



Explore the Sales Dataset

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Agenda

- **Data columns exploration**
- **Descriptive statistics and Visualisations**
- **Recommendation**
- **Conclusion**

Data Columns

Columns	Explanation
ID	Unique ID assigned to every row
cash_type	Mode of Payment of the customer
coffee_name	Type of Product that is different type of coffee
Time_of_Day	The Time of the day which are Morning, Afternoon, Night
Weekday	Day of the week. For example – Monday, Tuesday, Wednesday and so on
Month_name	Month of the year
hour_of_day	1 to 24
money	Price of the Product
Weekdaysort	Day of the week in number Monday – 1 to Sunday - 7
Monthsort	Month of the year in number January as 1 to December as 12
Date	Date on which product is sold
Time	Time at which product is sold
Unit sold	How many units of the product sold

Descriptive Statistics and Insights

Descriptives	hour_of_day	money	Weekdaysort	Monthsort
Mean	14.19	31.60	3.80	6.45
Median	14	32.82	4	7
Mode	10	35.76	2	3

The shop's busiest time is 10 AM, with a secondary demand peak around 2 PM, showing strong mid-morning traffic followed by steady afternoon activity. Rationale: Mode (10 AM) and Mean/Median (~2 PM) confirm concentrated customer purchasing during these hours.

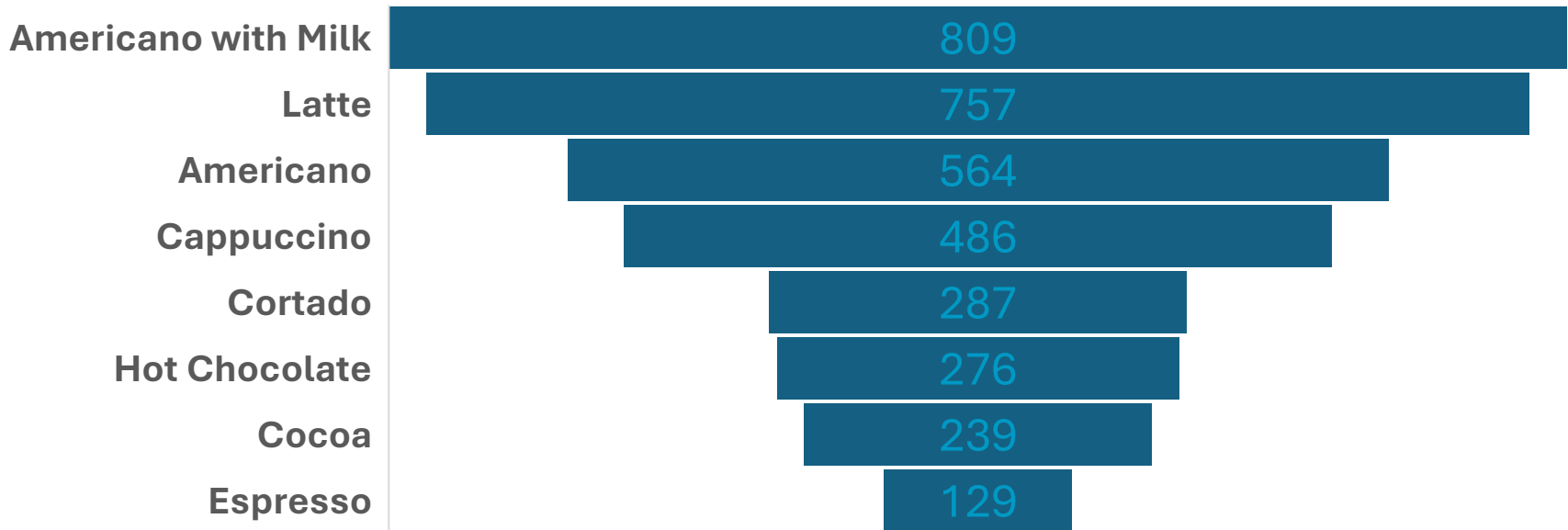
With a mean of ₹31.64, median of ₹32.82, and mode of ₹35.76, customers generally spend slightly above average and most often around ₹36, indicating stable and predictable transaction values. It means that people are generally spending in a range to 31-36.

Sales are strongest mid-week—especially on Tuesday—since the mean (~Wednesday), median (Thursday), and mode (Tuesday) all show customer demand concentrated between Tue–Thu.

Sales peak in March and gradually rise toward mid-year, as the mean (June) and median (July) show activity centered around early summer, making March the strongest month for promotions.

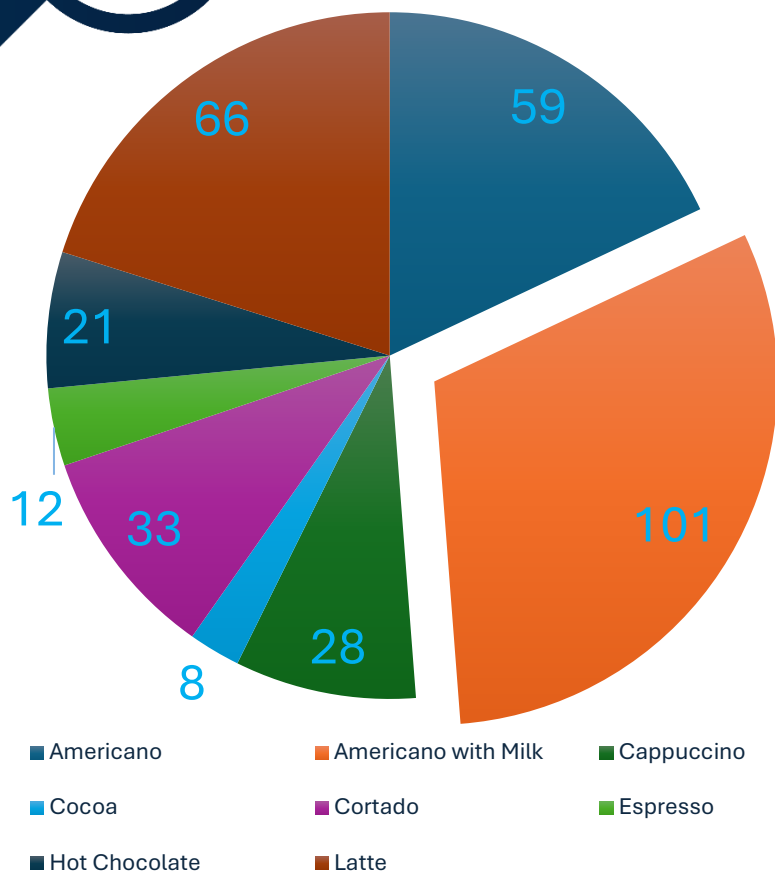
Best Seller Coffee Types

Top Selling Coffee



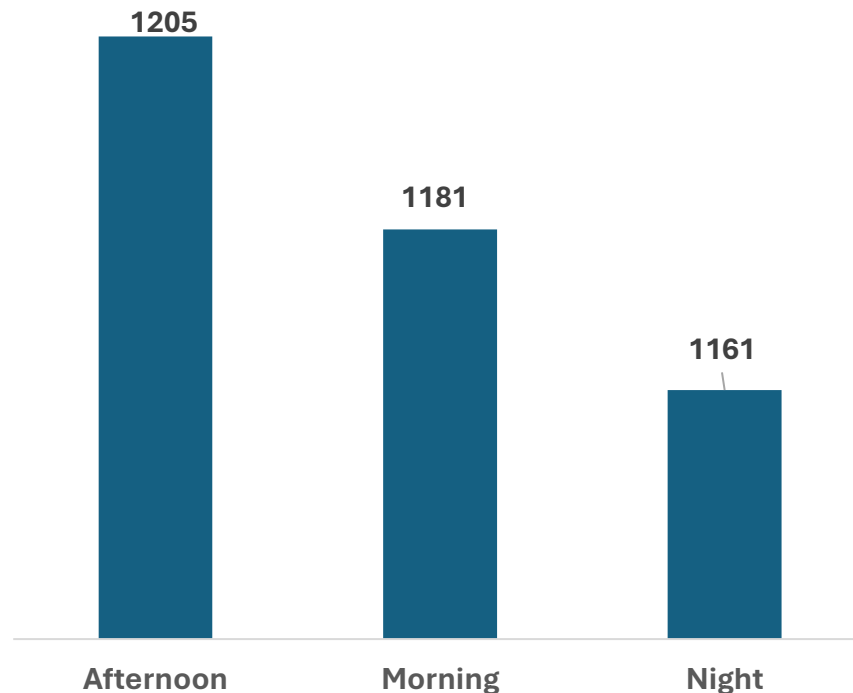
Americano with milk is top selling coffee followed by Latte and Americano while Hot Chocolate, Cocoa and Espresso were the least selling.

Best Seller During Peak Hour (10 AM)



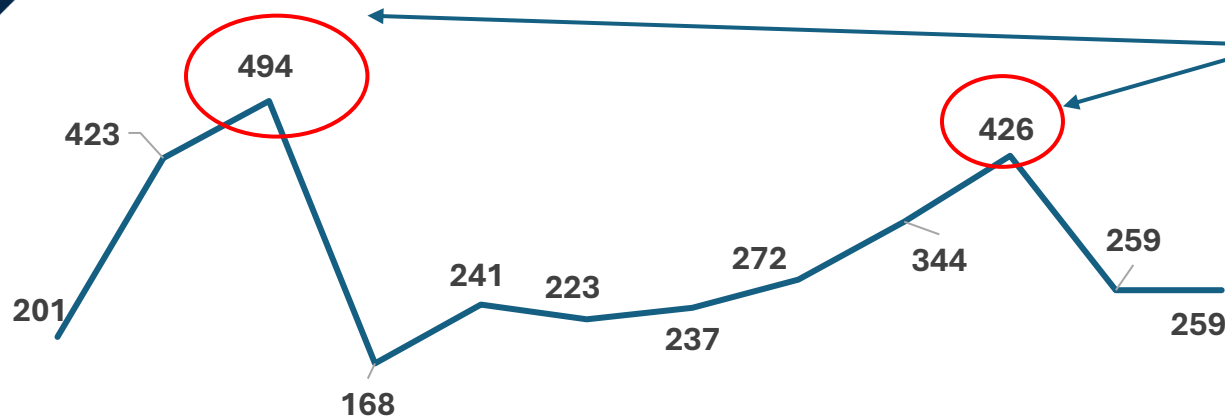
Americano with Milk is the top-selling product with 101 units sold, making it the clear bestseller during this peak time.

Sales VS Time

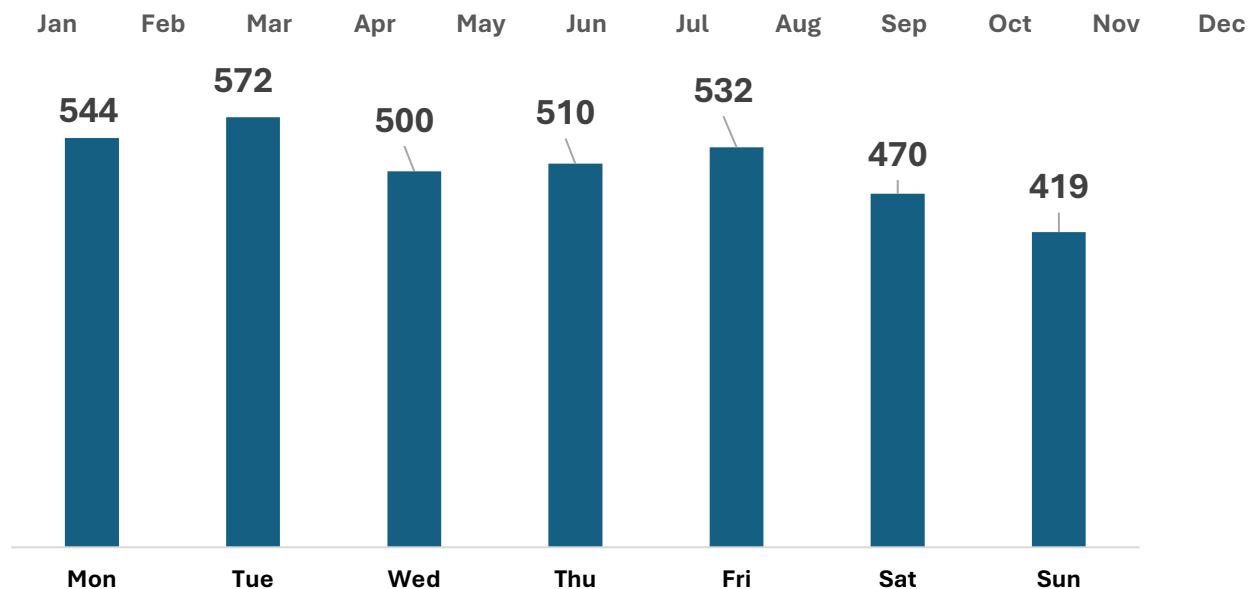


Sales are highest in the afternoon (1205 units), supported by the mean hour (~2 PM), while 10 AM remains the single busiest peak hour, showing a strong mid-morning rush

Best Performing Months and Days



March and October drive the highest demand. April is a sharp low. Sales then recover steadily and remain stable toward the year-end.



Sales peak on Tuesday, remain strong on Monday and Friday, and mid-week overall clearly outperforms weekends, with Sunday being the weakest day. Overall demand is stable throughout the week, showing the shop attracts weekday customers more than weekend visitors.



Recommendations

Operations and Staffing

- **At around 10 am in the morning, there is a rush so the shop owner should keep full staffing between 9–11 AM and in the afternoon (1–3 PM) maintain sufficient staff as there is steady demand.**
- **Americano with Milk, Latte, and Americano, as they are the core best sellers so always keep high stock of the key ingredients used in these items.**

Inventory and Menu Management

- **Always keep the high level of stock of the key ingredients used in Americano with Milk, Latte a and Americano especially before peak hours as they are the best selling.**
- **Try to add combos for the least selling products like Espresso, Cocoa instead of making them standalone drivers. For example – Espresso + Pastry**

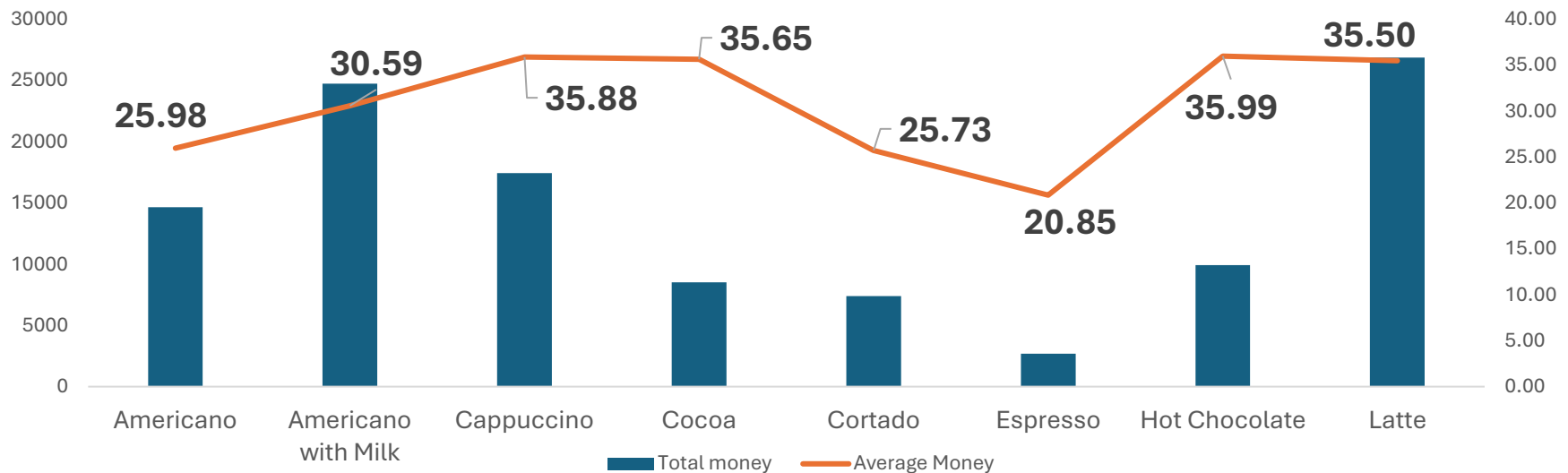
Seasonal Strategy

- **March, October, February are the best months for launching a new product and for marketing campaign.**
- **Introduce more discounts in the month of April to cover the dip as it is the lowest among all.**

Promotions & Customer Targeting

- **Focus promotions on mid-week (Tue–Thu) mainly Tuesday, which has the highest sales to increase the footfall.**
- **Design some offers like family combos, Sunday combos for weekend especially for Sunday to uplift the sales on weekends.**

Pricing & Revenue Optimisation



- Increase prices only on premium drinks like Cappuccino, Hot Chocolate, Cocoa, and Latte, as customers already pay ₹35–₹36 on average. Keep Americano with Milk, Latte stable because it is a high-volume, mid-price anchor product that should continue driving consistent sales.**

Conclusion

- The analysis shows that the coffee shop has **predictable and stable customer behavior**, with a clear **10 AM mid-morning peak** and strong **afternoon activity**. Sales are highest **mid-week**, especially on **Tuesday**, while weekends—particularly Sunday—remain the weakest. Product performance indicates that a few core items like **Latte and Americano with Milk** drive most of the sales volume, while premium drinks such as **Cappuccino and Hot Chocolate** generate high value per order. Seasonal patterns peak in **March** and again around **October**, reflecting strong mid-year and early-winter demand.
- Overall, the data suggests focusing on **peak-hour staffing, promoting top sellers, leveraging premium-priced drinks, and using targeted offers to strengthen weak days and months**, allowing the shop to increase both revenue and efficiency without major operational changes.