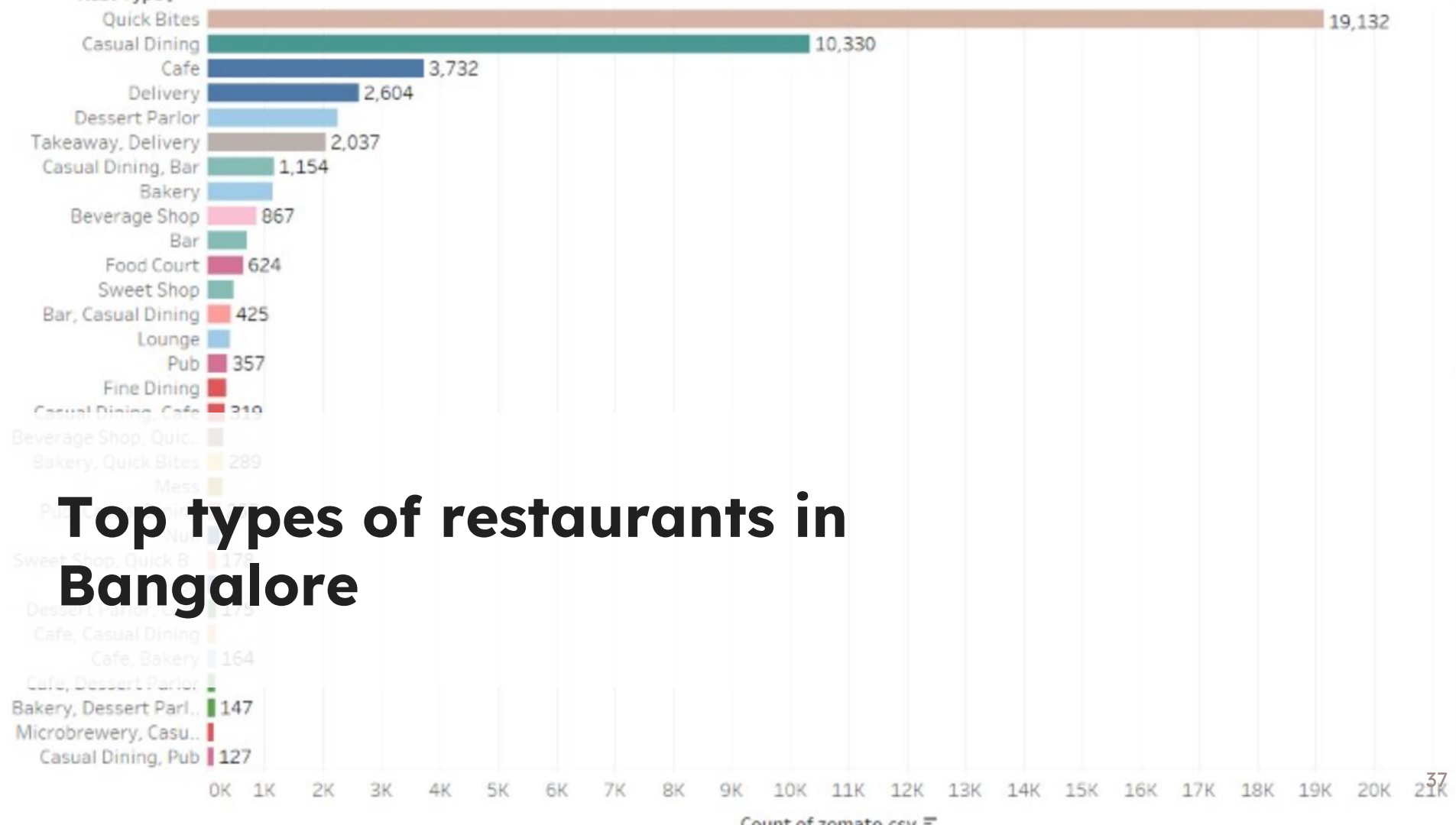
Implementation using Tableau



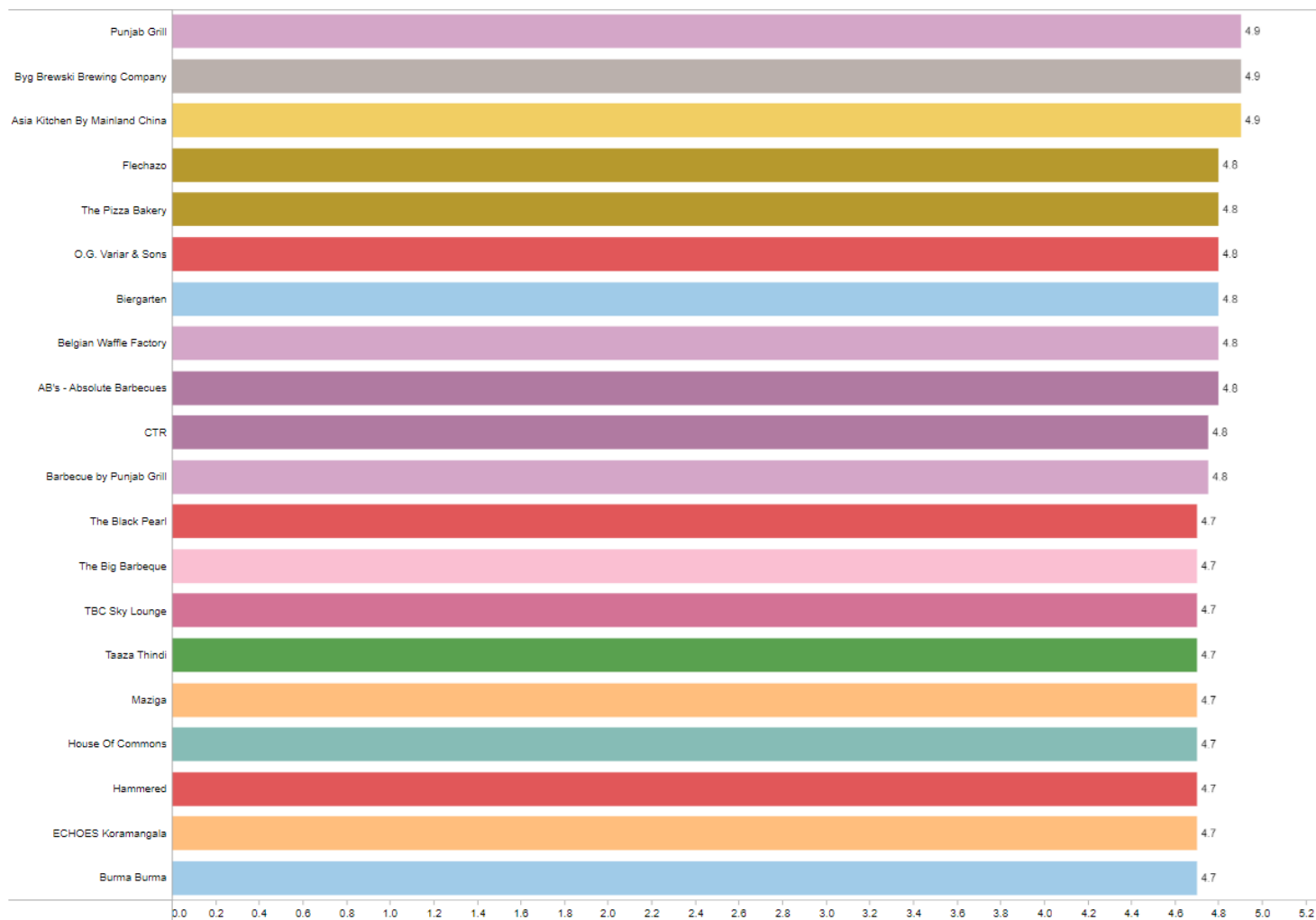
Percentage of restaurants in Bangalore accepting Zomato orders



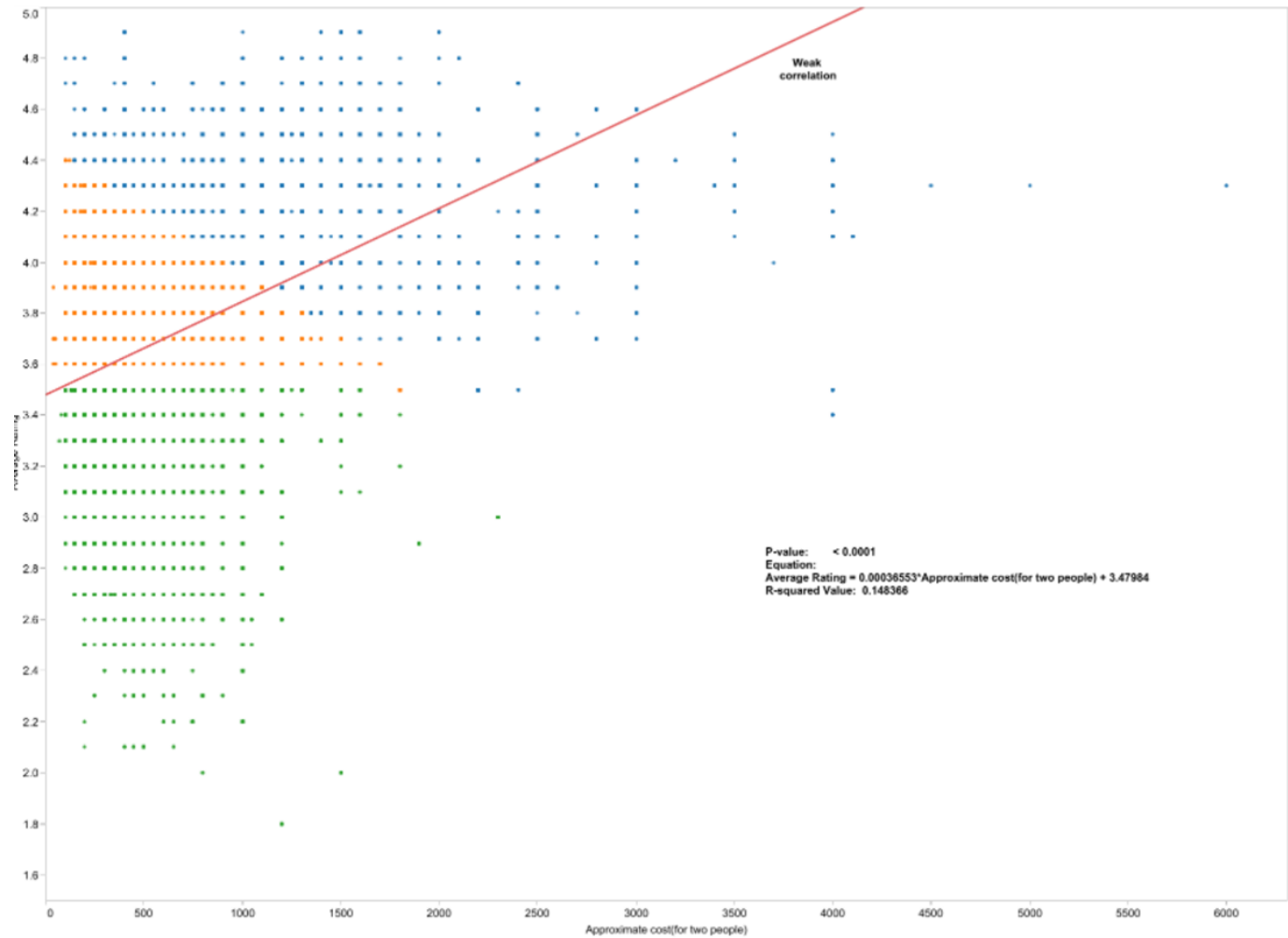




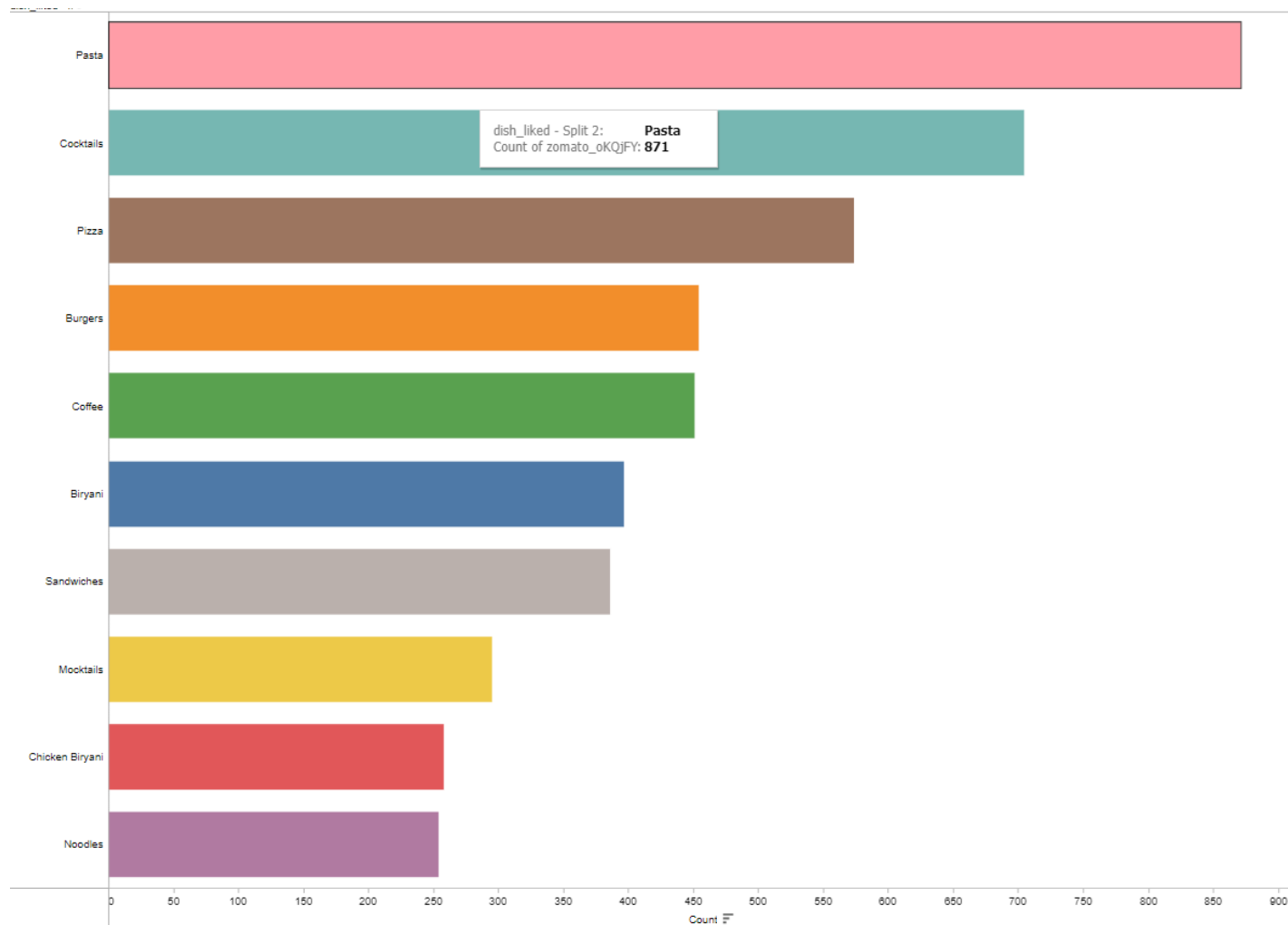
Top Rated restaurants in Bangalore

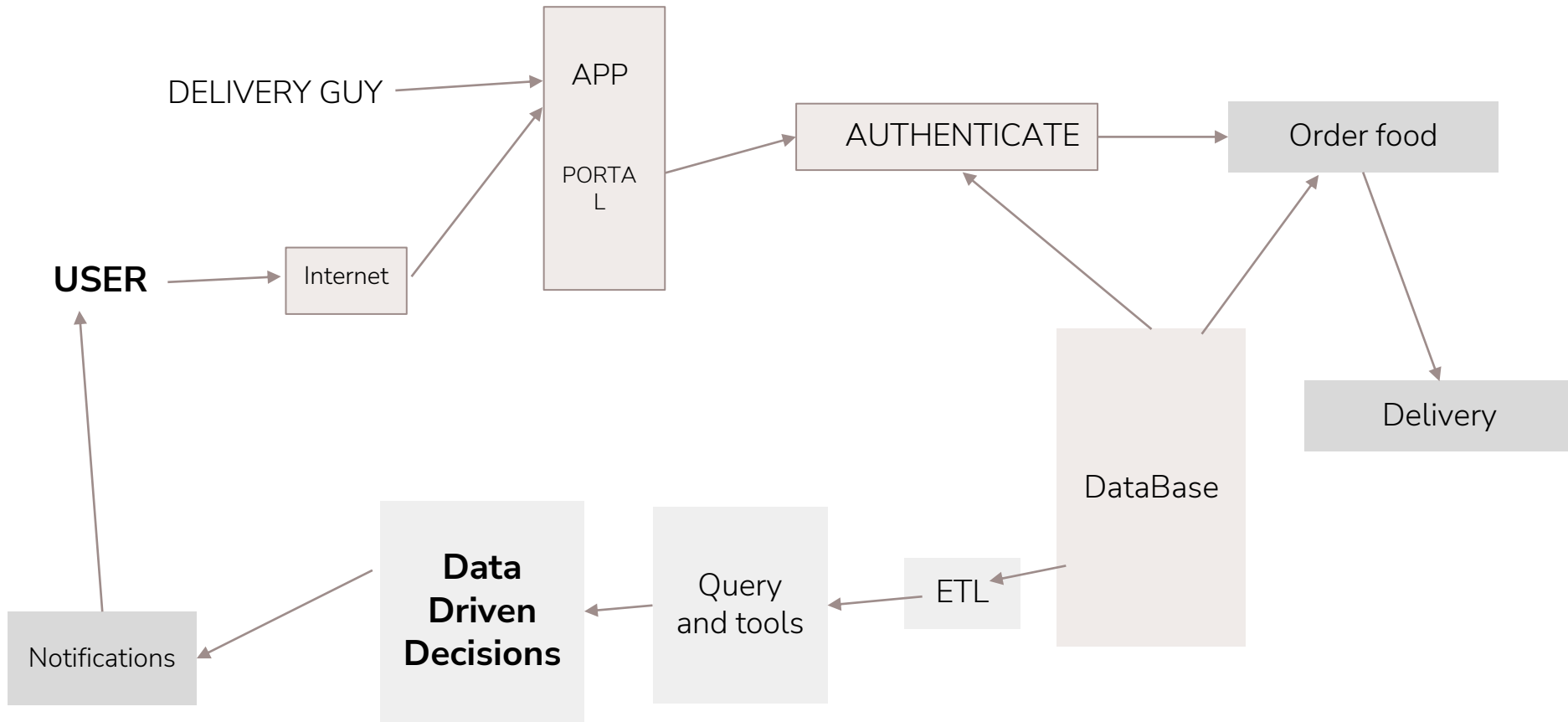


Correlation between ratings and cost



Food items
mostly liked by
Bangaloreans





Technical Architecture

Conclusion

1

Using BI applications companies can use the data in a very efficient way to improve in business.

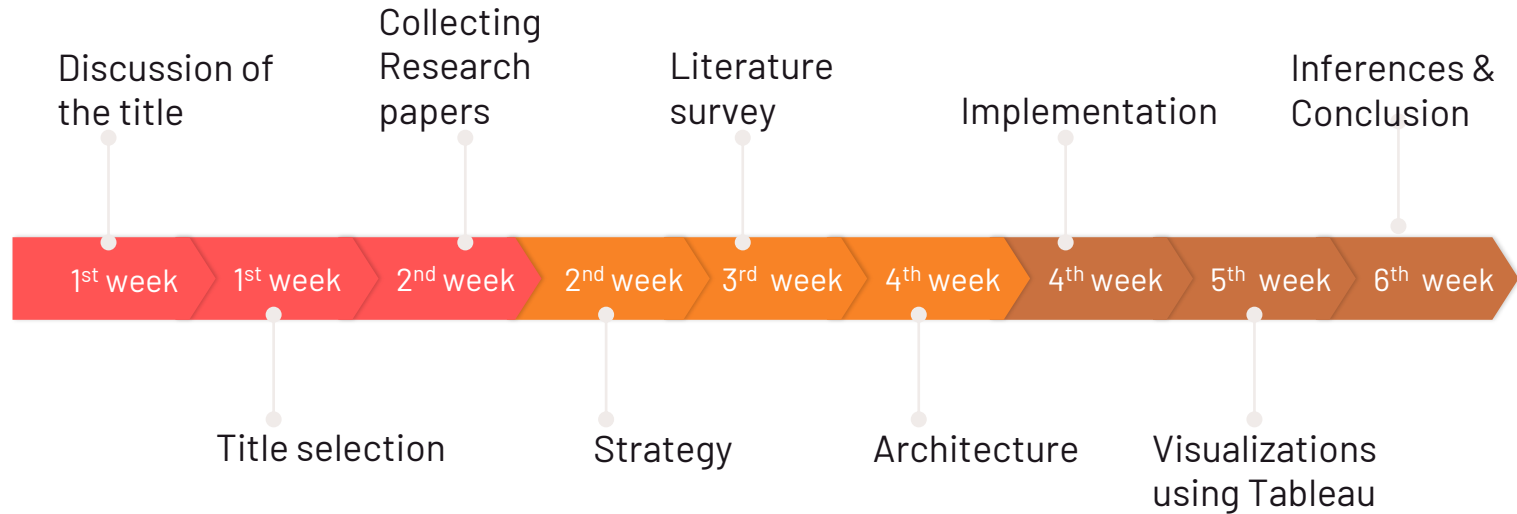
2

Using BI companies can personalize the suggestions based on customer's previous order which can benefit both customers and users.

3

Data driven with BI has proved that online food delivery system will be ruling the world over the normal traditional in the coming the future.

Timeline



References

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- <https://sci-hub.hkvisa.net/10.1109/ICIEA49774.2020.9102024>
- <https://doi.org/10.1109/CICN51697.2021.9574641>
- https://www.researchgate.net/publication/350430883_ONLINE_FOOD_ORDERING_SYSTEM
- <https://sci-hub.hkvisa.net/10.1109/ieem45057.2020.9309922>
- <https://www.analyticsvidhya.com/blog/2021/10/end-to-end-predictive-analysis-on-zomato/>

Thanks!