OVERVIEW

Maven Roasters is a fictitious coffee shop operating out of three NYC locations. I will be analyzing sales data from Q1 and Q2 of 2023 to uncover insights relating to product performance, store operations, and forecasting Q3.

QUESTIONS

- How have Maven Roasters sales trended over time?
- Which days of the week tend to be busiest, and why do you think that's the case?
- Which times during the day are the busiest, and why do you think that's the case?
- Which products are sold most often? Which drives the most revenue for the business?
- What is the distribution of sales between all 3 locations for each product?
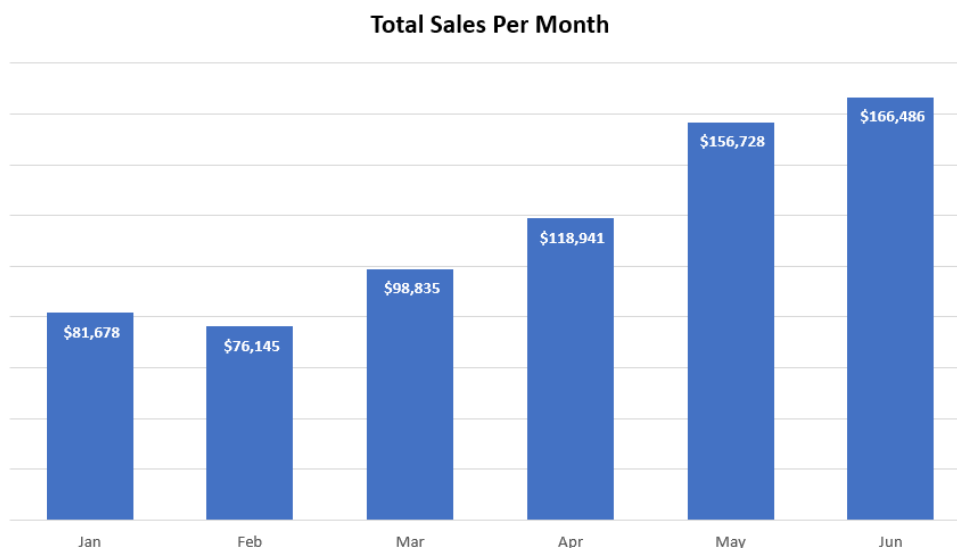- What are your projections across product categories for Q3?

DATA

The dataset includes details on transactions(date, timestamp, quantity), store(ID, location), and products(category, type, detail).

METHODS

I utilized Excel formulas to ensure data accuracy and calculate total sales for each transaction. Pivot tables were used to examine sales patterns across stores and products, as well as analyze transaction trends throughout the week and daily hours. Lastly, I utilized the forecasting function to generate a 90-day sales forecast for Q3.

RESULTS

- How have Maven Roasters sales trended over time?

Total Sales Per Month

| Month	Total Sales
Jan	$81,678
Feb	$76,145
Mar	$98,835
Apr	$118,941
May	$156,728
Jun	$166,486

Maven Roasters has seen growth throughout Q1 and Q2. The busiest months for sales are May and June while the least busy month appears to be February.

- Which days of the week tend to be busiest, and why do you think that's the case?

Average Number of Transactions Per Day
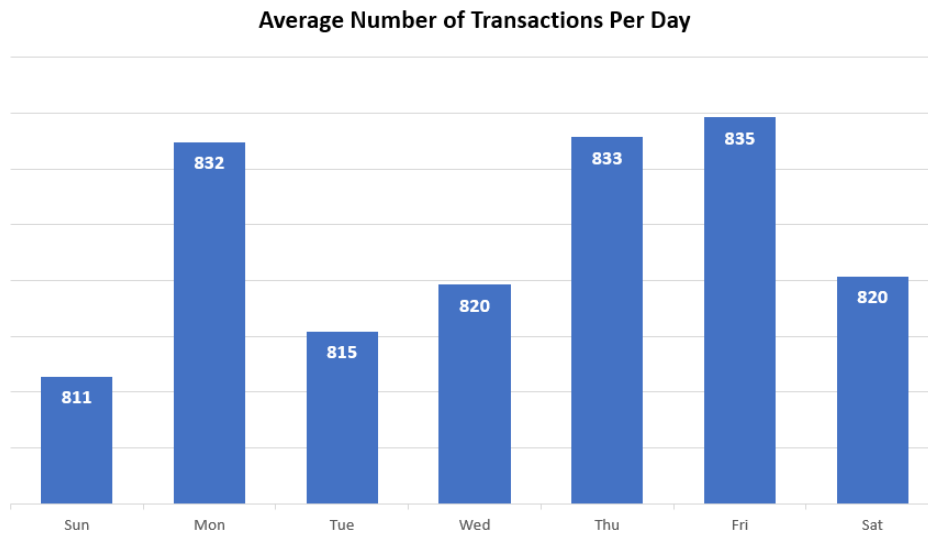
The busiest days of the week are Monday, Thursday, and Friday. It's logical to assume Monday will be a busy day because it is the start of the work week. Paydays typically occur on Thursdays or Fridays which may explain the uptick in customer transactions.

- Which times during the day are the busiest, and why do you think that's the case?

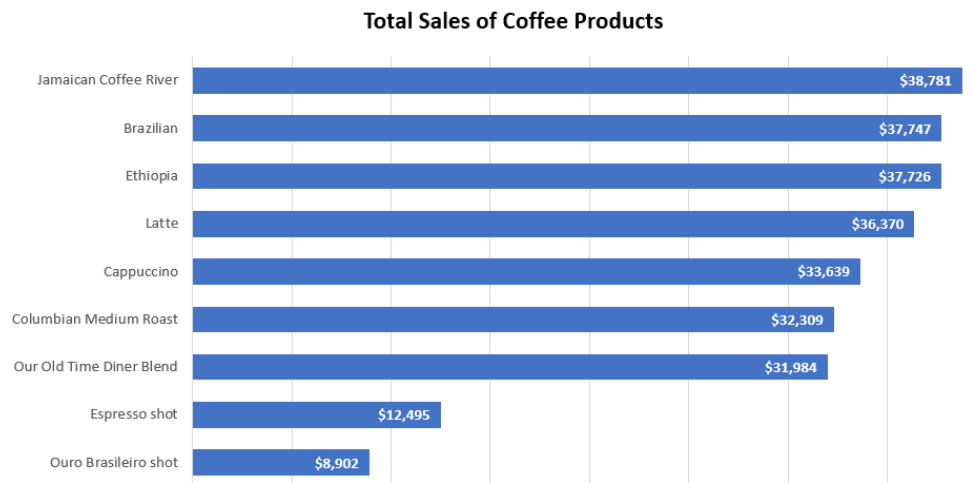**Average Number of Transactions Per Hour**
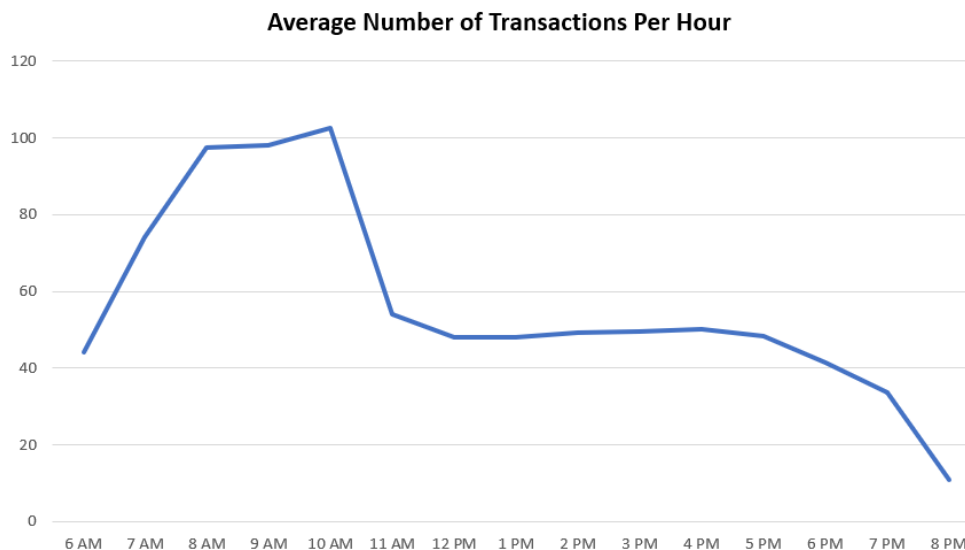
The largest volume of transactions is between 8 AM and 10 AM, averaging around 100 customer transactions per hour. These hours are typically when people are commuting to work or beginning their day which could explain the volume of customers compared to the rest of the day.
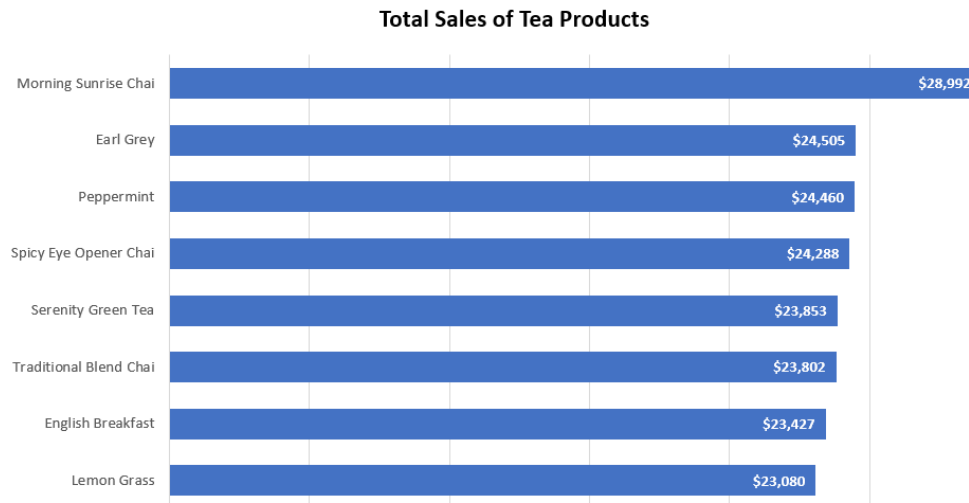
- Which products are sold most often? Which drives the most revenue for the business?

Units Sold by Product

Coffee 89,250
Tea 69,737
Bakery 23,214
Drinking Chocolate 17,457
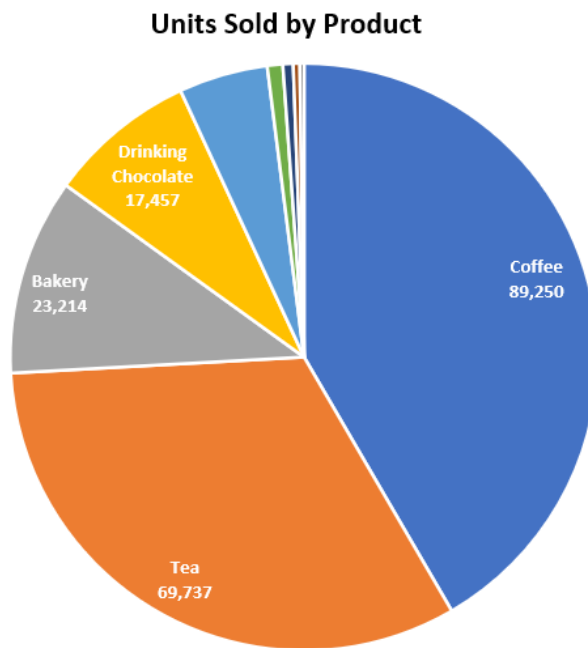
Since this is a coffee shop, it is unsurprising that coffee, tea, and bakery items are the most sold. Coffee and tea together make up 74.13% of transactions. In terms of revenue, coffee makes up 38.63%, tea makes up 28.11%, and bakery goods make up 11.78%.

Total Sales of Coffee Products

| Product	Sales
Jamaican Coffee River	$38,781
Brazilian	$37,747
Ethiopia	$37,726
Latte	$36,370
Cappuccino	$33,639
Columbian Medium Roast	$32,309
Our Old Time Diner Blend	$31,984
Espresso shot	$12,495
Ouro Brasileiro shot	$8,902

While coffee is the most popular product, there is a wide range between coffee products. The product with the most revenue is the Jamaican Coffee River while the Espresso and Ouro Brasileiro Shots gain the least revenue.

Total Sales of Tea Products

Product	Sales
Morning Sunrise Chai	$28,992
Earl Grey	$24,505
Peppermint	$24,460
Spicy Eye Opener Chai	$24,288
Serenity Green Tea	$23,853
Traditional Blend Chai	$23,802
English Breakfast	$23,427
Lemon Grass	$23,080

Tea revenue is consistent among the different types of tea with a range of around $5,000. The tea with the greatest revenue is the Morning Sunrise Chai, while the least revenue is the Lemon Grass.

- What is the distribution of sales between all 3 locations for each product?

Total Product Sales by Location

Legend: ■ Astoria ■ Hell's Kitchen ■ Lower Manhattan
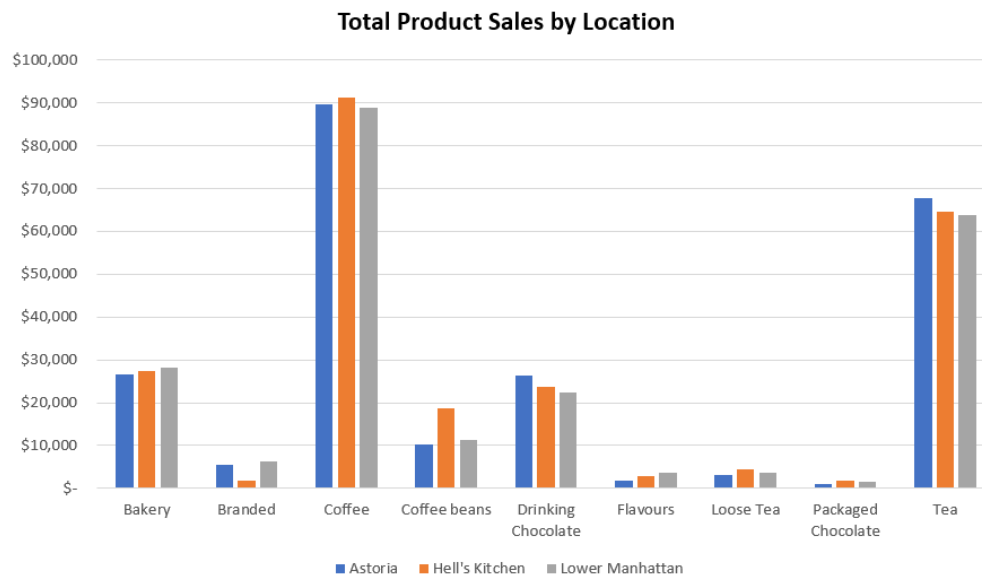
The performance of each product category is consistent throughout each of the 3 locations. However, for the sale of coffee beans, the location in Hell's Kitchen has earned over $10,000 more than the other two locations.

- What are your projections for sales for Q3? Explain your reasoning.

3 Month Forecast of Total Sales
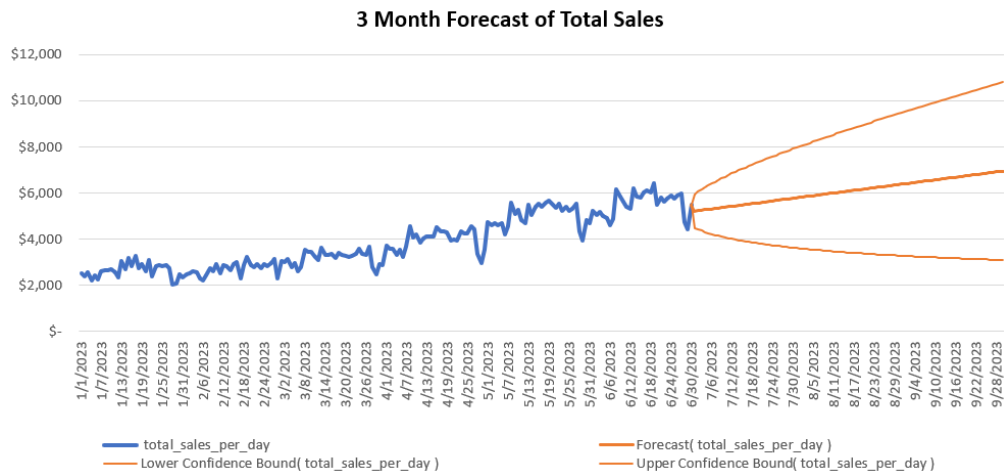
The total sales for Q1 and Q2 are $256,000 and $442,000 respectively. It is projected that Q3 will have slightly higher sales than Q2 – earning between $5,000 and $7,000 per month. The total sales grew exponentially between Q1 and Q2 but were consistent within the months of Q2.

CONCLUSION

- What are your thoughts/conclusions based on the sales for 2023 so far?
My assumptions were correct in that coffee and tea would be the most popular products in terms of units sold and revenue. I am surprised that bakery goods had such a low revenue – seeming as it is common to consume a baked good with coffee or tea. Further analysis of baked goods may bring us to the cause of why the sales are so low. A possibility that Q2 and Q3 will bring in more revenue is that they are summer and spring months when people are more likely to go out to buy coffee. It makes sense that Q3 will perform similarly to Q2 while revenue may even drop moving forward into Q4. It would be interesting to see data from past years to determine if this is the seasonal trend throughout the years or if there is an anomaly in regards to sales.