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Analyzing Sales Data for Successful Coffee Shop

Insights from Sales Data Analysis

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“ Introduction

This project aims to give clear insights into sales data by analyzing transaction details, finding patterns, and drawing practical conclusions. By making decisions based on data, businesses can improve operations and boost profitability.





Objectives:

- Understand sales distribution over time.
- Identify peak sales periods.
- Analyze store and product performance.
- Provide recommendations based on insights.





Data Overview

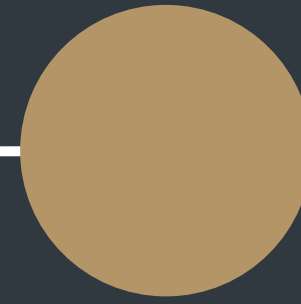
Dataset includes the transaction date, timestamp and location, along with product-level details.

- Transaction_id, Transaction_date, Transaction_time
- Product_category, Product_type, Product_detail
- Store_id, Store_location
- Transaction_qty, Unit_price, Total_bill



Dat

| transaction_id | transaction_date | transaction_time | store_id | store_location | product_id | transaction_qty | unit_price | product_category | product_type | product_detail | Size | Total_bill |
|----------------|------------------|------------------|----------|-----------------|------------|-----------------|------------|--------------------|-----------------------|---------------------------|-------------|------------|
| 42148 | 13-03-2023 | 09:17:40 | 8 | Hell's Kitchen | 43 | 1 | 3 | Tea | Brewed herbal tea | Lemon Grass | Large | 3 |
| 11706 | 21-01-2023 | 09:46:39 | 8 | Hell's Kitchen | 49 | 1 | 3 | Tea | Brewed Black tea | English Breakfast | Large | 3 |
| 101217 | 19-05-2023 | 18:24:59 | 3 | Astoria | 48 | 1 | 2.5 | Tea | Brewed Black tea | English Breakfast | Regular | 2.5 |
| 61341 | 08-04-2023 | 15:40:13 | 3 | Astoria | 54 | 1 | 2.5 | Tea | Brewed Chai tea | Morning Sunrise Chai | Regular | 2.5 |
| 50765 | 25-03-2023 | 10:55:41 | 3 | Astoria | 54 | 1 | 2.5 | Tea | Brewed Chai tea | Morning Sunrise Chai | Regular | 2.5 |
| 69958 | 18-04-2023 | 10:56:32 | 8 | Hell's Kitchen | 52 | 1 | 2.5 | Tea | Brewed Chai tea | Traditional Blend Chai | Regular | 2.5 |
| 105593 | 23-05-2023 | 18:06:53 | 5 | Lower Manhattan | 79 | 1 | 3.75 | Bakery | Scone | Jumbo Savory Scone | Not Defined | 3.75 |
| 117215 | 03-06-2023 | 17:13:55 | 8 | Hell's Kitchen | 75 | 1 | 3.5 | Bakery | Pastry | Croissant | Not Defined | 3.5 |
| 11812 | 21-01-2023 | 10:41:17 | 3 | Astoria | 63 | 1 | 0.8 | Flavours | Regular syrup | Carmel syrup | Not Defined | 0.8 |
| 111402 | 29-05-2023 | 11:17:36 | 8 | Hell's Kitchen | 31 | 1 | 2.2 | Coffee | Gourmet brewed coffee | Ethiopia | Small | 2.2 |
| 44597 | 16-03-2023 | 13:43:23 | 3 | Astoria | 33 | 2 | 3.5 | Coffee | Gourmet brewed coffee | Ethiopia | Large | 7 |
| 96915 | 16-05-2023 | 08:20:57 | 3 | Astoria | 51 | 1 | 3 | Tea | Brewed Black tea | Earl Grey | Large | 3 |
| 43049 | 14-03-2023 | 10:37:39 | 5 | Lower Manhattan | 53 | 1 | 3 | Tea | Brewed Chai tea | Traditional Blend Chai | Large | 3 |
| 90044 | 10-05-2023 | 06:42:13 | 8 | Hell's Kitchen | 71 | 1 | 3.75 | Bakery | Pastry | Chocolate Croissant | Not Defined | 3.75 |
| 95307 | 14-05-2023 | 15:40:16 | 3 | Astoria | 20 | 1 | 7.6 | Packaged Chocolate | Organic Chocolate | Sustainably Grown Organic | Not Defined | 7.6 |
| 6032 | 11-01-2023 | 16:22:41 | 3 | Astoria | 25 | 1 | 2.2 | Coffee | Organic brewed coffee | Brazilian | Small | 2.2 |
| 61994 | 09-04-2023 | 10:28:57 | 8 | Hell's Kitchen | 55 | 2 | 4 | Tea | Brewed Chai tea | Morning Sunrise Chai | Large | 8 |
| 119722 | 06-06-2023 | 07:17:17 | 5 | Lower Manhattan | 49 | 2 | 3 | Tea | Brewed Black tea | English Breakfast | Large | 6 |
| 500 | 01-01-2023 | 18:41:28 | 8 | Hell's Kitchen | 49 | 2 | 3 | Tea | Brewed Black tea | English Breakfast | Large | 6 |
| 142359 | 24-06-2023 | 15:41:24 | 5 | Lower Manhattan | 31 | 3 | 2.2 | Coffee | Gourmet brewed coffee | Ethiopia | Small | 6.6 |
| 135563 | 19-06-2023 | 07:22:09 | 3 | Astoria | 37 | 1 | 3 | Coffee | Barista Espresso | Espresso shot | Not Defined | 3 |
| 96391 | 15-05-2023 | 14:32:25 | 8 | Hell's Kitchen | 32 | 1 | 3 | Coffee | Gourmet brewed coffee | Ethiopia | Regular | 3 |
| 41101 | 11-03-2023 | 15:40:29 | 8 | Hell's Kitchen | 73 | 1 | 3.75 | Bakery | Pastry | Almond Croissant | Not Defined | 3.75 |
| 33677 | 28-02-2023 | 18:22:44 | 5 | Lower Manhattan | 36 | 1 | 3.75 | Coffee | Premium brewed coffee | Jamaican Coffee River | Large | 3.75 |
| 98485 | 17-05-2023 | 10:50:31 | 3 | Astoria | 59 | 1 | 4.5 | Drinking Chocolate | Hot chocolate | Dark chocolate | Large | 4.5 |
| 99483 | 18-05-2023 | 10:26:56 | 3 | Astoria | 50 | 2 | 2.5 | Tea | Brewed Black tea | Earl Grey | Regular | 5 |
| 56229 | 02-04-2023 | 14:29:04 | 3 | Astoria | 35 | 2 | 3.1 | Coffee | Premium brewed coffee | Jamaican Coffee River | Regular | 6.2 |
| 36548 | 05-03-2023 | 11:15:14 | 5 | Lower Manhattan | 27 | 2 | 3.5 | Coffee | Organic brewed coffee | Brazilian | Large | 7 |
| 69449 | 18-04-2023 | 06:49:22 | 8 | Hell's Kitchen | 36 | 1 | 3.75 | Coffee | Premium brewed coffee | Jamaican Coffee River | Large | 3.75 |
| 113387 | 31-05-2023 | 09:31:17 | 3 | Astoria | 25 | 1 | 2.2 | Coffee | Organic brewed coffee | Brazilian | Small | 2.2 |
| 20214 | 06-02-2023 | 09:38:26 | 8 | Hell's Kitchen | 42 | 2 | 2.5 | Tea | Brewed herbal tea | Lemon Grass | Regular | 5 |
| 21795 | 08-02-2023 | 19:03:53 | 3 | Astoria | 59 | 2 | 4.5 | Drinking Chocolate | Hot chocolate | Dark chocolate | Large | 9 |

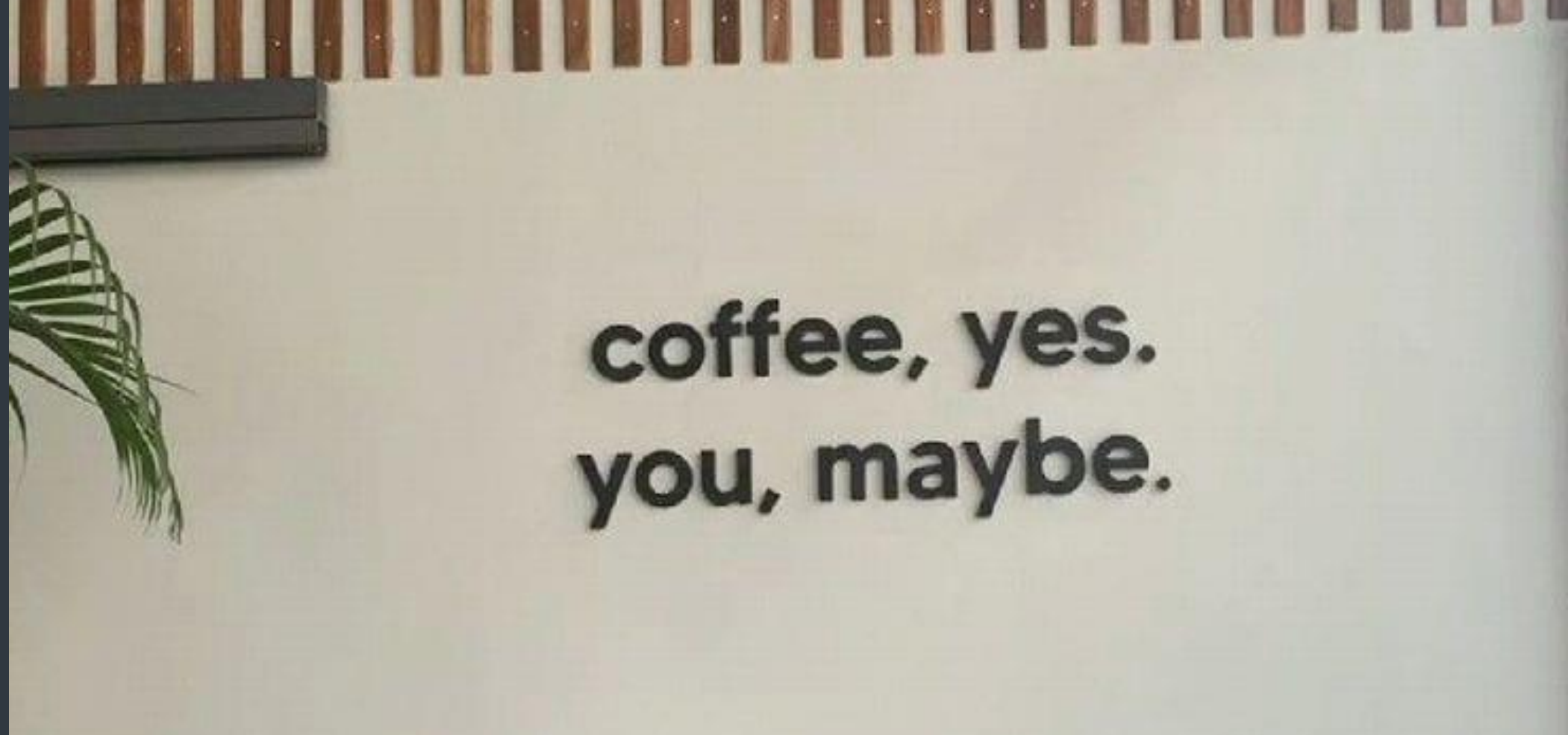


Monthly Sales Distribution

The analysis of monthly sales distribution revealed the following insights:

- Sales increased steadily from January to June.
- June had the highest number of transactions and total revenue.
- February had the lowest number of transactions and revenue.







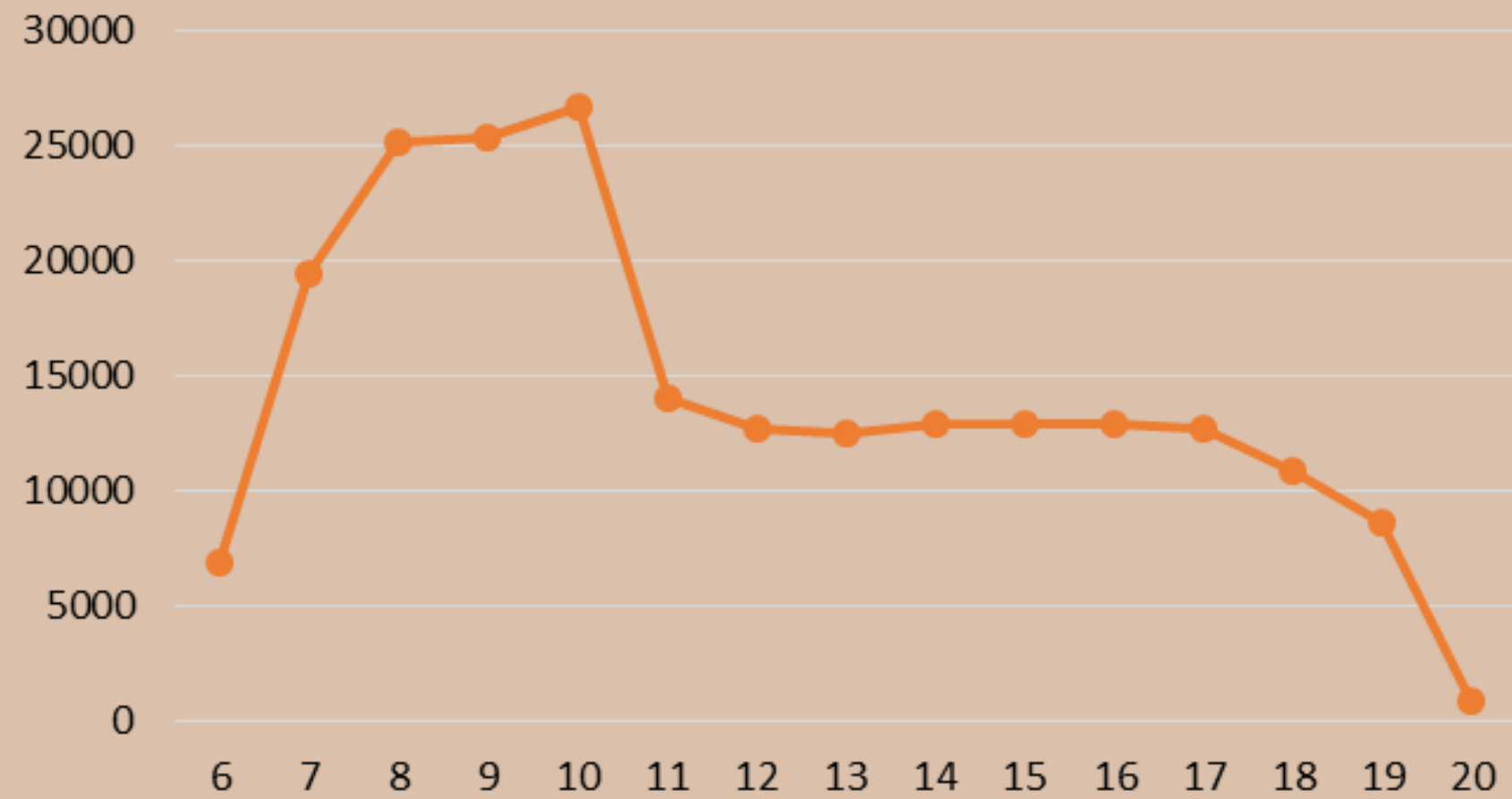
Sales Patterns by Day and Hour

The sales patterns analysis by day of the week and hour of the day showed:

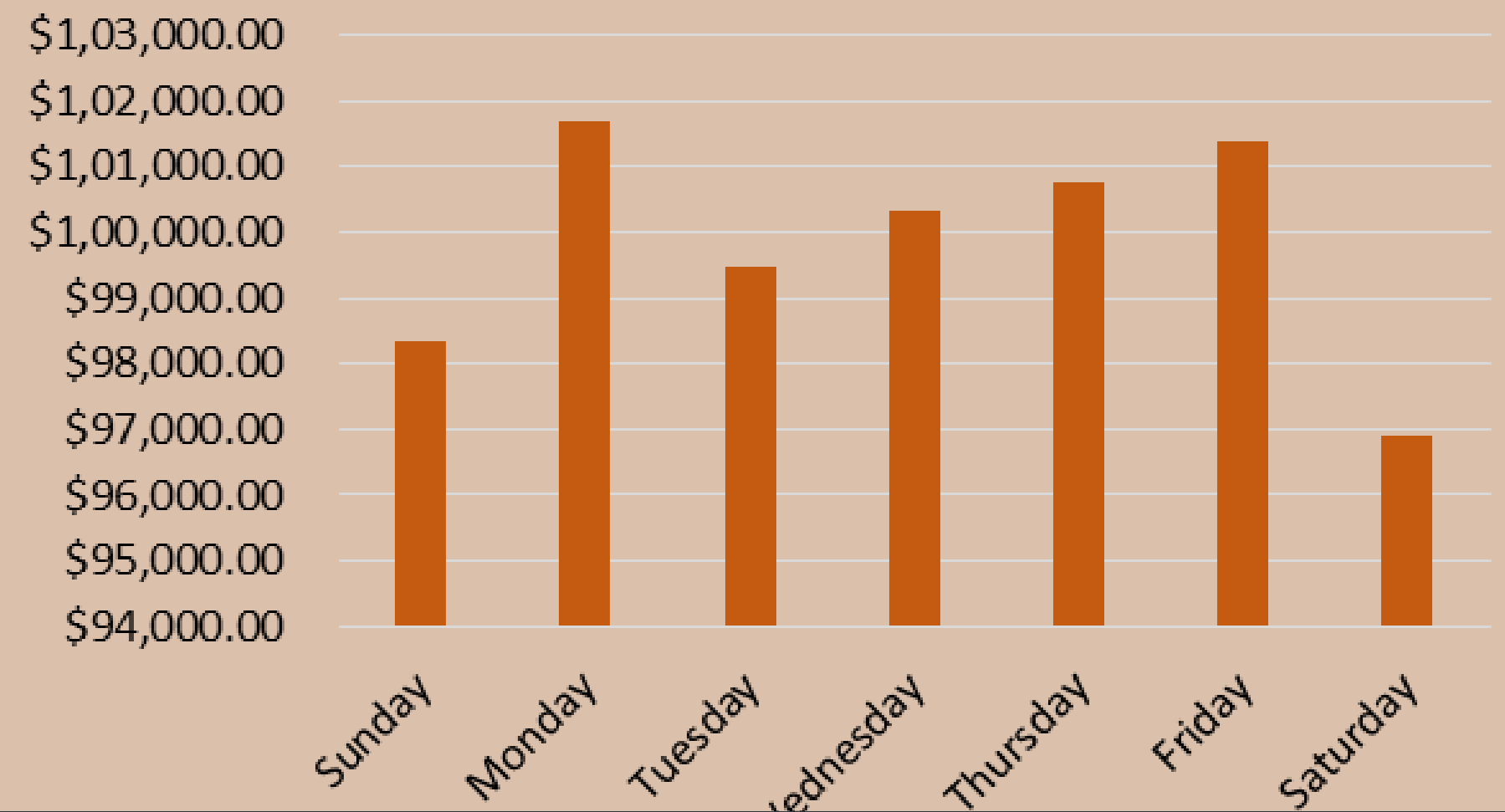
- Sales are consistent throughout the week, with Friday having the highest number of transactions and Monday generating the highest revenue.
- Sales peak around 8 AM to 10 AM, with the lowest sales occurring at 8 PM.



Quantity Ordered Based on Hours



Orders on Weekdays





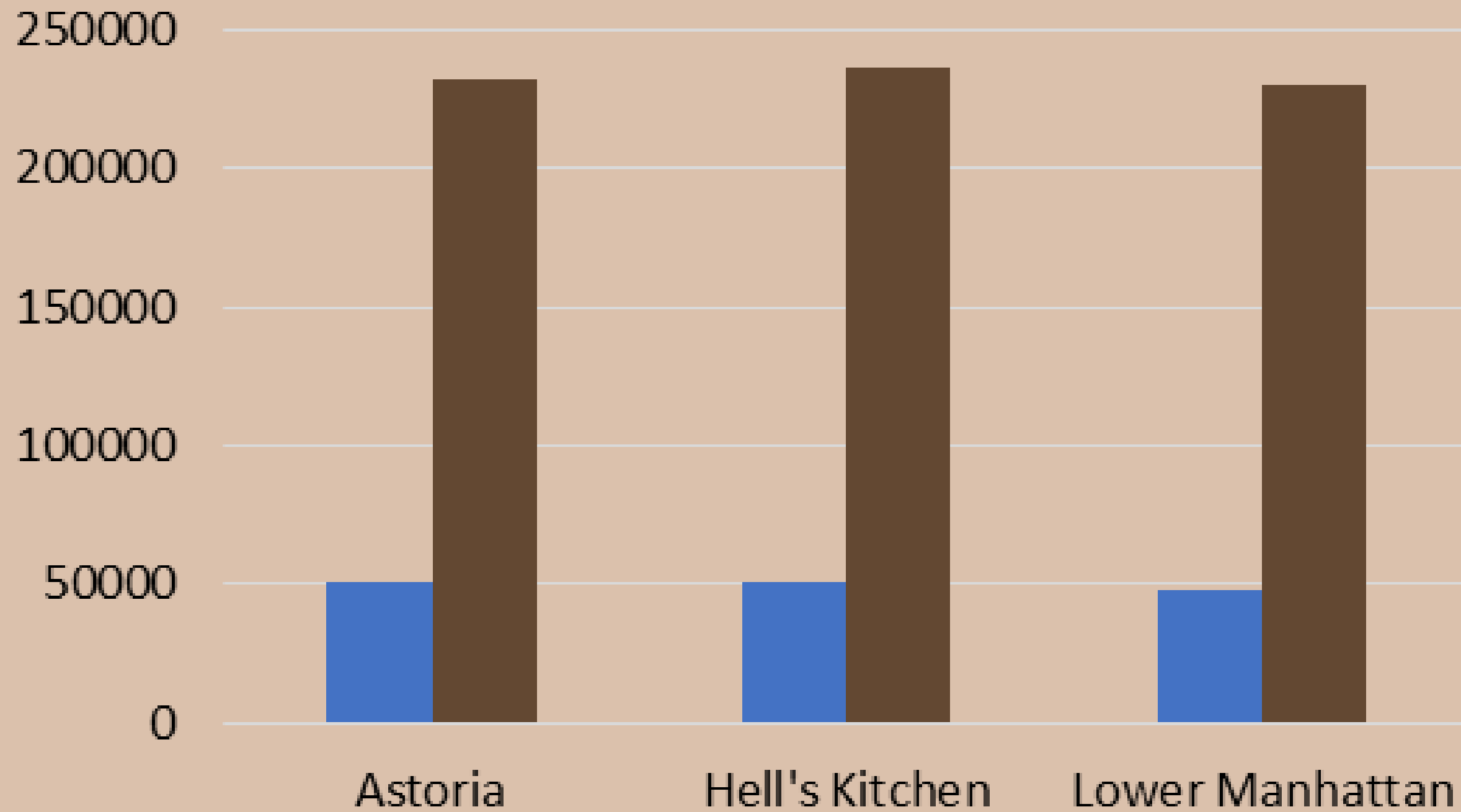
Store Performance

The performance of different store locations was analyzed:

- Stores varied in the number of transactions and total revenue.
- Comparative analysis of top-performing and underperforming stores provides insights for operational improvements.



Footfall and Sales over various Store Locations



SALE





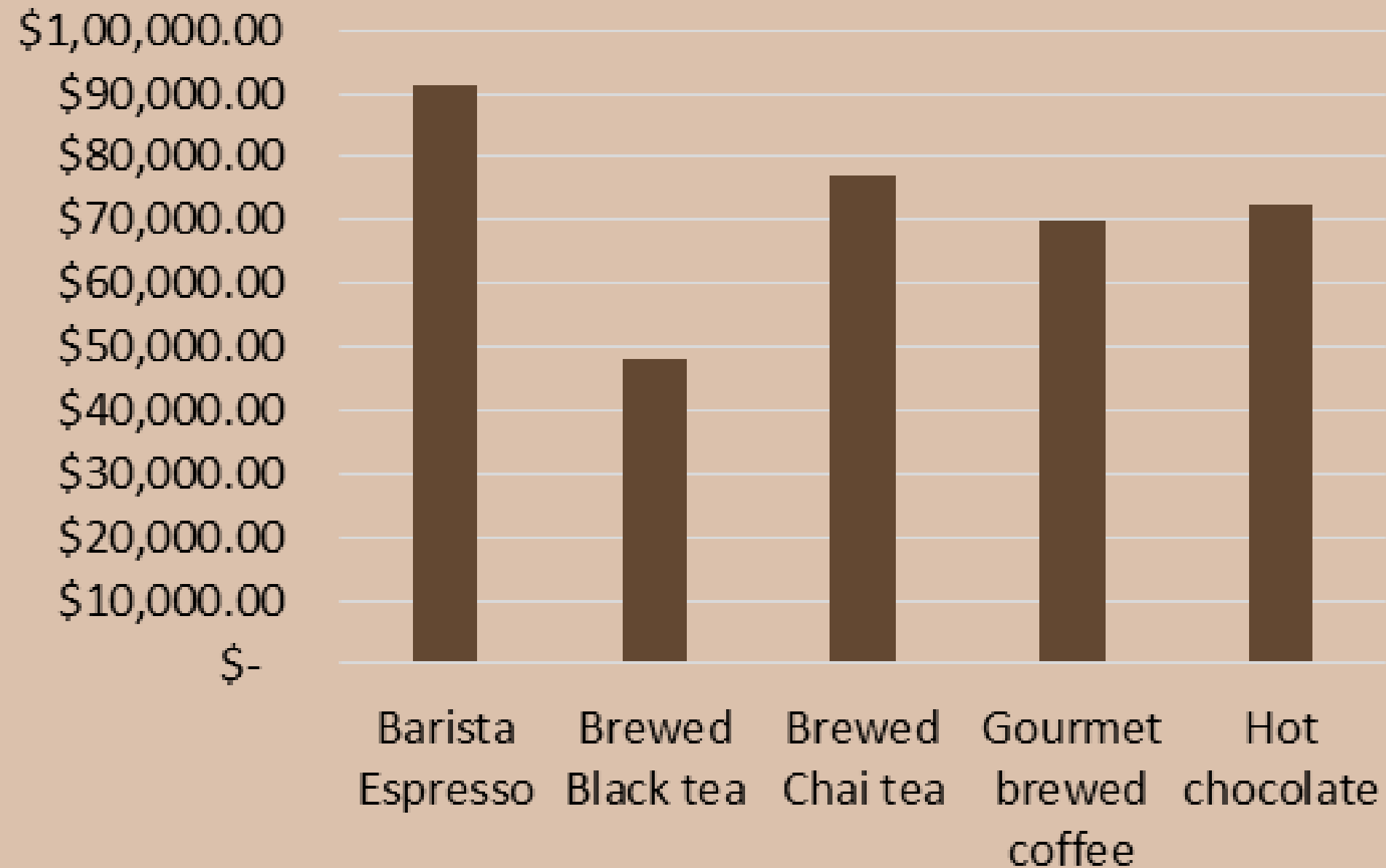
Product Analysis

The product analysis identified top-selling products and analyzed product categories:

- Top-selling products were identified.
- Analysis of product categories and types helped understand customer preferences.



Top 5 Products Based on Sales



3676 5
Roasted Products

Our Coffees
+ Paes offices



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Conclusion

— Key findings from the analysis include:

- Sales peak during morning hours and are consistent throughout the week.
- Store performance varies significantly, with some stores outperforming others.
- Top-selling products and categories were identified, providing insights into customer preferences.





Recommendations

- Recommendations based on insights:
- Focus marketing efforts on peak sales hours.
 - Investigate factors contributing to lower sales on Saturdays.
 - Adjust inventory for top-selling products.
 - Explore promotional opportunities during identified peak times.





End of Presentation Thank You

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