NYC Coffee Shop Report Sales Analysis

Context Coffe Shop Report

The Background

Maven Roasters own Coffee Shops operating out of three NYC locations.

The Business Task

Maven Analytics assigns challenges to its subscribers, tasking them with generating analytical reports.

The goal is to transform the data into a Dynamic Dashboard that the franchise owner can use to identify patterns trends and opportunities for the business.

The Objectives

Preparing and explore data for the analysis.
Build a dynamic Dashboard to visualize patterns and trends.

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Preparing Data for Analysis

01

Understand the data

Familiarize yourself with the data;Transactions, Products sold,prices,quantity…

02

Check the data

Deal with Missing values, outliers, miss categorized texts, duplicates…

03

Feature engineering

Add new columns (Revenue, Month, Week Day, Hour) …

04

Data Exploration

Use Pivot tables to identify distributions, relationships and correlation between variables…

Data Visualization :

Coffe Shop Dashboard

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Maven Roasters Coffee Shop Sales Analysis

Astoria | Hell's Kitchen | Lower Manhattan
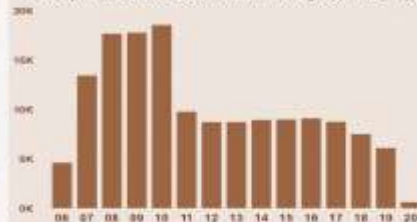
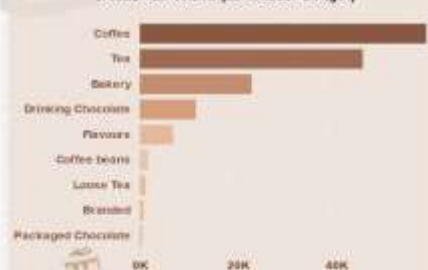**Revenue**
$166.5K

How does Revenue Fluctuate Monthly

Transaction Frequency Across Days of the Week

Hourly Transaction Distribution Throughout the Day

Transaction Volume per Product Category

Top 10 Product Types: Transactions and Revenue Summary

product_type	Count of transaction_id	Sum of Revenue
Barista Espresso	16403	$91,408
Brewed Black tea	11350	$47,932
Brewed Chai tea	17183	$77,082
Brewed herbal tea	11245	$47,540
Drip coffee	8477	$31,864
Gourmet brewed coffee	16912	$70,035
Hot chocolate	11468	$72,416
Organic brewed coffee	8469	$57,747
Premium brewed coffee	8135	$38,781
Scone	10173	$38,868
Total	**119835**	**$551,788**

Insights & Trends

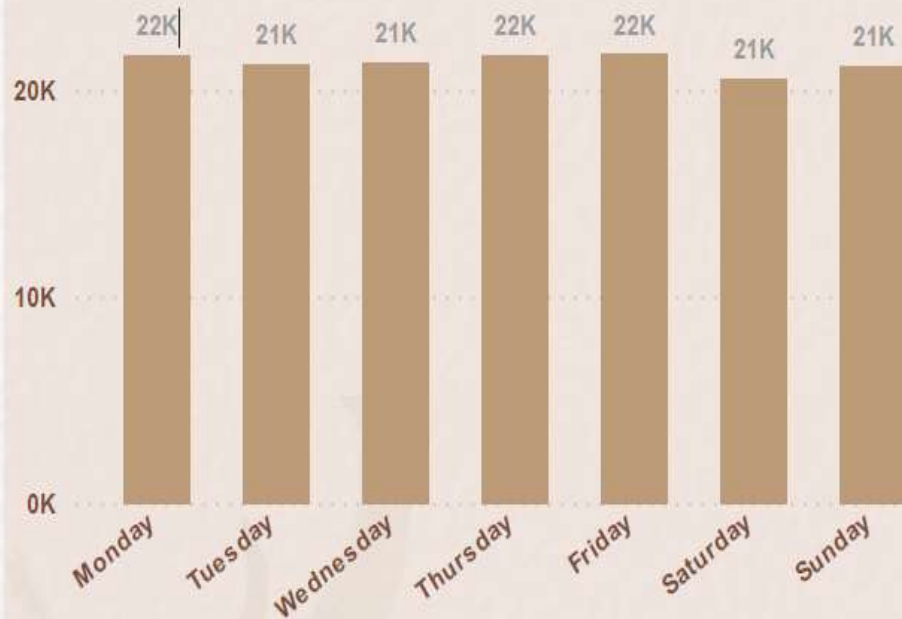- The revenue starts at **$82,000** in January and increases to **$166,000** in June.
- The percentage augmentation (increase) from January to June is approximately **102.44%.** This indicates that the revenue more than doubled from January to June, showing a significant growth rate within this period.
- Leveraging the slicer to select different coffee shop locations can provide comparative insights
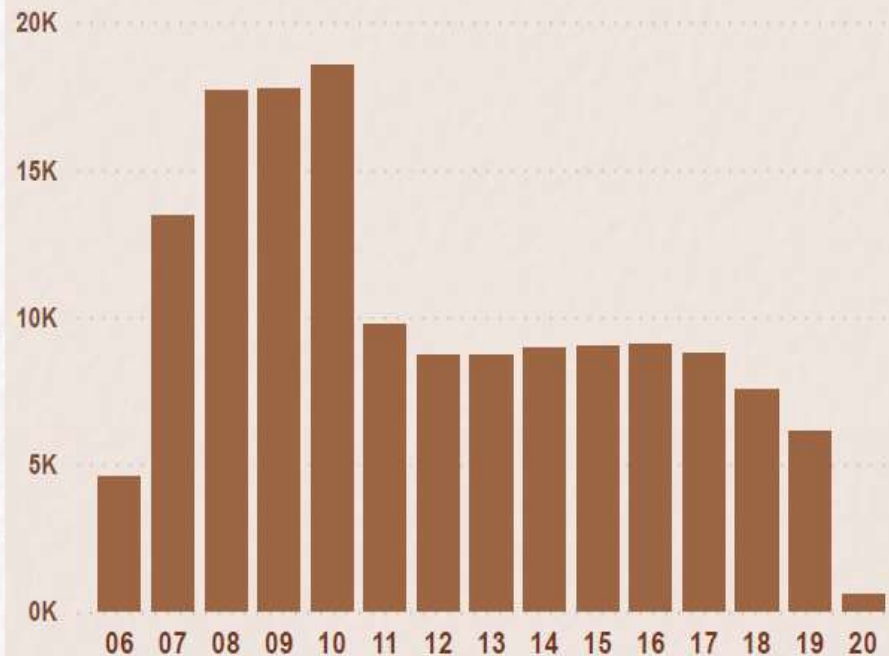
1.Steady Revenue Growth: The observed trend shows consistent month-over-month revenue growth for the coffee shop. From January to June, there's a noticeable upward trajectory, indicating a positive performance in sales.

2.Strong Seasonal Variation: The revenue pattern suggests a possible seasonal trend. It appears that the coffee shop experiences a significant increase in revenue as it moves towards mid-year (may-June). This could be due to various factors like weather changes or seasonal preferences.

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Insights & Trends

Certainly! Based on the hourly transaction distribution you've observed:

1.Morning Rush (7:00 - 10:00): There's a notable peak in transaction activity during these hours, suggesting a morning rush or peak business hours. This trend might indicate increased customer visits, potentially due to breakfast hours or commuters on their way to work.

2.Start at 6:00: The initial transactions starting at 6:00 might represent early risers or individuals starting their day early. This early start might involve preparations, setting up, or even customers arriving ahead of the main rush.

3.Decreased Activity Post-Morning (after 10:00): As the morning progresses into the afternoon, there's a decline in transaction volume. This could align with a typical business day where the morning rush slows down, and there's a lull until potentially lunchtime.

4.Evening Slump (after 20:00): The decrease in transactions after 20:00 indicates a sharp decline in activity during the evening hours. This decline could be due to closing hours, reduced foot traffic, or a shift in customer behavior, with fewer people frequenting the establishment during the late evening.

focusing on efficient operations during peak morning hours or possibly offering promotions to drive more traffic during slower periods.

Transaction Volume per Product Category
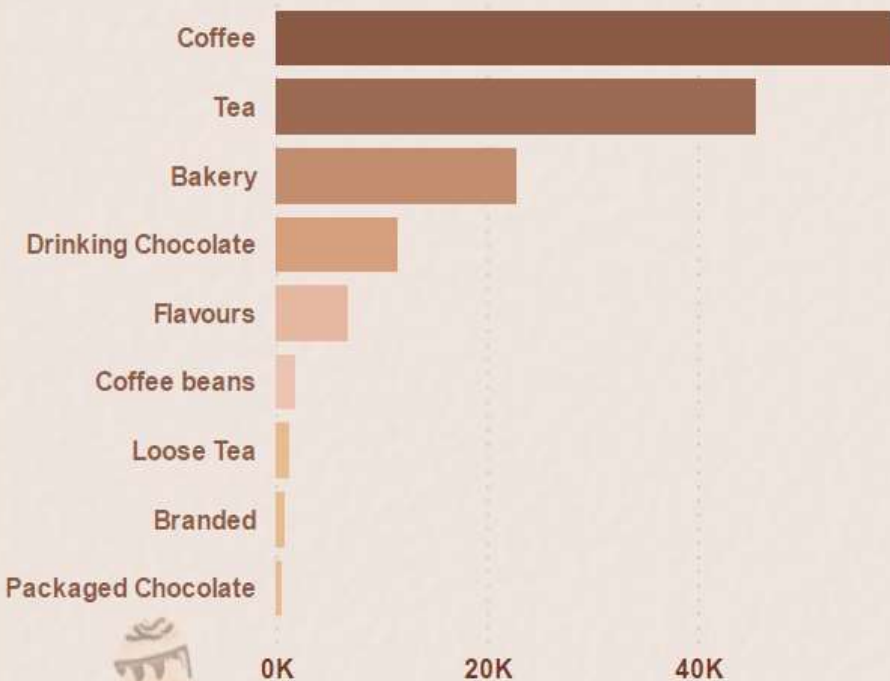
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Scone	10173	$36,866
Total	119835	$551,788

Insights & Trends

1.Product Dominance: The top four products, namely **coffee, tea, bakery items, and drinking chocolate**, stand out significantly in transaction volume compared to the other product categories. These top products collectively contribute a substantial portion of the total transactions.

2.Primary Revenue Generators: Coffee and tea lead the sales, indicating that hot beverages are the primary revenue generators for the business. This insight might suggest that investing in these product lines or optimizing their offerings could further boost overall revenue.

3.Secondary Revenue Streams: Bakery items and drinking chocolate, while lower in transaction volume compared to coffee and tea, still hold considerable significance. They represent secondary revenue streams that contribute moderately to the overall sales.

4.Long Tail Products: Products falling under the "rest under 10k" category collectively have lower transaction volumes individually

5.Product Performance Analysis: It might be beneficial to analyze the products in the lower transaction volume categories further. Understanding their individual performances, identifying any seasonal or promotional impacts, or considering customer preferences could help in optimizing their sales potential.

6.Marketing and Inventory Strategies: This insight could guide marketing strategies to further promote the top-performing products while evaluating inventory management for the lower-volume items to avoid overstocking and optimize shelf space.