

Final DONE

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📁 Class	Final Project

Zomato Market Analysis Report

Dashboard

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Description & Instructions

This dashboard is designed to help users explore restaurant data interactively, with a focus on cuisine types, ratings, and city-wise distribution. I've set up several filters and custom groupings to make the analysis intuitive and flexible.

Key Features and Filters

I've included filters for **City**, **Cuisine Category**, and **Rating**. Users can select one or more cities to focus the analysis, filter by broad cuisine categories (which I created using a calculated field), and narrow down results by average restaurant ratings.

How I Grouped Cuisines

To make the cuisine filter more user-friendly, I created a calculated field called **Cuisine Category**. This field groups the many different cuisine names in my data into broader, more meaningful categories. Here's how it works:

If the **Cuisine** field contains keywords like "North Indian," "Chinese," "Desserts," etc., it assigns that specific category. For example, anything containing "Ice

Cream" is grouped under "Desserts." There's also a long list of other cuisines that I grouped under "All" to keep the filter manageable. If a cuisine doesn't match any of my conditions, it's labeled as "Other."

This approach ensures that users can easily filter and compare similar types of food, even if the original data had a lot of variety in cuisine names.

Visualizations

The dashboard includes:

- **Bar charts** showing the number of restaurants by cuisine category and city.
- **Maps** displaying restaurant locations.
- **Summary metrics** (KPIs) for total restaurants, average ratings, and possibly review counts.

All these visuals update dynamically based on the filters selected.

Data Connections

The dashboard is connected to a dataset with fields like `Cuisine`, `City`, `Rating`, and geographic coordinates. The calculated field for cuisine categories is essential for grouping and filtering the data effectively. If I add new cuisine types to the data in the future, I'll need to update the calculated field logic to keep the categories accurate.

How to Use My Dashboard

1. **Select a City:** Use the city filter to focus on restaurants in a particular location.
2. **Choose a Cuisine Category:** Use the cuisine category filter to analyze specific types of food, as grouped by my calculated field.
3. **Adjust the Rating Filter:** Narrow down the results to restaurants with certain average ratings.
4. **Explore the Visuals:** Interact with the bar charts, maps, and summary metrics to gain insights into restaurant distribution, popularity, and performance.

Special Notes

- The **Cuisine Category** calculated field is key to making the dashboard easy to use, especially given the variety of cuisine names in the data.
- If you notice any new or uncategorized cuisines, let me know so I can update the grouping logic.
- The dashboard is designed to be flexible and interactive, so feel free to experiment with different filter combinations to discover trends.

Executive Summary

This analysis of Zomato's restaurant and customer sales data uncovers actionable insights to drive growth and engagement across our platform. By focusing on sales performance and customer segmentation, we've identified clear opportunities for both restaurant partners and customer experience teams.

Our data shows that leading brands like Domino's Pizza, McDonald's, Paratha Plaza, Chaat House, and Dosa Express command significant market share. Domino's Pizza stands out for its consistent sales and order volume, while McDonald's leads in the beverage segment. Paratha Plaza achieves strong results despite fewer outlets, and Dosa Express demonstrates reliable growth, especially during festival periods. Chaat House, however, experiences more volatile sales, often relying on a small group of top customers.

Customer segmentation analysis reveals that a small group of high-value customers is responsible for a large share of total sales, especially for brands like Domino's. In contrast, McDonald's beverage segment has a broad customer base, but most buyers fall into low or medium-value segments, highlighting an opportunity to nurture more high-value customers. Brands with focused menus, such as Domino's, consistently outperform those with broader offerings, suggesting that menu optimization can drive stronger results.

Based on these findings, we recommend the following strategic actions:

1. Launch targeted marketing and retention programs for high-value, high-frequency customers to maximize their lifetime value.
2. Advise restaurant partners to streamline menus and focus on top-performing items to boost sales efficiency.

3. Encourage brands to use customer segmentation data to identify and nurture potential high-value customers, especially in segments with many low or medium-value buyers.
4. Support partners in developing loyalty programs and personalized offers to increase repeat purchases and move more customers into higher-value segments.
5. Monitor sales and customer trends at the city level to identify local growth opportunities and tailor promotional strategies accordingly.

Project Description

Business Problem

Zomato aims to enhance business performance by leveraging data-driven insights from sales patterns across our restaurant partners and customer base. Our goal is to identify actionable intelligence that can inform growth strategies, improve customer retention, and drive operational improvements across the platform.

Analysis Focus

This project addresses the following key objectives:

- Track and analyze sales and revenue trends over time
- Identify the highest-performing brands, products, and cities by revenue
- Analyze sales metrics and revenue distribution patterns
- Assess how menu structure and customer spending segments impact overall sales performance
- Segment customers using RFM analysis to inform targeted marketing and loyalty strategies

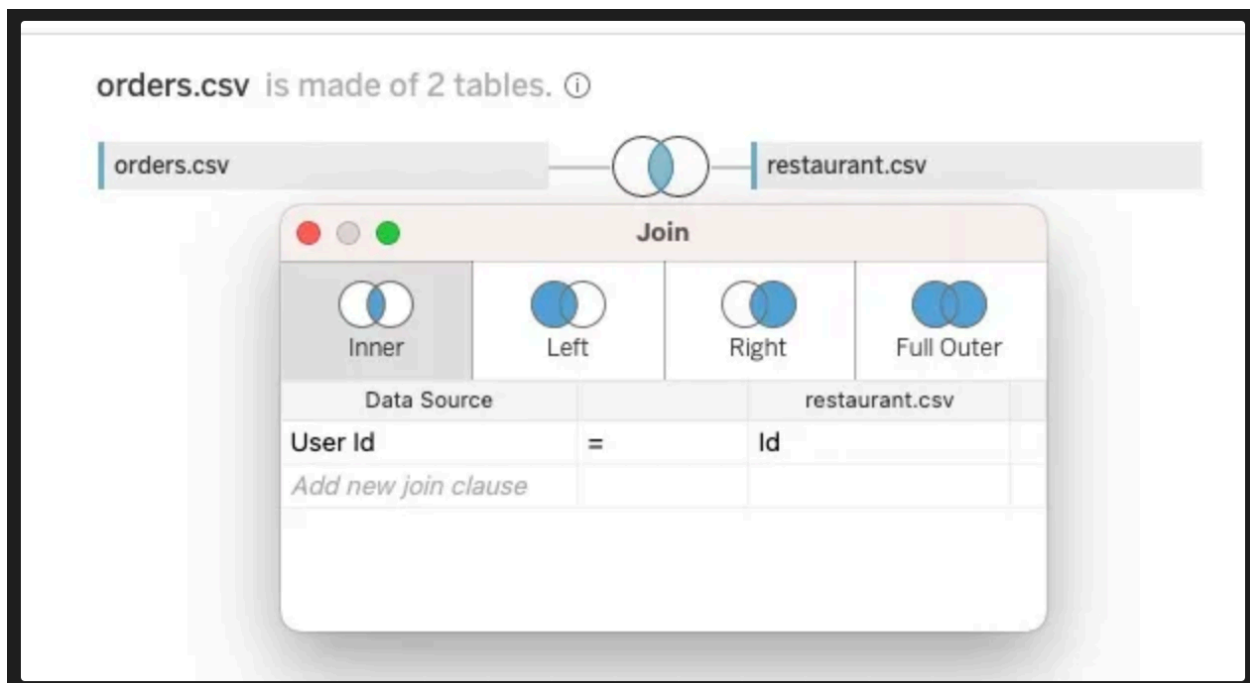
Data Description

Our analysis utilizes five comprehensive tables from the Zomato data archive:

- **orders:** Detailed customer order information including order IDs, timestamps, product details, and transaction values

- **restaurant:** Restaurant partner information including name, location, and cuisine type
- **food:** Food item details including product IDs, names, and categories
- **menu:** Menu offerings for each restaurant, linking food items to specific outlets
- **users:** Anonymized customer data including user IDs and segmentation attributes

Table Relationship



Key Variables

- **user_id:** Unique customer identifier
- **order_frequency:** Number of orders per user during the analysis period
- **total_spent:** Total INR spent by each user
- **average_order_value:** Mean value of a user's orders

- **segment:** Customer segment label based on RFM score
- **first_order_date:** Date of user's first order
- **last_order_date:** Date of user's most recent order

Orders Table (**orders.csv**)

- **Order Date:** Date when the order was placed
- **Currency:** Currency used for the transaction
- **F1:** (Field as per your data, could be a unique order identifier)
- **R Id:** Restaurant identifier for each order
- **Sales Amount:** Total value of the order
- **Sales Qty:** Quantity of items in the order

Restaurant Table (**restaurant.csv**)

- **Id:** Unique restaurant identifier
- **Name:** Restaurant name
- **Address:** Restaurant address
- **City:** City where the restaurant is located
- **Cost:** Average cost for two people (or as defined in your data)
- **Cuisine:** Type of cuisine offered
- **Menu:** Menu details or description
- **Lic No:** Restaurant license number
- **Link:** URL or reference link for the restaurant
- **Country:** Country where the restaurant operates
- **Cuisine Category:** Broader cuisine classification
- **Cuisine Filter:** Filtered or grouped cuisine type
- **Customer Segment:** Customer group classification
- **Time Filter:** Time-based filter for analysis (e.g., quarter, month)

- **User Id:** User identifier (for mapping orders to users)
- **Rating:** Customer rating for the restaurant
- **Rating Count:** Number of ratings received

RFM Methodology & Customer Segmentation

RFM Scoring

Our RFM (Recency, Frequency, Monetary) analysis segments customers according to the following criteria:

Recency: Days since the user's most recent order (as of June 25, 2020)

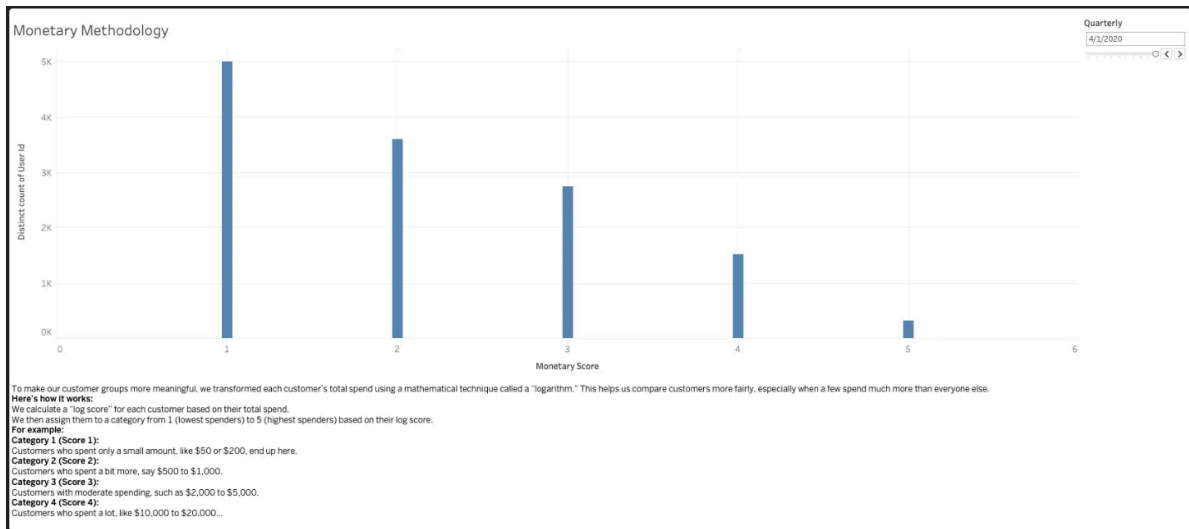
- Score 5: ≤ 100 days
- Score 4: 101–200 days
- Score 3: 201–300 days
- Score 2: 301–400 days
- Score 1: > 400 days

Frequency: Number of orders per user

- Score 4: 6+ orders
- Score 3: 4–5 orders
- Score 2: 2–3 orders
- Score 1: 1 order

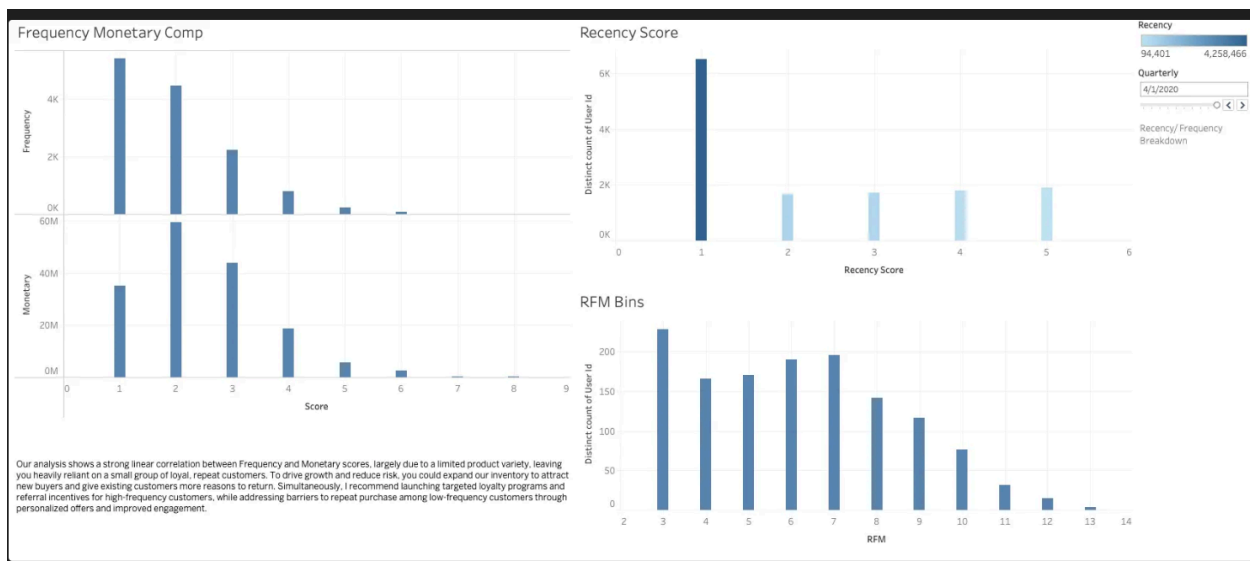
Monetary: Total sales amount per user

- Score 5: $\geq 100,000$ INR
- Score 4: 20,000–99,999 INR
- Score 3: 5,000–19,999 INR
- Score 2: 1,000–4,999 INR
- Score 1: $< 1,000$ INR



Monetary Bin (Logarithmic): Used for segmentation, with bins based on the log of total spend

RFM Score: Calculated as the sum of Recency, Frequency, and Monetary scores for each user



Customer Segmentation

Customers are segmented by RFM score:

- **High Value:** RFM score ≥ 10
- **Medium Value:** RFM score 5–9
- **Low Value:** RFM score < 5

RFM Analysis Findings

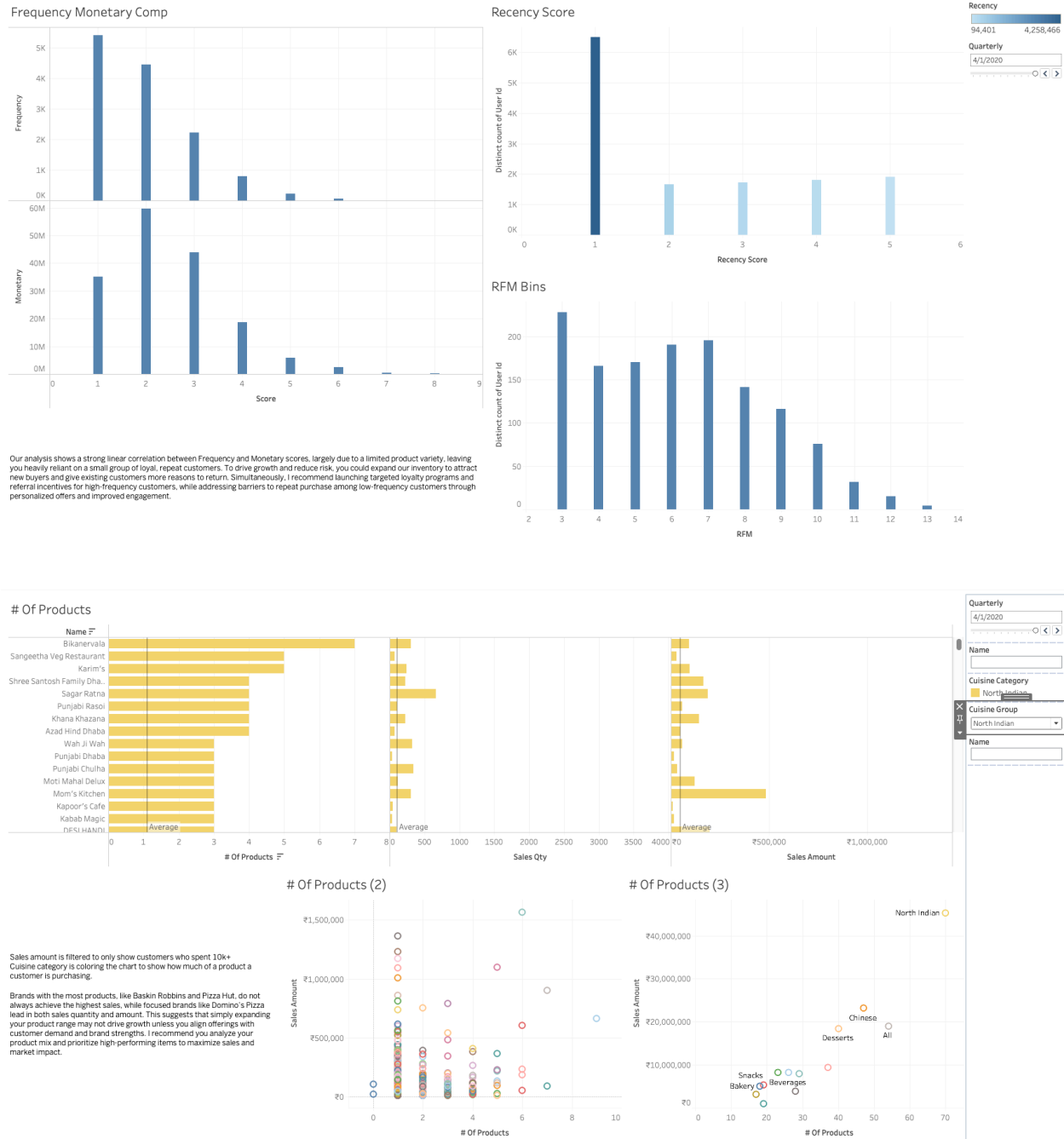
- Frequency and Monetary scores show strong correlation; high-spending customers are typically frequent buyers as well
- Most users have a low recency score, indicating they have not made purchases recently
- High-value customers (RFM ≥ 10) represent a small percentage of our user base but account for a disproportionately large share of revenue
- The largest customer groups fall within the lowest monetary bins, but the highest spenders drive most sales
- Strategic initiatives such as expanding inventory, launching loyalty and referral programs, and implementing personalized offers present significant opportunities to increase repeat purchases

Key Insights

Customer Segmentation Insights

1. North Indian: Customer Patterns & Opportunities

Most North Indian customers buy infrequently and spend less, with only a small group making regular, high-value purchases. This means the brand relies heavily on a few loyal fans. To grow, there's a chance to attract new buyers and encourage more frequent orders—perhaps by expanding the product range, offering personalized deals, or launching referral rewards for regulars.

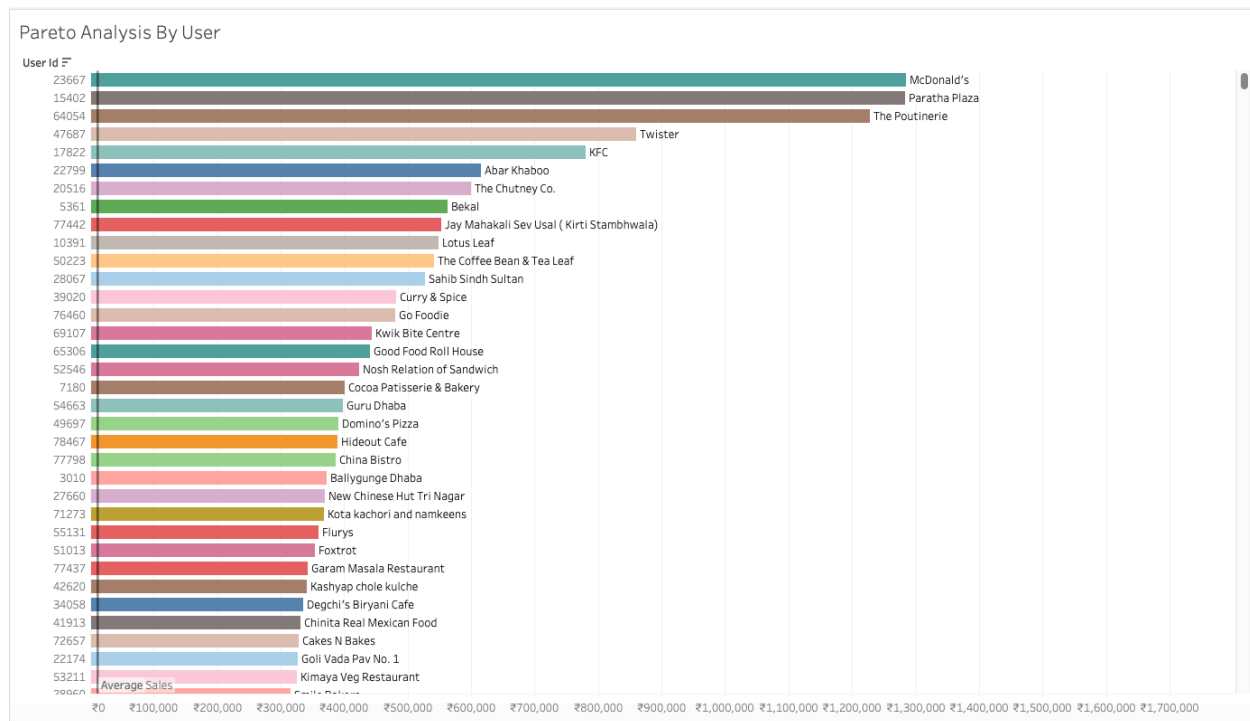


2. The Golden 18%: High-Value Customer Opportunity

Our analysis reveals that customers spending over 100,000 INR annually represent just 18% of our customer base but drive a remarkable 45% of total sales. These premium customers aren't just big spenders—they're our brand ambassadors. Their loyalty presents a significant opportunity to create tailored experiences that

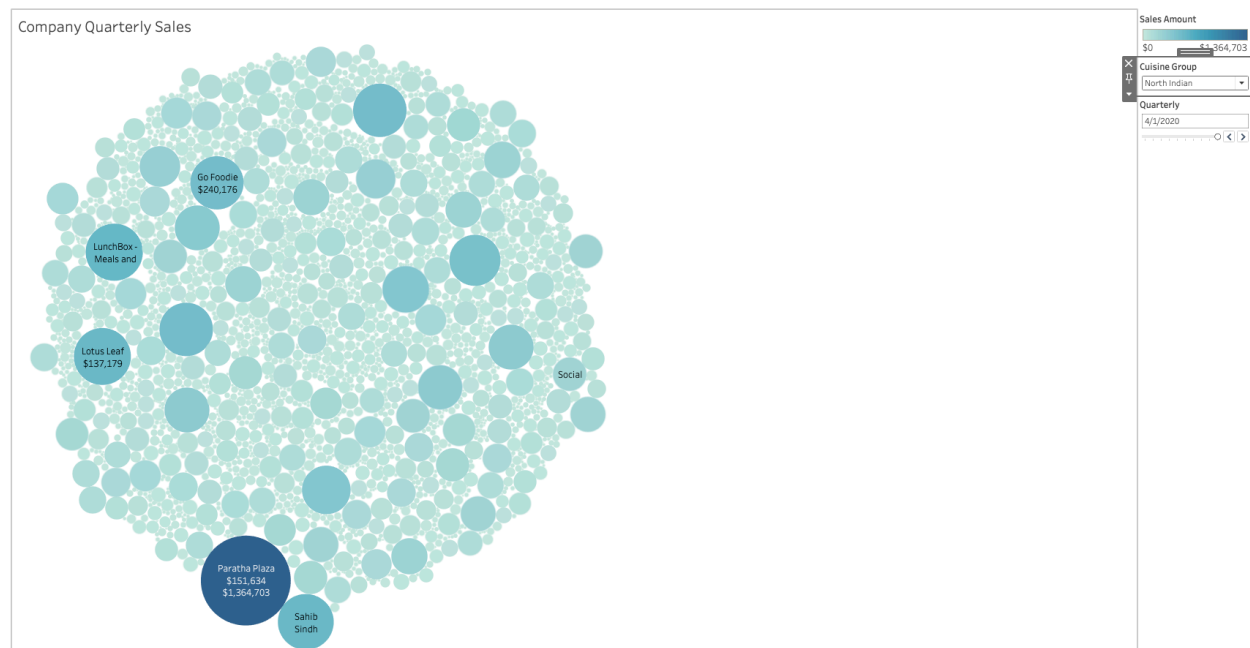
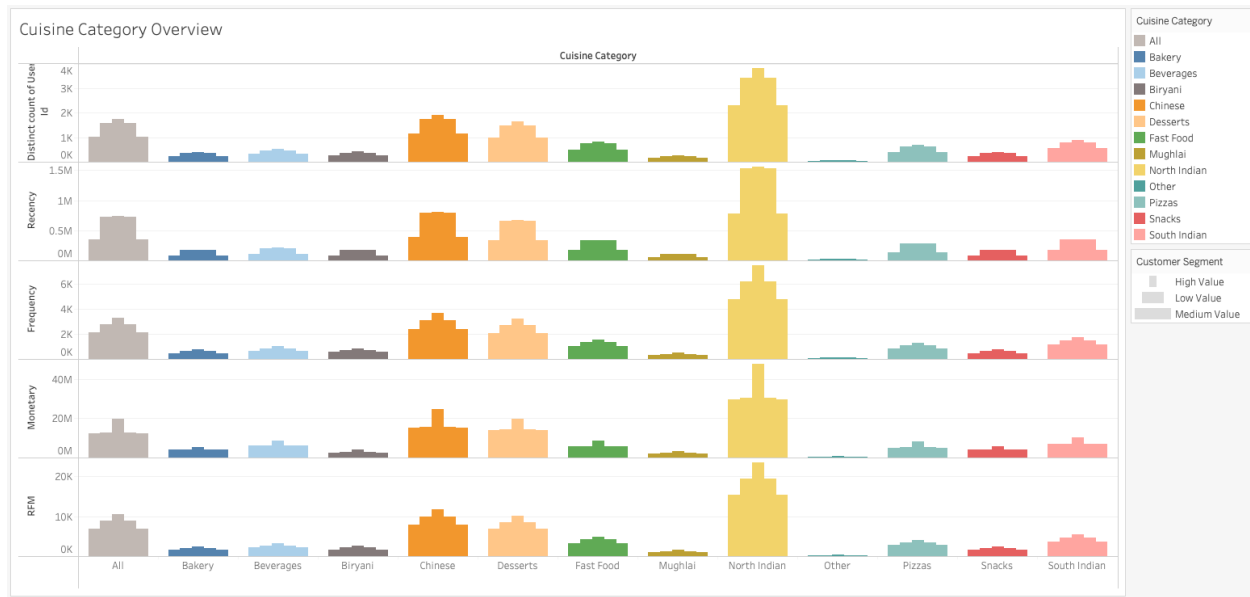
not only retain their business but potentially increase their lifetime value through exclusive offerings and personalized engagement.

04/01/2020



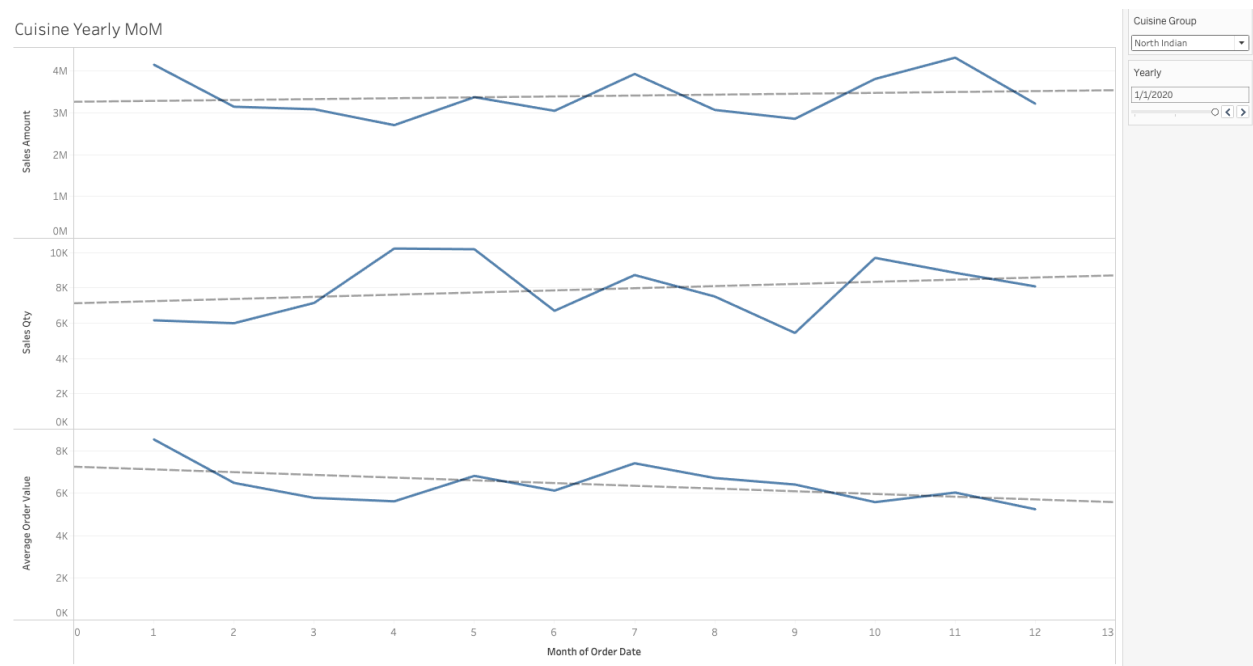
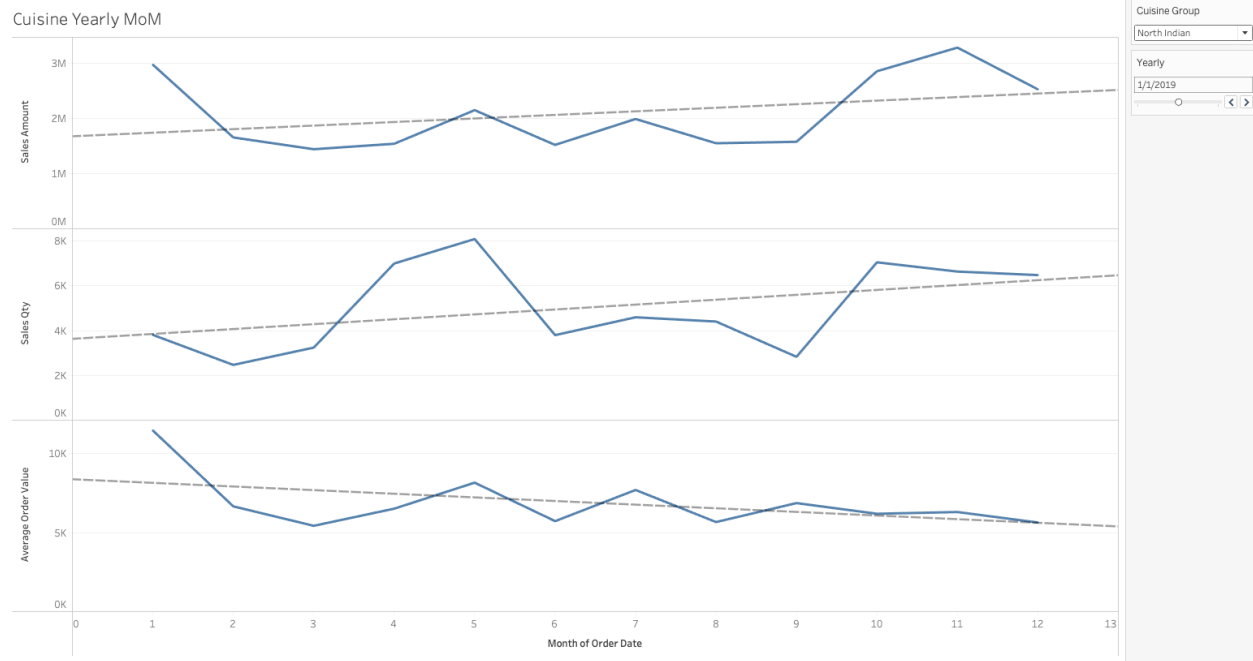
3. The Loyalty Challenge in North Indian Brands

North Indian brands are the most populous segment, yet most of them are low value. A large proportion of customers engage only once or infrequently, lagging behind the loyalty seen in other regional markets. This trend highlights a gap between initial interest and sustained engagement with North Indian offerings, whether in fashion, food products, or cultural experiences. By launching a comprehensive loyalty program—drawing inspiration from successful digital rewards models—North Indian brands could foster deeper connections and repeat engagement. Such an initiative has the potential to increase customer retention by 15-20% within two quarters, transforming one-time buyers into devoted brand advocates. This population has the most potential, because you have such a broad customer base in Northern Indian, the majority of your potential lies with them



4. North Indian Cuisine: Sales Trends

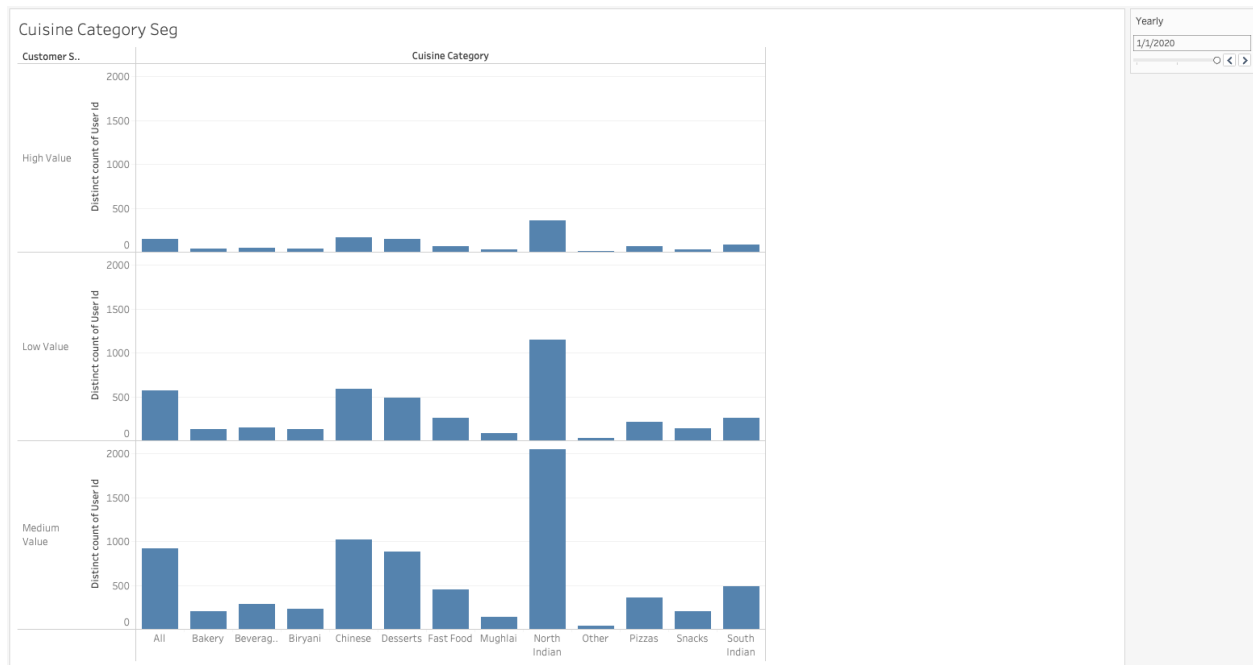
North Indian cuisine is attracting more customers each month, but people are spending less per order. This means interest is growing, but there's room to boost how much each customer buys. Smart deals or bundles could help increase order sizes and keep sales strong all year.



5. North Indian: User Value Segments

Most North Indian cuisine customers fall into the medium or low-value segments, with only a small group in the high-value bracket. There's a big opportunity to

move more customers up the value ladder—perhaps with exclusive perks or targeted offers for regulars.



Sales Analysis Insights

1. Sales Analysis: Key Drivers of Performance

Our sales review highlights a clear pattern: consistent growth is driven by a strong core of repeat customers and steady order volumes. With total sales surpassing ₹168 crore and an average order value of ₹6,413, the business has built a solid foundation. However, year-over-year growth has fluctuated, with notable peaks and dips throughout the year. To sustain momentum, focusing on customer retention and optimizing the sales process—rather than just expanding offerings—will be crucial. A targeted approach to boosting average order value and nurturing loyal customers can help drive stable, long-term growth.

Total Sales

₹168,208,054.00

Average Sales per Customer

₹12,366.42

Average Order Value

₹6,413.55

Number Of Orders

₹26,227.00

Total Sales



Total Sales



Sales Growth YoY



Total Sales

₹168,208,054.00

Average Sales per Customer

₹12,366.42

Average Order Value

₹6,413.55

Number Of Orders

₹26,227.00

Total Sales



Total Sales



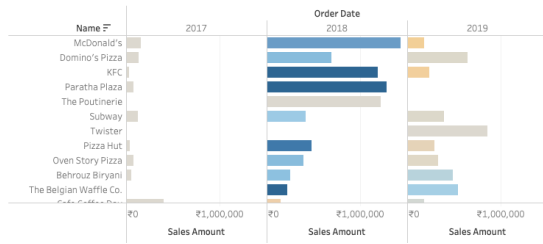
Sales Growth YoY



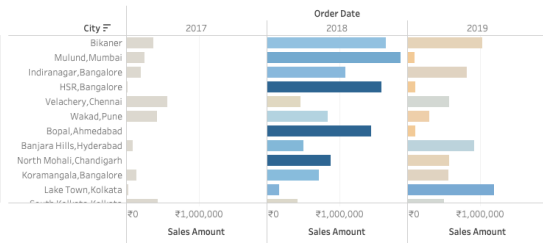
2. Sales Growth Patterns

Sales growth varies widely across both companies and cities. Some brands, like Domino's Pizza, show strong and consistent gains, while others see more modest or uneven results. Certain cities are emerging as key growth drivers, with sales amounts rising sharply year over year. The Pareto analysis also reveals that a small group of users accounts for a large share of total sales, highlighting the importance of nurturing top customers to sustain momentum.

Sales Growth per Company



Sales Growth per City



Quarterly

10/2/2019

Name

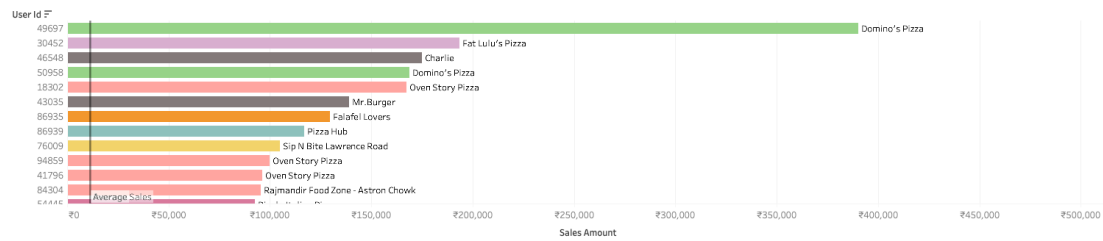
Sales Growth Rate

-100% 1500%

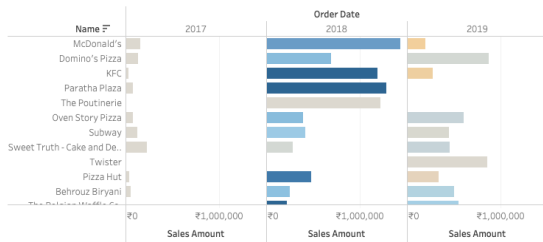
Cuisine Group

Pizzas

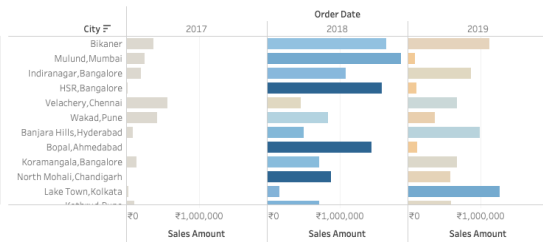
Pareto Analysis By User



Sales Growth per Company



Sales Growth per City



Quarterly

1/2/2020

Name

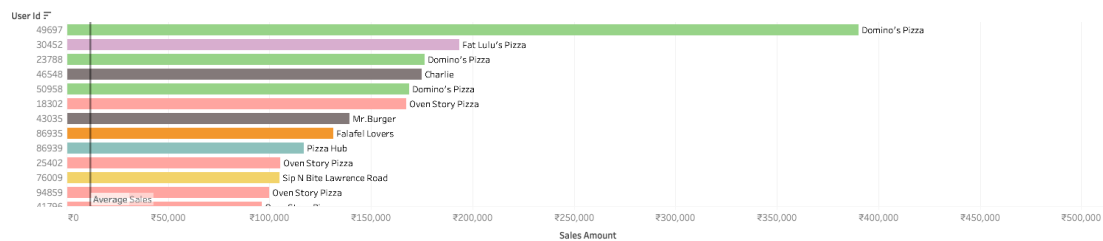
Sales Growth Rate

-100% 1500%

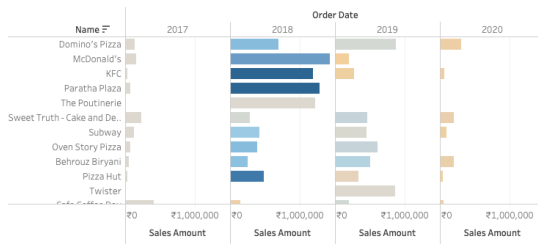
Cuisine Group

Pizzas

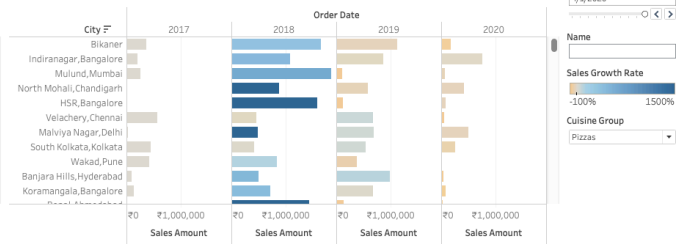
Pareto Analysis By User



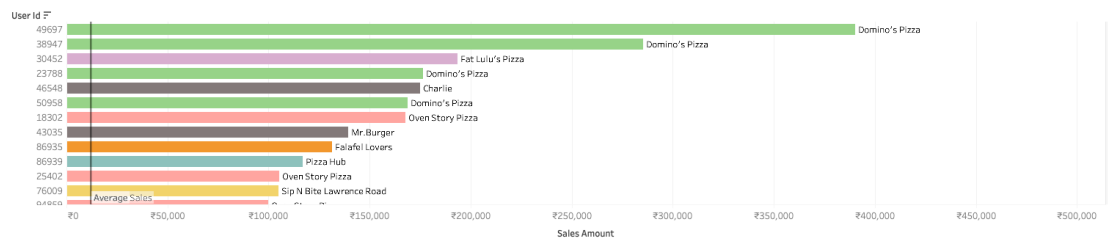
Sales Growth per Company



Sales Growth per City



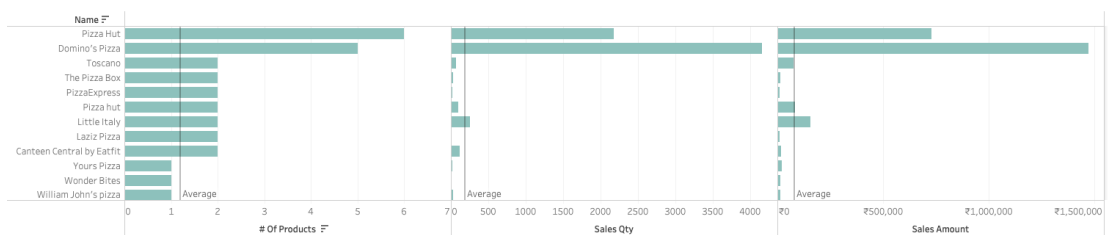
Pareto Analysis By User



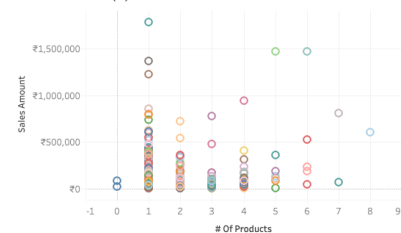
3. Product Range vs. Sales Impact

Having more products doesn't always mean higher sales. Brands like Domino's Pizza, with a focused menu, lead in both sales quantity and revenue, while others with broader offerings don't see the same results. The data suggests that concentrating on top-performing items and streamlining the menu can drive stronger growth. Regularly reviewing and prioritizing your best products is key to maximizing sales and market impact.

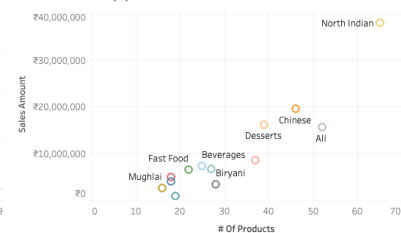
Of Products



Of Products (2)



Of Products (3)



Sales amount is filtered to only show customers who spent 10k+
Cuisine category is coloring the chart to show how much of a product a customer is purchasing.

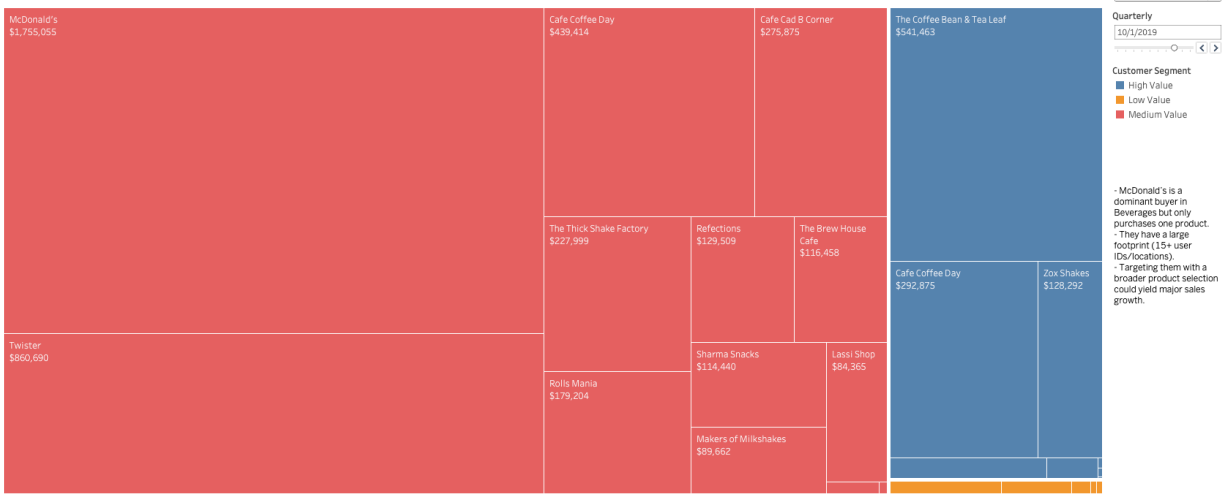
Brands with the most products, like Baskin Robbins and Pizza Hut, do not always achieve the highest sales, while focused brands like Domino's Pizza lead in both sales quantity and amount. This suggests that simply expanding your product range may not drive growth unless you align offerings with customer demand and brand strengths. I recommend you analyze your product mix and prioritize high-performing items to maximize sales and market impact.



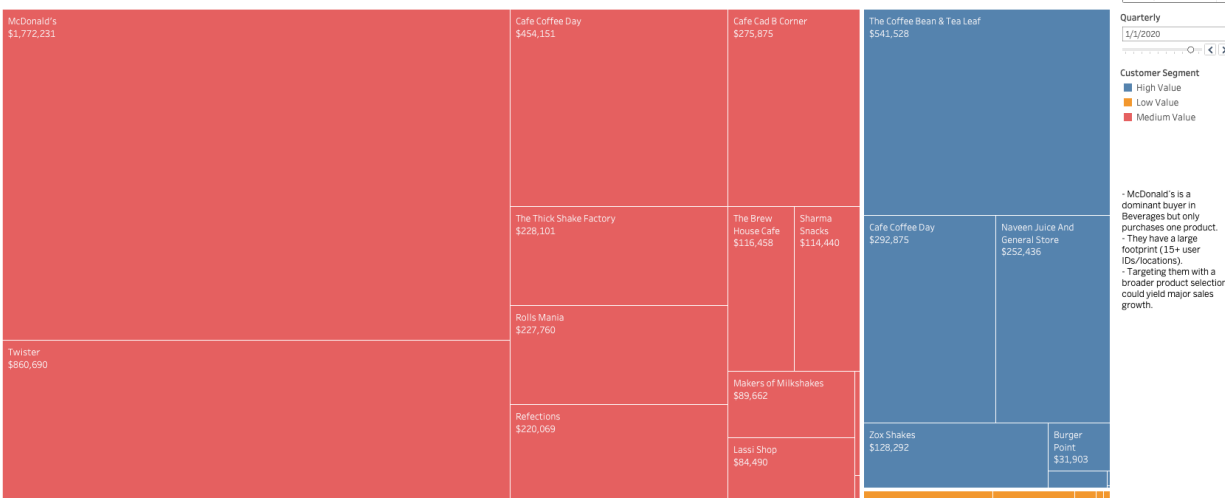
4. Beverage Segment: Customer Value Insights

McDonald's dominates beverage sales but focuses on just one product, missing out on potential growth from a broader selection. Most other brands fall into the medium or low-value segments, with only a few high-value customers. There's a big opportunity to boost sales by encouraging top buyers—like McDonald's—to try more products, and by helping other brands move more customers into the high-value group.

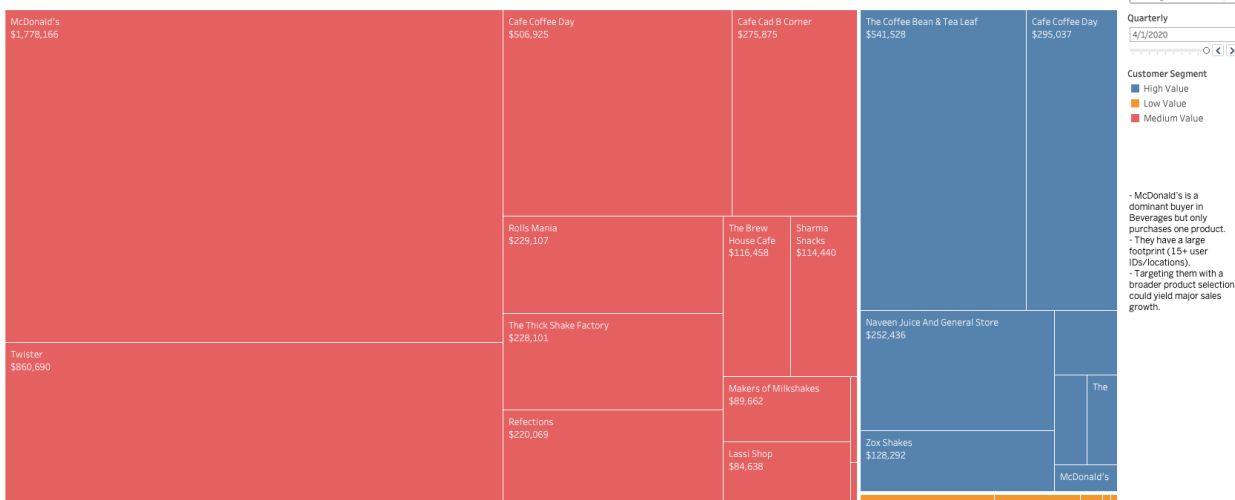
QS Segmentation



QS Segmentation

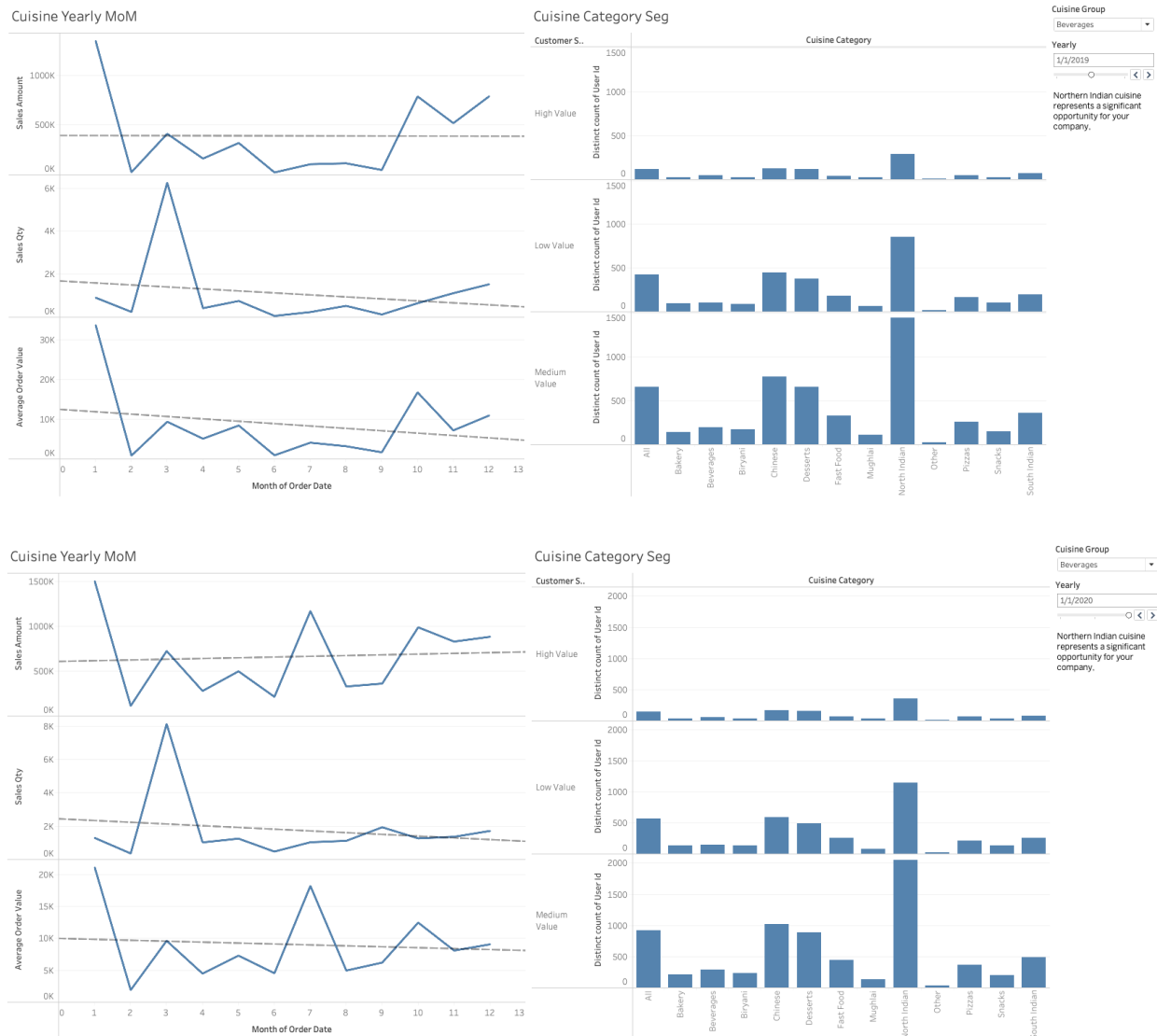


QS Segmentation



5. Beverages: Unlocking More Value at McDonald's

McDonald's leads the beverage category in both sales and customer numbers, but most of its buyers are still in the low or medium-value segments. This means there's a big opportunity to encourage more frequent purchases or upsell premium drinks. With the right offers or loyalty perks, McDonald's could turn more casual beverage buyers into high-value customers and boost overall sales.



Key Insights: Sales & Customer Segmentation

Sales Performance

Domino's Pizza consistently leads in both sales and order volume, showing steady growth and minimal fluctuations between quarters. McDonald's is the top performer in the beverage segment, maintaining strong quarterly sales. Paratha Plaza achieves high sales despite having fewer outlets, while Dosa Express shows reliable growth, especially during festival periods. Chaat House's sales are more volatile, with noticeable drops in some quarters, highlighting its reliance on a small group of top customers.

Customer Segmentation

Domino's Pizza benefits from a loyal base of high-value customers, with a small segment driving a large share of total sales. McDonald's, while leading in beverage sales, has most of its buyers in the low and medium-value segments, indicating room to grow its high-value customer base through targeted offers and menu expansion. Paratha Plaza maintains steady repeat business but has potential to increase its high-value segment. Chaat House is highly dependent on a few top customers, making its sales less predictable and more vulnerable to churn. Dosa Express enjoys strong engagement from regulars, especially during festivals, but could benefit from strategies to increase order frequency among occasional buyers.

Actionable Opportunities

Brands with a focused menu, like Domino's, tend to outperform those with broader offerings. There is significant potential for McDonald's to boost beverage sales by encouraging more frequent purchases and upselling to move more customers into the high-value segment. For all brands, nurturing top customers and finding ways to convert more buyers into high-value segments can help drive sustainable sales growth and reduce volatility.