GOVERNMENT ARTS COLLEGE(AUTONOMOUS), COIMBATORE-18

DEPARTMENT OF STATISTICS

A PROJECT REPORT ON

UNVEILING MARKET INSIGHTS: ANALYSING SPENDING BEHAVIOUR AND IDENTIFYING OPPURTUNITIES FOR GROWTH

BASED ON THE COURSE

FUNDAMENTALS OF DATA ANALYTICS WITH TABLEAU – SMARTBRIDGE

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UNDER THE GUIDANCE OF

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DEPARTMENT OF STATISTICS

SUBMITTED TO

NAAN MUDHALVAN – SMART INTERNZ DATA ANALYTICS AND UPSKILL PROGRAMMING

Dissertation submitted in partial fulfilment of the requirements for the course of

SMARTBRIDGE

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We are thankful to our project guide

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Thankyou!

1.INTRODUCTION

1.1 OVERVIEW

Wholesaling or distributing is the sale of goods or merchandise to retailer to industrial, commercial, institutional or other professional businessman to other wholesalers (wholesale

businesses) and related subordinated services. In general, it is the 0sale of goods in bulk to anyone, either a person or an organization, other than the end consumer of that merchandise. Wholesaling is buying goods in bulk quantity, usually directly from the manufacturer or source, at a discounted rate. The retailer then sells the goods to the end consumer at a higher price making a profit the consumption and production of marketed food are spatially separated. Production is primarily in rural areas while consumption is mainly in urban areas.

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1.2 PURPOSE

Identify trends and patterns in customer spending.

By visualizing customer spending data over time, businesses can identify trends and patterns that can help them understand how customers are spending their money and the factors are influencing their spending habits.

Segment customers by spending behaviour.

Tableau can be used to segment customers into different groups based on their spending behaviour. This information can then be used to develop targeted marketing and sales strategies for each segment.

Identify high-value customers.

Tableau can be used to identify customers who are spending the most money with a business. These customers can then be targeted with special offers and loyalty programs to encourage them to continue spending.

Identify opportunities for cross-selling and upselling.

By analysing customer spending data, businesses can identify opportunities to crosssell and upsell related products and services to their customers.

Identify new market opportunities.

By comparing customer spending data across different regions, products, and services, businesses can identify new market opportunities that they may be able to exploit.

2.PROBLEM DEFINITION & DESIGN THINKING

In order and find solutions for the problems and understanding it we have conducted many discussions within our team and presented it in the form of Empathy map .

2.1 EMPATHY MAP

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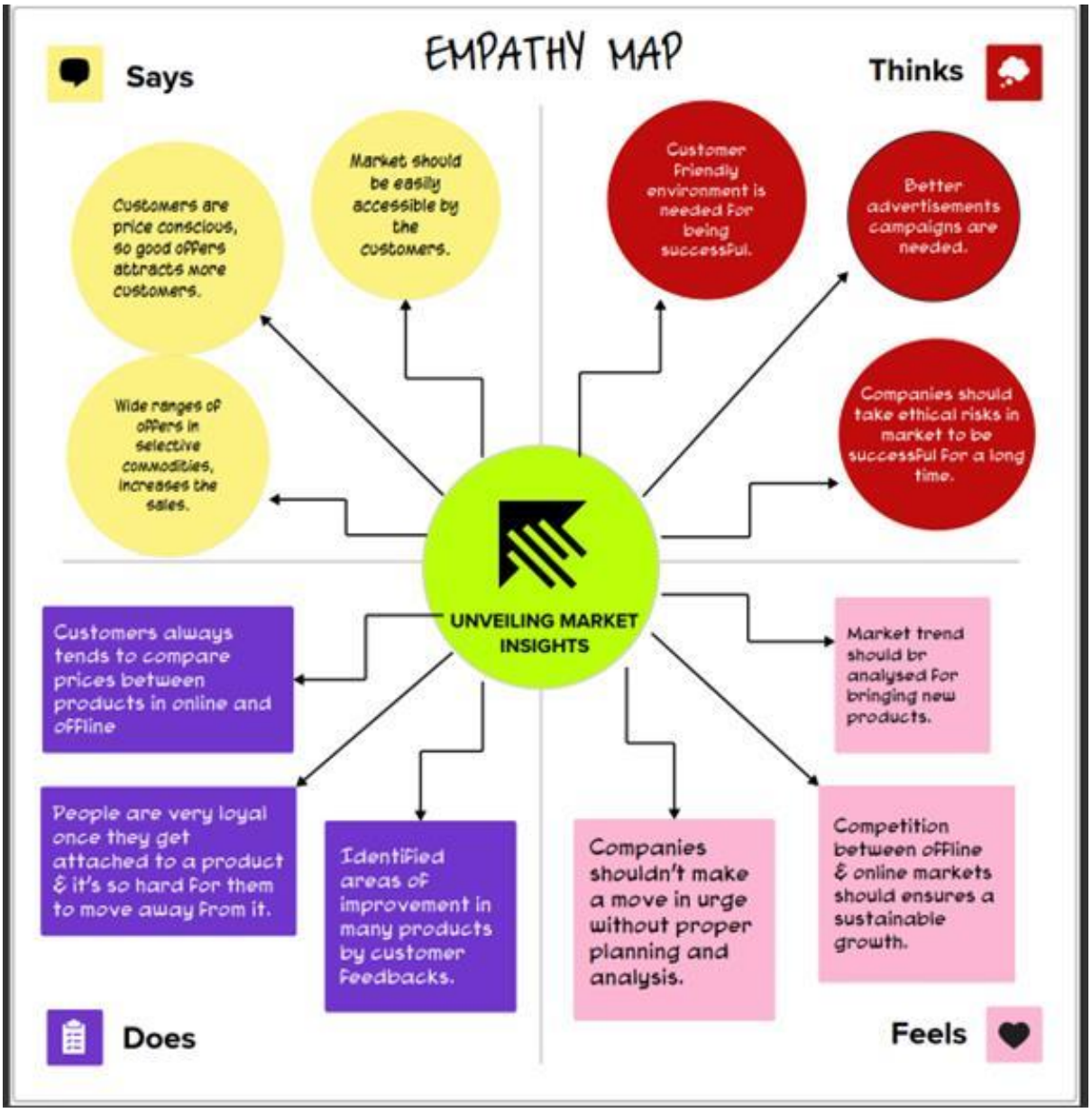

EMPATHY MAP
Says
Thinks
Customers are price conscious, so good offers attracts more customers.
Market should be easily accessible by the customers.
Customer Friendly environment is needed for being successful.
Better advertisements campaigns are needed.
Wide ranges of offers in selective commodities, increases the sales.
Companies should take ethical risks in market to be successful for a long time.
UNVEILING MARKET INSIGHTS
Customers always tends to compare prices between products in online and offline
Market trend should br analysed for bringing new products.
People are very loyal once they get attached to a product & it's so hard for them to move away from it.
Identified areas of improvement in many products by customer feedbacks.
Companies shouldn't make a move in urge without proper planning and analysis.
Competition between offline & online markets should ensures a sustainable growth.
Does
Feels

3.RESULT

DATA VISUALISATION:

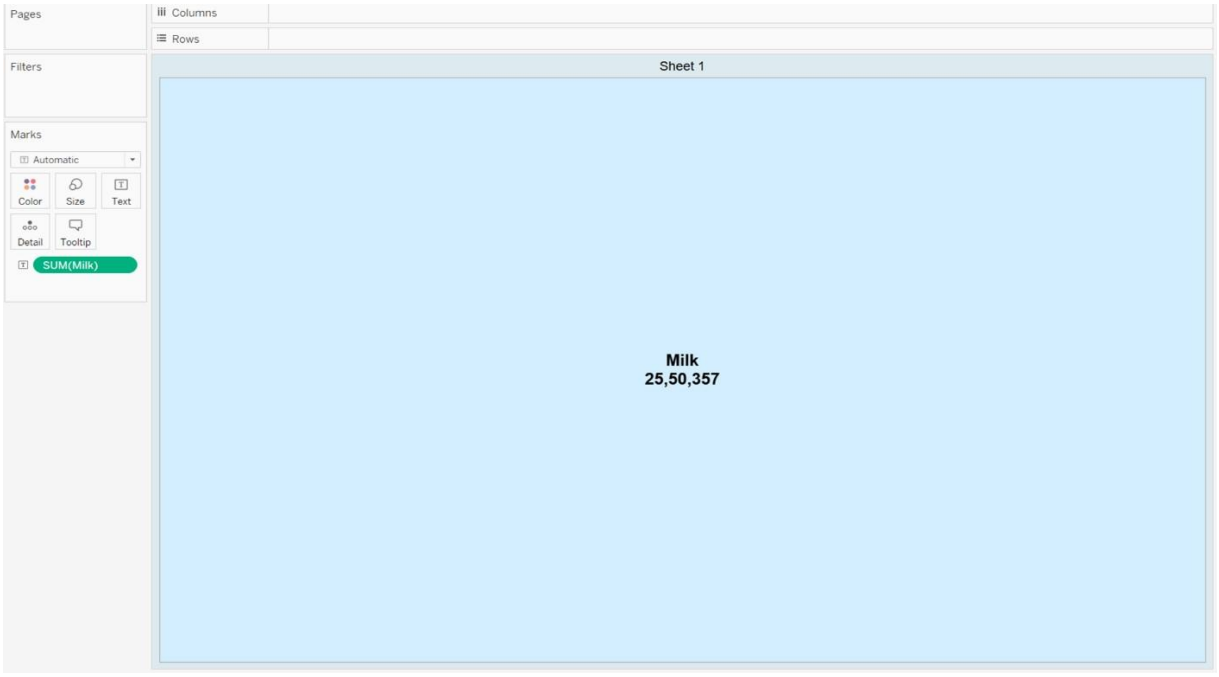
Data visualization is the process of creating graphical representations of data in order to help people understand and explore the information. The goal of data visualization is to make complex data sets more accessible, intuitive, and easier to interpret. By using visual elements such as charts, graphs, and maps, data visualizations can help people quickly identify patterns, trends, and outliers in the data.

NUMBER OF UNIQUE VISUALISATIONS:

The number of unique visualizations that can be created with a given dataset. Some common types of visualizations that can be used to analyse the performance and efficiency of a project include bar charts, line charts, heat maps, scatter plots, pie charts, Maps, etc. These visualizations can be used to compare performance, track changes over time, and show distribution, and relationships between variables.

1.KEY PERFORMANCE INDICATORS (KPI)

KPI For Milk, Fresh and Grocery


Pages
Columns
Rows
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Sheet 1
Marks
Automatic
Color
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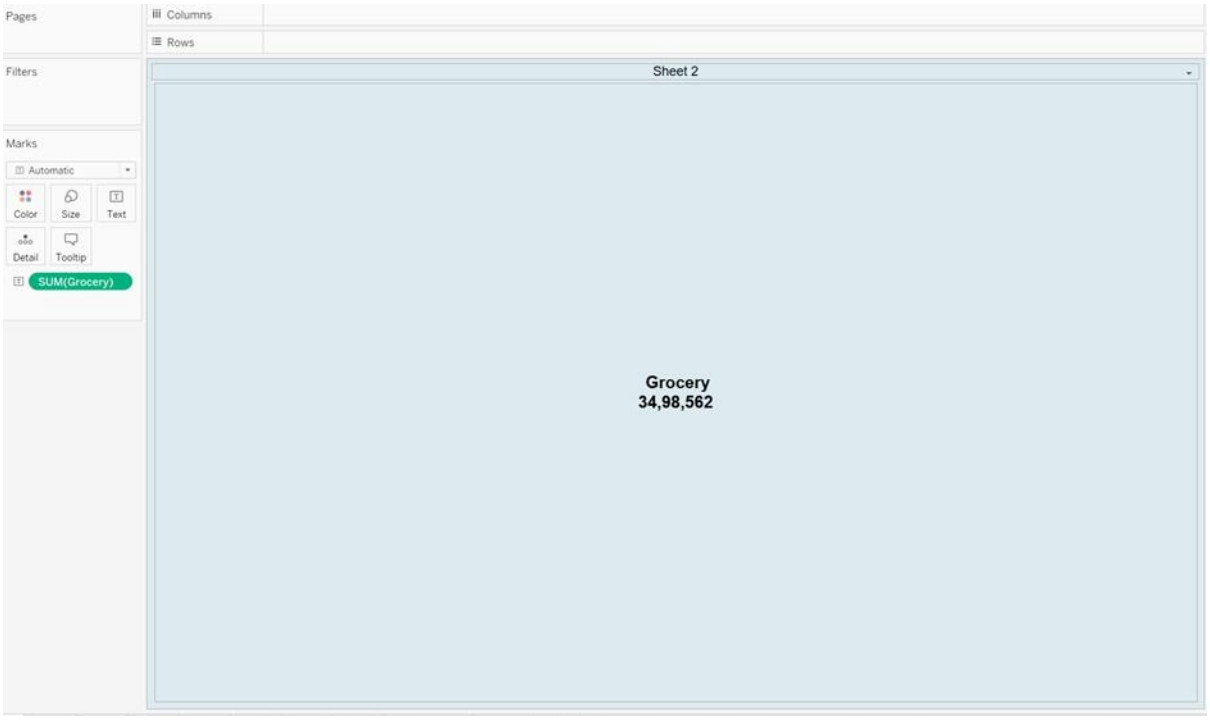
Text
Detail
Tooltip
SUM(Milk)
Milk
25,50,357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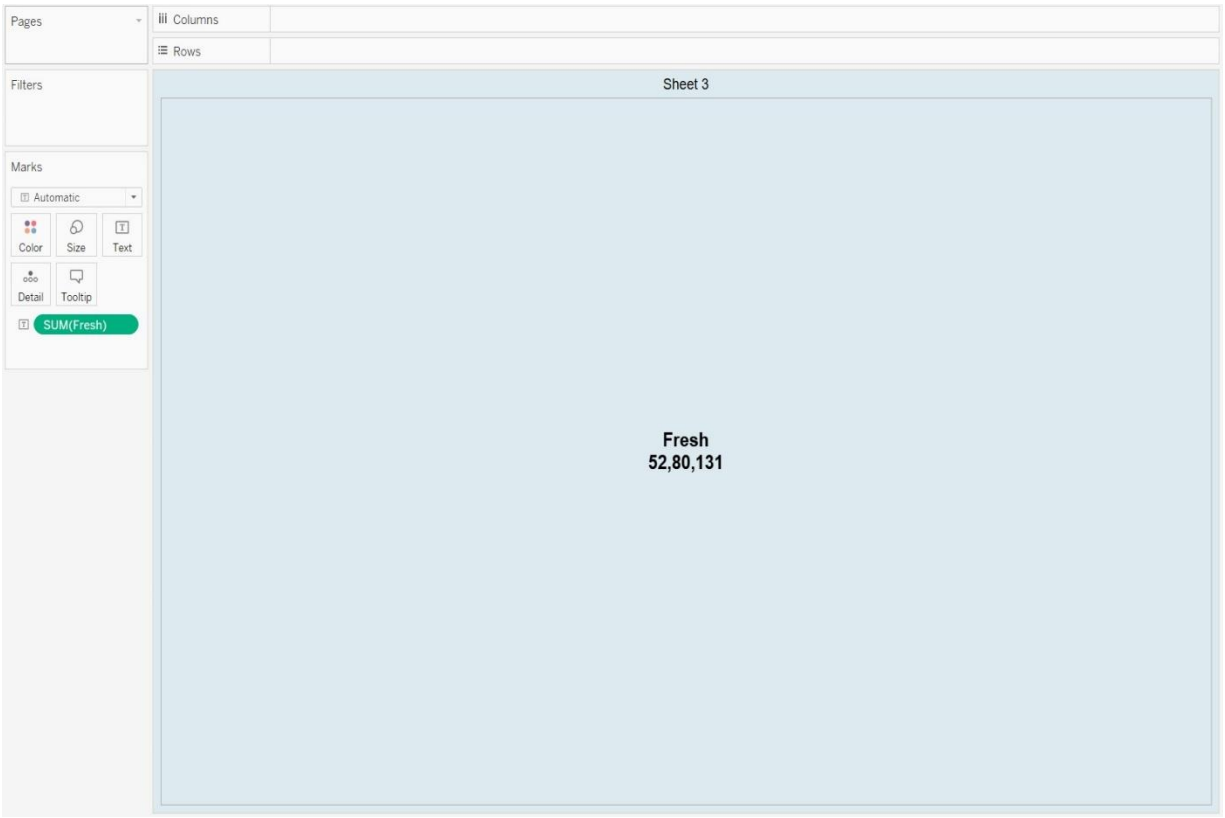
SUM(Grocery)
Grocery
34,98,562


Pages
Columns
Rows
Filters
Marks
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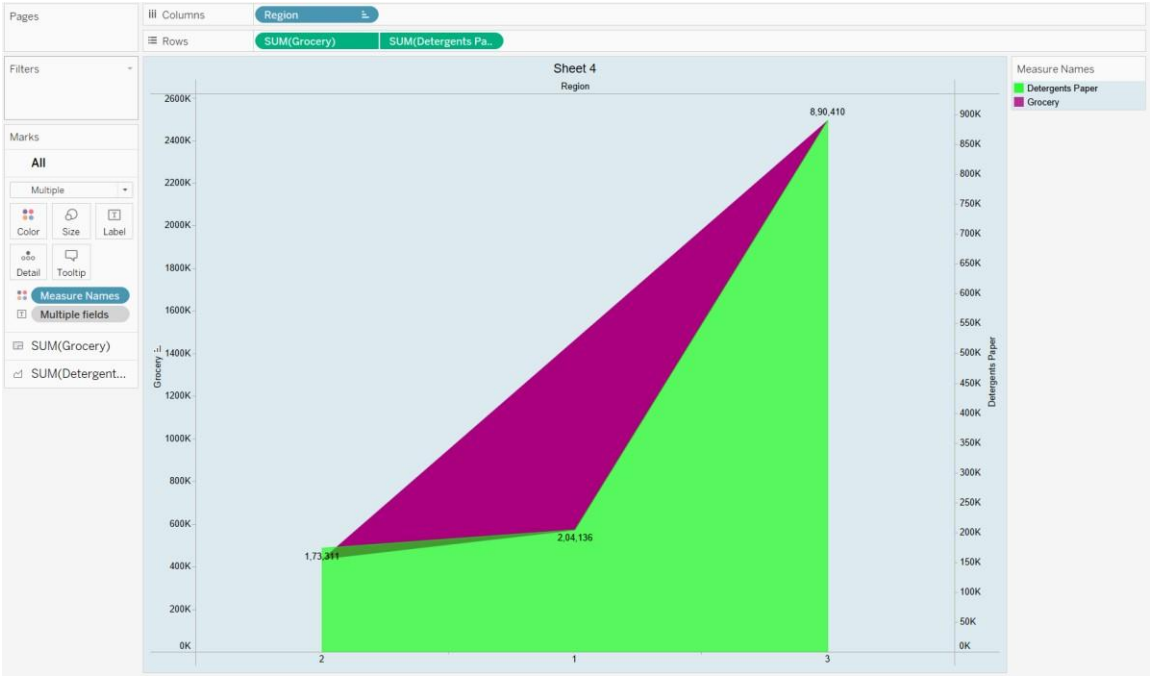
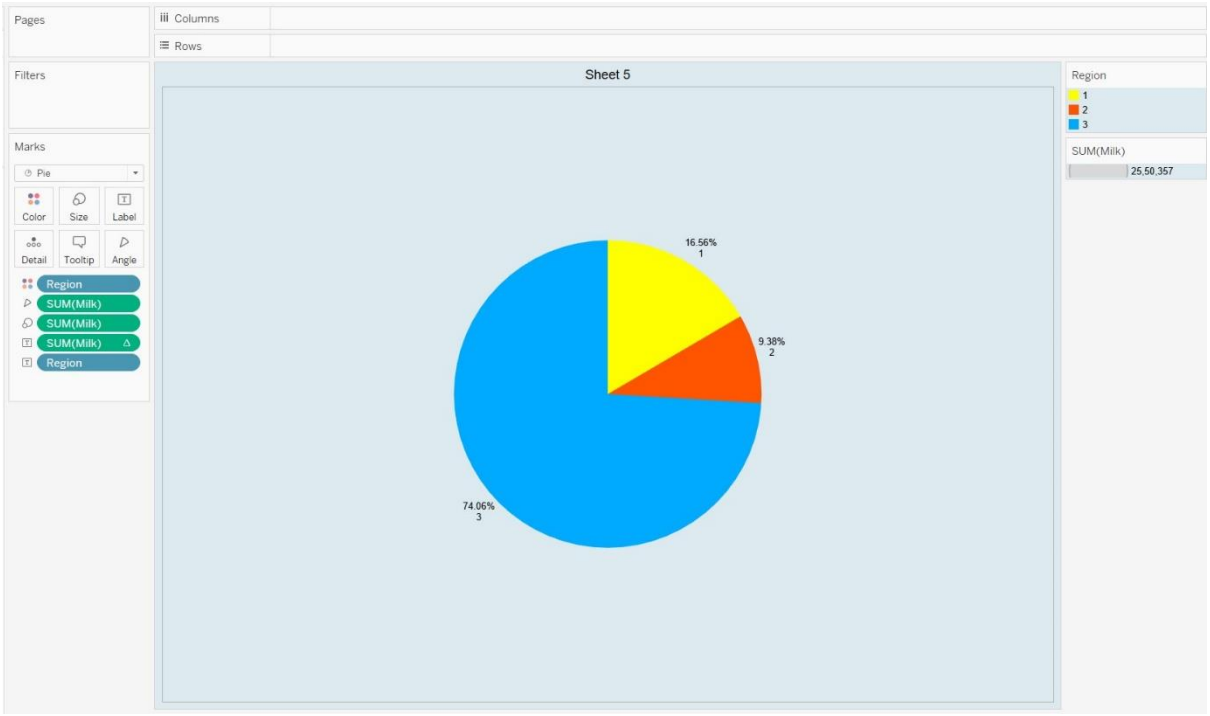
Size
Text
Detail
Tooltip
SUM(Fresh)
Sheet 3
Fresh
52,80,131

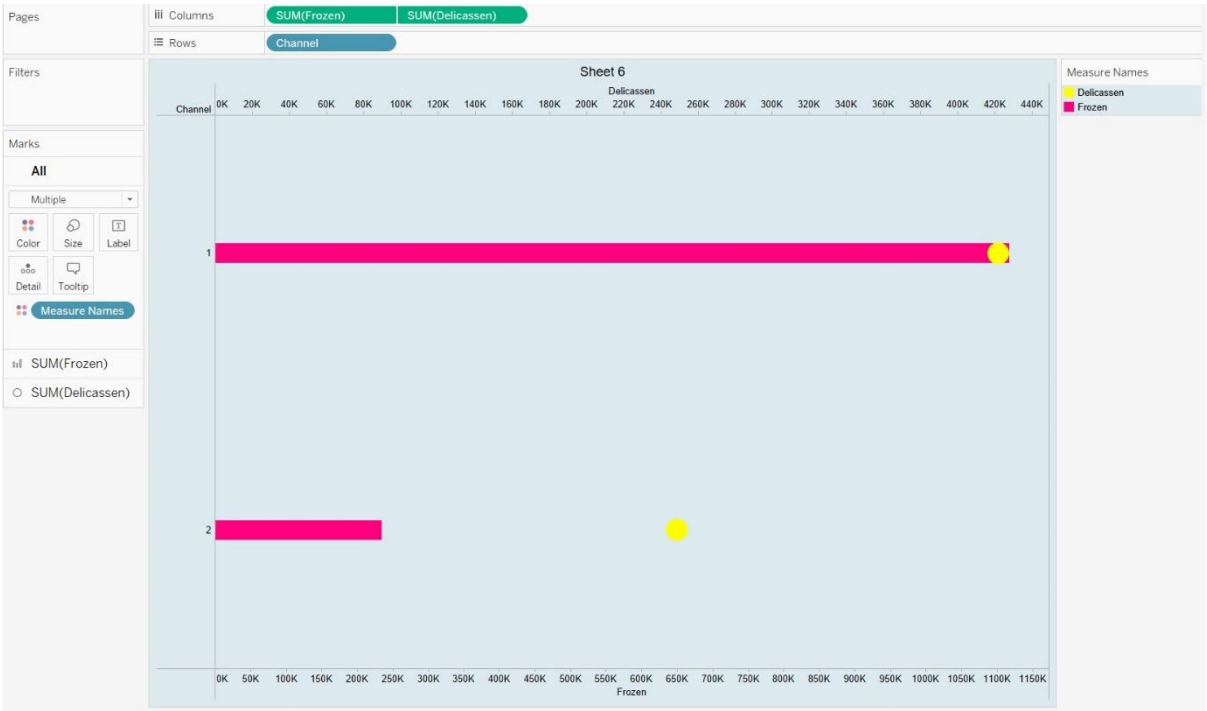
1. REGION WISE DETERGENT PAPER AND GROCERY



3.REGION WISE MILK

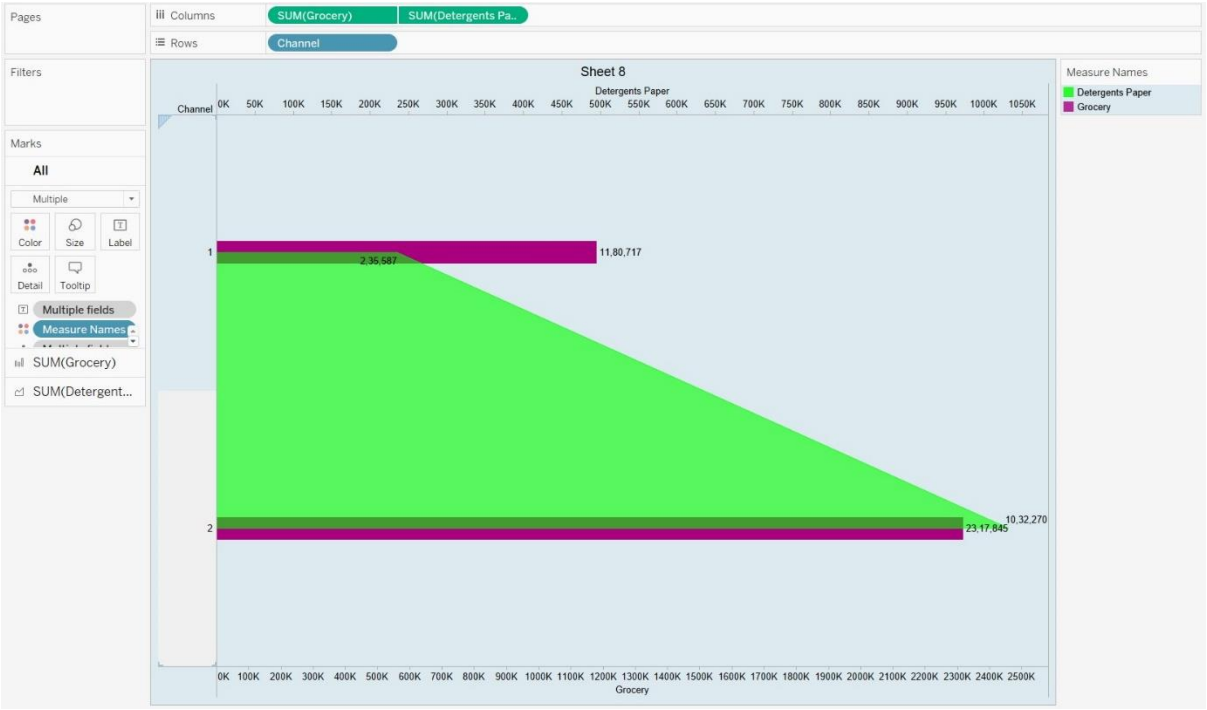


4.CHANNEL WISE FROZEN AND DELICATESSEN



5. Region wise Delicatessen and Detergent paper

6. Channel wise grocery and Detergent paper

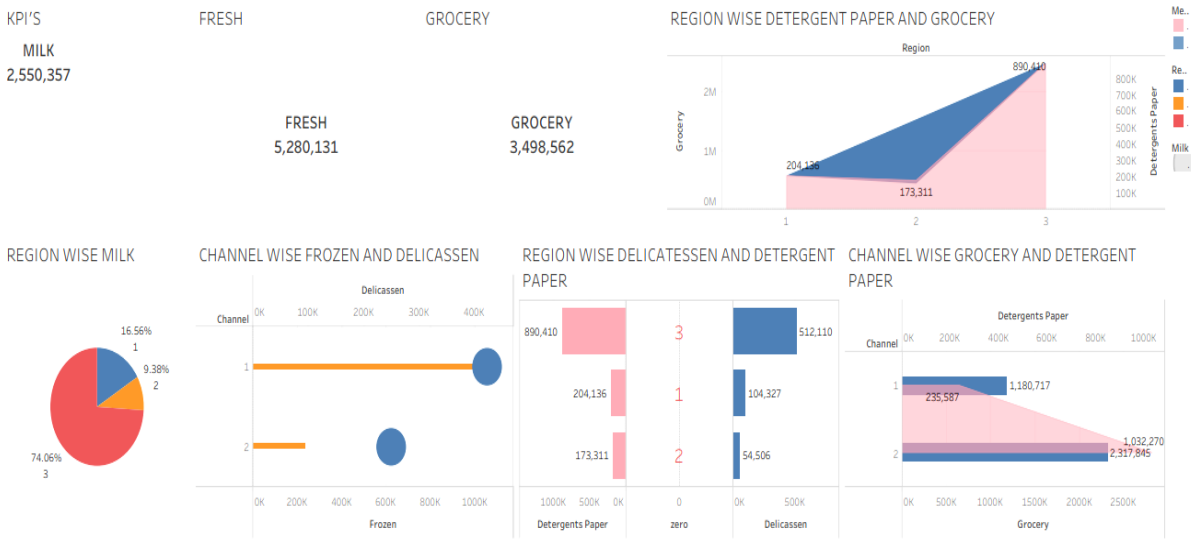


DASHBOARD

A dashboard is a graphical user interface (GUI) that displays information and data in an organized, easy-to-read format. Dashboards are often used to provide real-time monitoring and analysis of data, and are typically designed for a specific purpose or use case. Dashboards can be used in a variety of settings, such as business, finance, manufacturing, healthcare, and many other industries. They can be used to track key performance indicators (KPIs), monitor performance metrics, and display data in the form of charts, graphs, and tables.

Responsive and Design of Dashboard

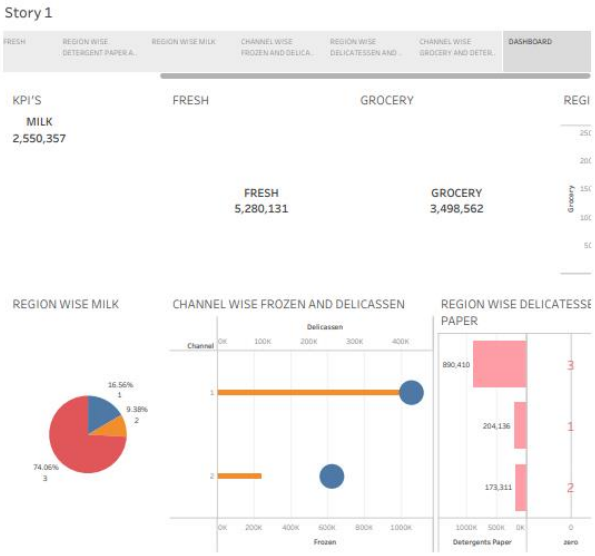
After completion various sheets using the available data, we can pull all those sheets into a Dashboard and present it for better understanding and analyzing problems.



STORY

A data story is a way of presenting data and analysis in a narrative format, with the goal of making the information more

engaging and easier to understand. A data story typically includes a clear introduction that sets the stage and explains the context for the data, a body that presents the data and analysis in a logical and systematic way, and a conclusion that summarizes the key findings and highlights their implications. Data stories can be told using a variety of media, such as reports, presentations, interactive visualizations, and videos.



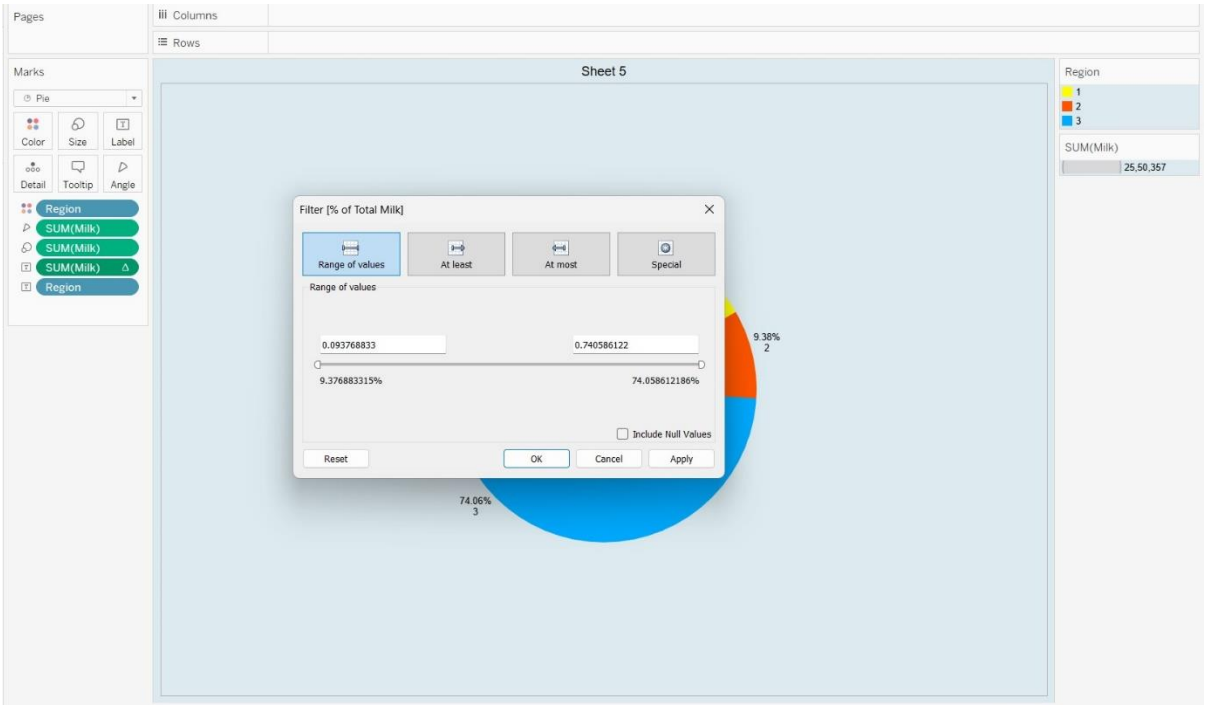
PERFORMANCE TESTING

1.AMOUNT OF DATA RENDERED

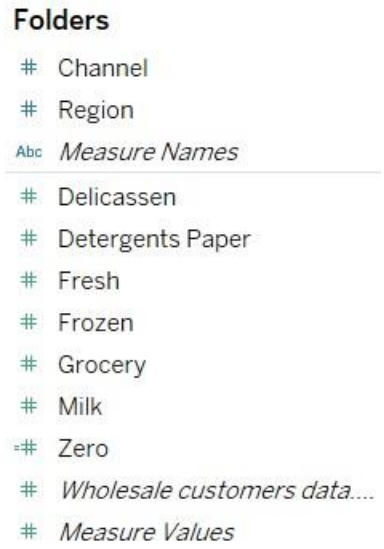
Amount of data rendered in our project is comparatively large set of data it has around 440+ rows we have used this data and prepared our sheets and done our analysis

2.UTILISATION OF DATA FILTERS

We can use filters to analyze our data and get a wide range of understanding about it.



2. NUMBER OF CALCULATION FIELDS



4.NUMBER OF VISUALISATION/GRAPHS

1. KPI
2. Region Wise Detergent paper and grocery
3. Region wise Milk
4. Channel wise frozen and Delicassen
5. Region wise Delicassen and Detergent paper
6. Channel wise grocery and Detergent paper
7. Region Wise Delicassen

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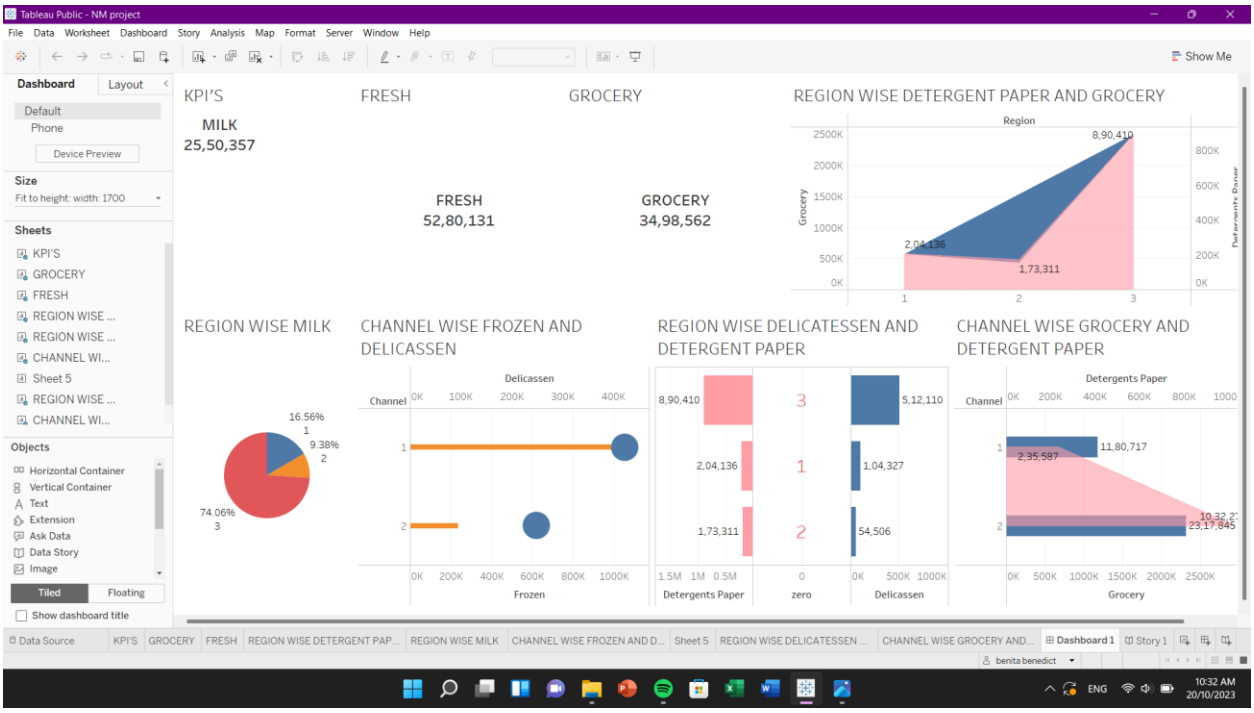
PUBLISHING

Publishing helps us to track and monitor key performance metrics, to communicate results and progress. help a publisher stay informed, make better decisions, and communicate their performance to others.

The Story and Dashboard has been completed and uploaded in Tableau public server and the link is attached as a Hyperlink here- [Unveiling Market Insights]



PROJECT DOCUMENTATION AND DEMONSTRATION

4.ADVANTAGES

1.Comprehensive analysis of customer spending behaviour:

Tableau allows businesses to analyse customer spending behaviour across a variety of dimensions, such as product category, customer segment, geographic location, and time period. This comprehensive analysis can help businesses to identify trends and patterns that would otherwise be difficult to discern.

2.Identification of growth opportunities:

By understanding customer spending patterns and preferences, businesses can identify opportunities to grow their business. For example, businesses may identify opportunities to launch new products or services, expand into new markets, or target specific customer segments with more tailored marketing campaigns.

3.Data visualization:

Tableau's powerful data visualization capabilities make it easy to communicate complex data findings to stakeholders in a clear and concise way. This can help businesses to make more informed and data-driven decisions.

4.Ease of use:

Tableau is a user-friendly platform that does not require any coding knowledge. This makes it accessible to a wide range of

users, including business analysts, marketing professionals, and executives.

5.Improve customer satisfaction:

By understanding customer spending patterns and preferences, businesses can improve their product and service offerings, as well as their marketing and sales strategies. This can lead to improved customer satisfaction and loyalty.

6.Increase revenue:

By identifying and capitalizing on growth opportunities, businesses can increase their revenue and profitability.

7.Gain a competitive advantage:

By leveraging data analytics and data-driven decision-making, businesses can gain a competitive advantage in their respective markets.

DISADVANTAGES

1.Ethical concerns:

Businesses need to be careful about how they use market insights. For example, they should not use market insights to exploit or manipulate customers.

2.Misinterpretation of data:

It is important to interpret market data carefully. Businesses should be aware of the limitations of their data and should not draw conclusions from data that is not statistically significant.

3.Action paralysis:

Having too much market data can sometimes lead to action paralysis. Businesses may become overwhelmed by the amount of data they have and may not be able to decide what actions to take.

5.APPLICATIONS

5.APPLICATIONS

1.Customer segmentation:

Tableau can be used to segment customers based on their spending habits, demographics, and other factors. This information can then be used to develop targeted marketing campaigns and product offerings.

2.Product analysis:

Tableau can be used to analyse product performance by category, region, and time period. This information can be used to identify

popular products, declining products, and new product opportunities.

3.Channel analysis:

Tableau can be used to analyse sales performance by channel, such as online, offline, and wholesale. This information can be used to identify the most effective sales channels and to make necessary adjustments to channel strategies.

4.Competitor analysis:

Tableau can be used to compare your company's performance to that of its competitors. This information can be used to identify areas where you are excelling and areas where you need to improve.

5.Understand customer needs and preferences:

Tableau can be used to analyse customer spending behaviour, demographics, and other factors to understand customer needs and preferences. This information can then be used to develop new products and services, improve existing products and services, and target marketing campaigns more effectively.

6.Identify market trends:

Tableau can be used to identify trends in customer spending, product popularity, and other market factors. This information can then be used to make informed decisions about business strategy, product development, and marketing.

7.Evaluate the effectiveness of marketing campaigns:

Tableau can be used to track the performance of different marketing campaigns and to identify the most effective targeting strategies. This information can then be used to improve future marketing campaigns.

8.Optimize pricing:

Tableau can be used to analyse customer spending behaviour and to determine optimal pricing strategies. This information can then be used to maximize revenue and profits.

9.Improve operational efficiency:

Tableau can be used to identify areas where a business can improve its operational efficiency. This information can then be used to reduce costs and improve profitability.

6.CONCLUSION

This project aims to analyze customer spending behavior and identify opportunities for growth by leveraging data analytics and data-driven decision making. The primary objective of this project is to understand customer spending patterns, preferences, and trends across various dimensions. By conducting a comprehensive analysis, businesses can optimize their marketing strategies, improve product offerings, and enhance customer engagement to drive revenue growth. The technical architecture of the project involves creating a dashboard and story using Tableau and analyzing spending behavior and identifying opportunities for growth.

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7.FUTURE SCOPE

1.Integration with other data analysis tools:

Tableau can already be integrated with a variety of other data analysis tools, such as R and Python. This integration will only continue to improve in the future, making it easier for businesses to use Tableau in conjunction with other tools to create a complete data analysis solution.

2.Artificial intelligence and machine learning:

Tableau is already starting to incorporate artificial intelligence and machine learning into its platform. This will allow Tableau to provide businesses with even more powerful insights into their data. For example, Tableau could use AI and machine learning to identify trends and patterns in customer spending behaviour that would be difficult to detect manually.

3.Cloud computing:

Tableau is already available in the cloud, making it easy for businesses of all sizes to access. In the future, Tableau will become even more tightly integrated with cloud computing platforms, making it even easier for businesses to use Tableau to analyse their data.

4.Predictive analytics:

Tableau could be used to develop predictive analytics models that can forecast future customer spending behaviour, product demand, and other market trends.

This information could then be used to make more informed business decisions.

5.Prescriptive analytics:

Tableau could be used to develop prescriptive analytics models that can recommend specific actions that businesses can take to improve their performance. For example, Tableau could recommend specific marketing campaigns that businesses can launch to reach new customers or to increase sales of certain products.

6.Natural language processing (NLP):

Tableau could be integrated with NLP capabilities to allow users to query data using natural language instead of having to learn complex SQL queries. This would make Tableau more accessible to a wider range of users, including those without a technical background.

7.Augmented reality (AR) and virtual reality (VR):

Tableau could be integrated with AR and VR capabilities to allow users to visualize data in new and innovative ways. For example, users could use AR to overlay data on the real world or VR to create immersive data visualizations.