



# 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.

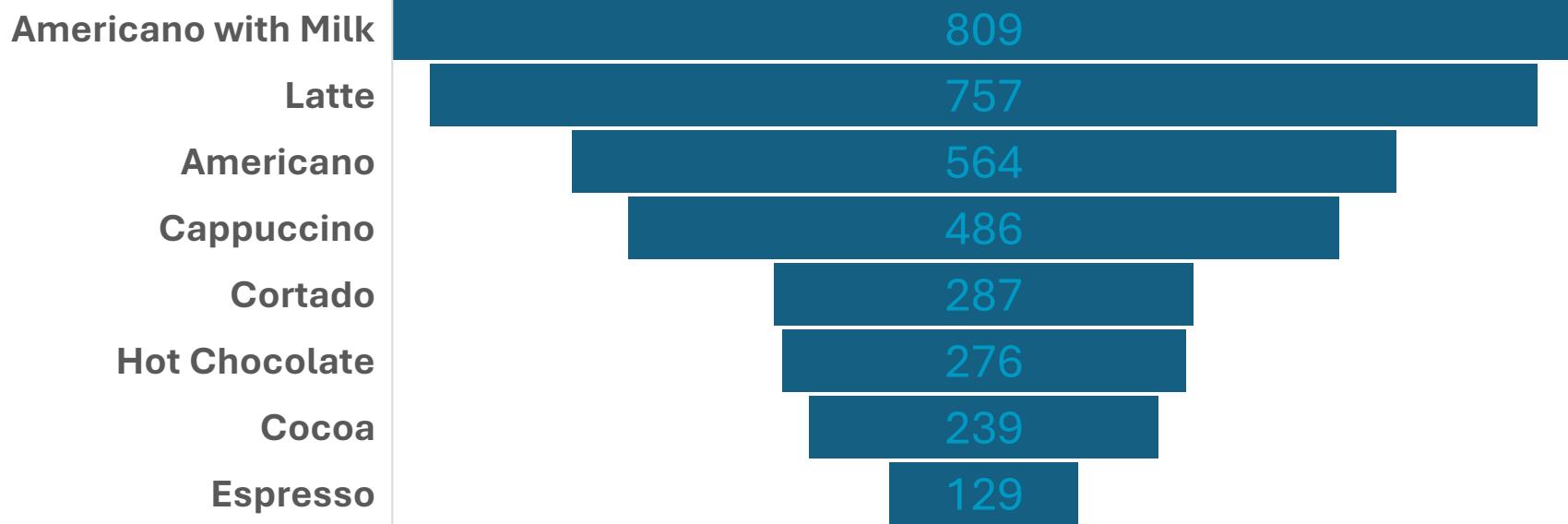
With a mean of ₹31.64, median of ₹32.82, and mode of ₹35.76, customers generally spend slightly above average and most often around ₹36, indicating stable and predictable transaction values. It means that people are generally spending in a range to 31-36.

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.

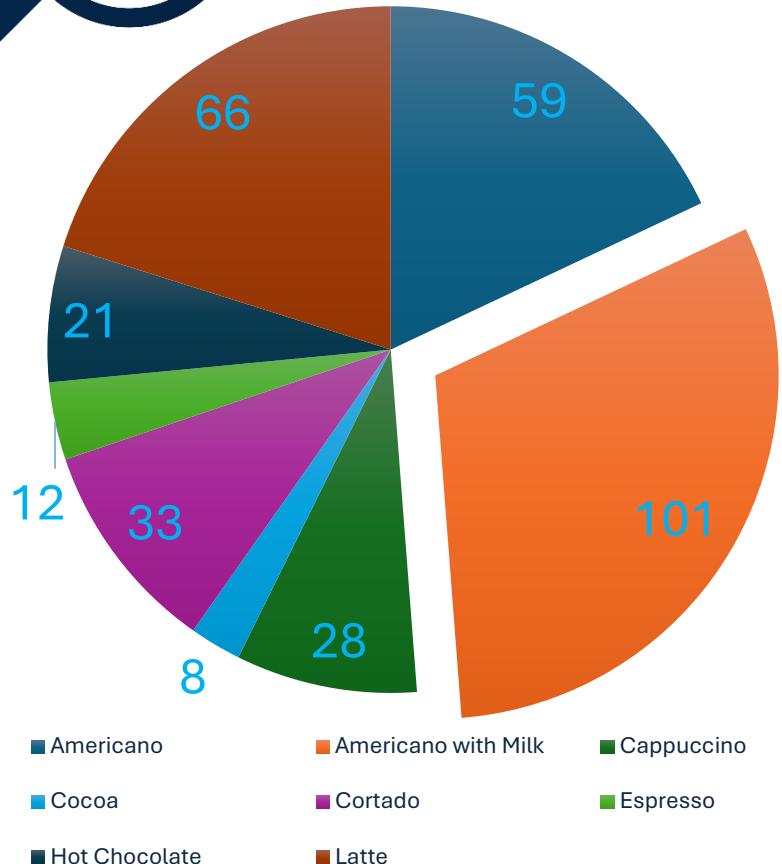
# Best Seller Coffee Types

## Top Selling Coffee



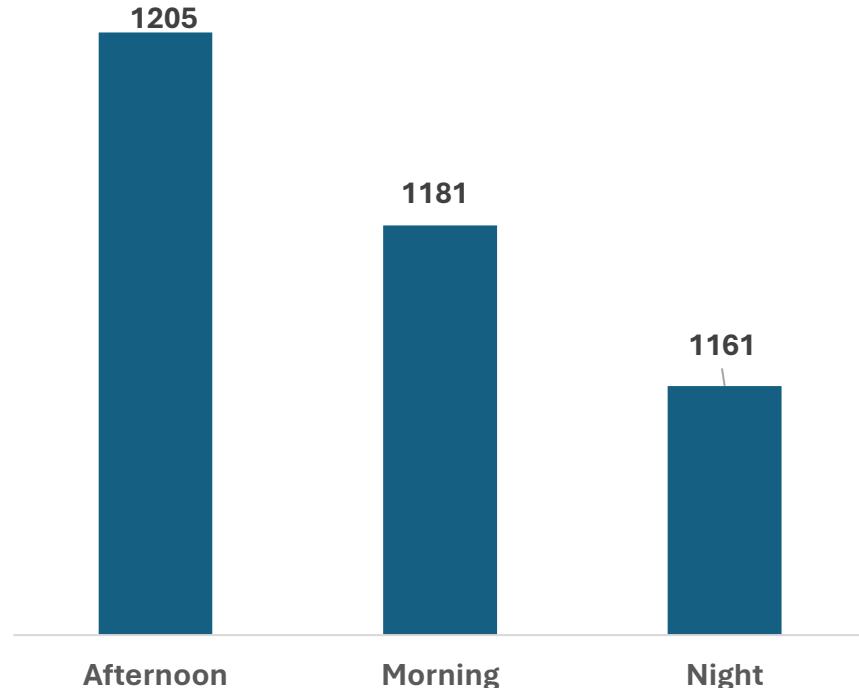
Americano with milk is top selling coffee followed by Latte and Americano while Hot Chocolate, Cocoa and Espresso were the least selling.

## Best Seller During Peak Hour (10 AM)



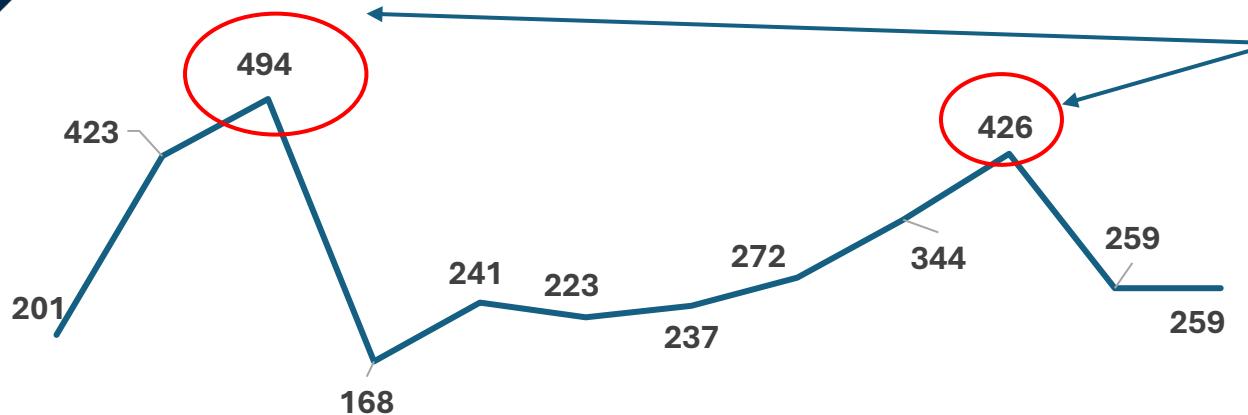
**Americano with Milk is the top-selling product with 101 units sold, making it the clear bestseller during this peak time.**

## Sales VS Time

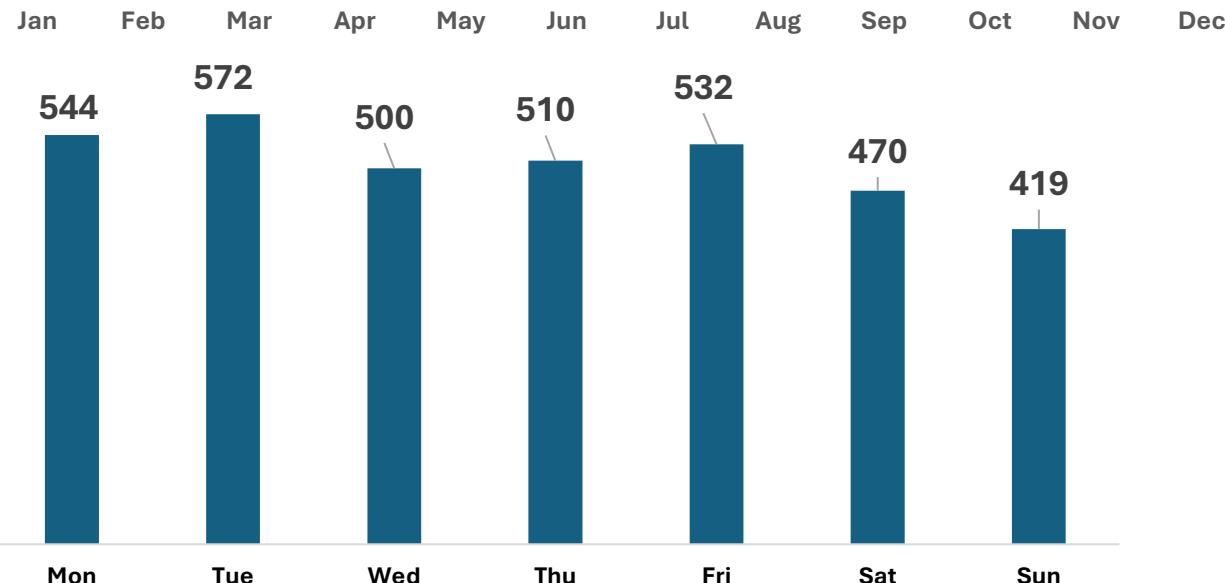


**Sales are highest in the afternoon (1205 units), supported by the mean hour (~2 PM), while 10 AM remains the single busiest peak hour, showing a strong mid-morning rush**

# 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 as 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



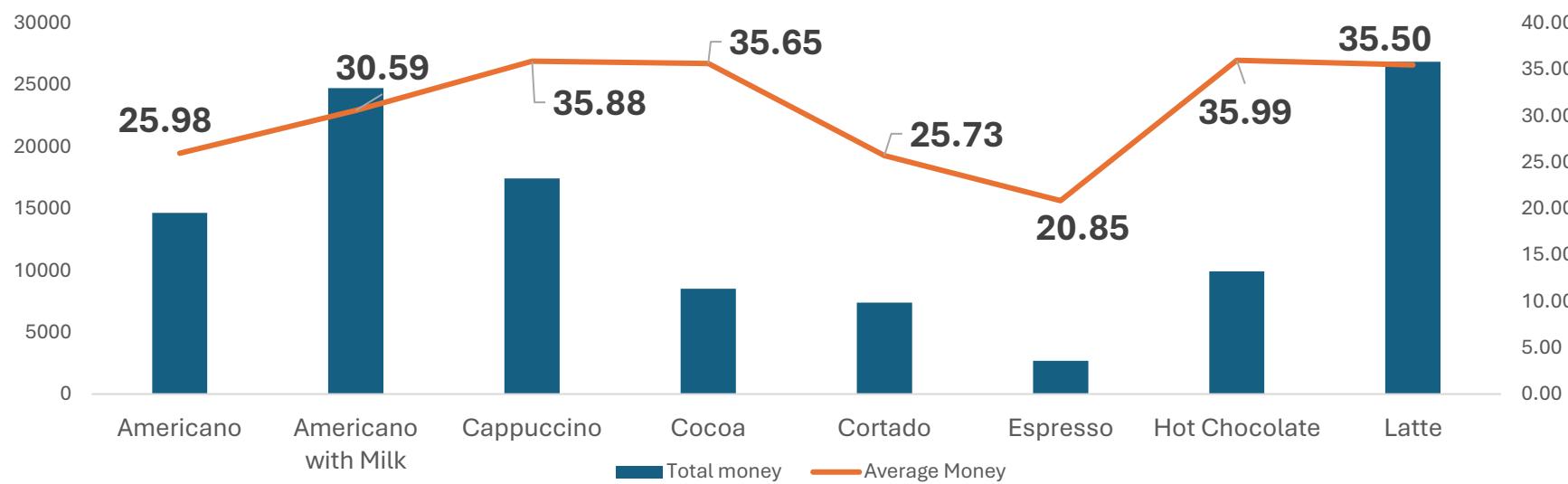
## Seasonal Strategy

- **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.