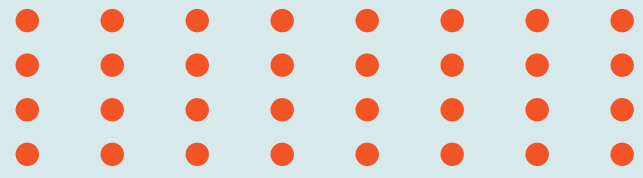croma-A **TATA**

Enterprise

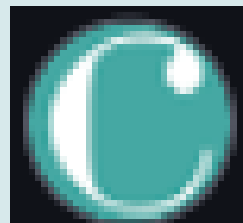# SQL LAPTOP SALES ANALYSIS

by

SAYAN ROY

2024-2025

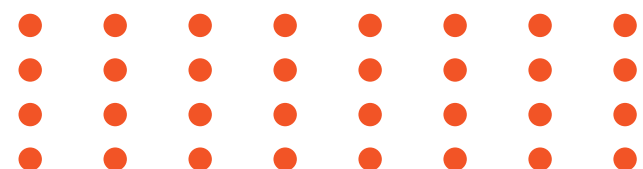# Introduction

croma-A **TATA** Enterprise

Croma, a retail chain under Infiniti Retail (a Tata enterprise), is one of India's leading electronics and consumer durables retailers. With a strong presence both online and through physical stores across major cities, Croma has built a reputation for offering a wide range of high-quality technology products, including laptops.

This project focuses on analyzing and enhancing laptop sales at Croma, exploring customer preferences, market trends, brand performance, and promotional strategies. The goal is to understand the factors influencing consumer buying behavior, optimize product offerings, and propose actionable insights to boost sales. Laptops represent a significant segment in Croma's product portfolio, catering to students, professionals, gamers, and general users alike.

Questions

- Transactions from the brand "HP"
- Cities where Laptop sold
- Total Units Sold
- Customers paid by "Credit Card"
- Transactions in December
- Revenue generated by each brands
- Avg. rating by each payment method
- Top 3 cities with highest transaction

- Laptop model which sold maximum
- Youngest customer to buy "MacBook Air"
- Monthly revenue trend in 2024
- Customer, buy more than 1 product
- Day which has max avg. customer rating
- Ranking of brand by their total revenue
- Avg. unit price for each brand

Dataset

transaction_id	day	month	year	week_name	brand	laptop_model	units_sold	price_per_unit	customer_name	customer_age	City	payment_method	customer_rating
TXN00001	8	March	2025	Saturday	HP	Omen 15	3	27584	Anika Sarin	59	Hyderabad	Credit Card	1
TXN00002	8	September	2024	Sunday	Apple	MacBook Air	5	30930	Neelofar Sunder	46	Ghaziabad	Debit Card	5
TXN00003	13	March	2025	Thursday	Lenovo	IdeaPad S340	3	96484	Saksham Bhalla	35	Bhopal	Cash	4
TXN00004	25	December	2024	Wednesday	Acer	Predator Helios	1	56116	Mahika Sahni	21	Rajkot	Cash	4
TXN00005	4	September	2024	Wednesday	Acer	Aspire 5	2	88025	Riaan Goel	31	Visakhapatnam	Credit Card	2
TXN00006	17	July	2024	Wednesday	Asus	VivoBook 15	3	41101	Manjari Deol	33	Faridabad	Credit Card	5
TXN00007	24	October	2024	Thursday	Dell	Inspiron 15	2	36031	Inaaya Dugar	34	Ludhiana	Credit Card	2
TXN00008	8	February	2025	Saturday	Asus	TUF Gaming	2	49334	Alisha Kumar	24	Kolkata	Cash	4
TXN00009	21	July	2024	Sunday	MSI	GF63 Thin	2	37212	Kiaan Walia	19	Hyderabad	Debit Card	4
TXN00010	8	March	2025	Saturday	Acer	Swift 3	2	32769	Ehsaan Basu	61	Patna	Debit Card	4
TXN00011	30	July	2024	Tuesday	Acer	Aspire 5	4	88995	Fateh Kara	20	Ludhiana	Debit Card	1
TXN00012	7	May	2024	Tuesday	MSI	Modern 14	4	55204	Nitara Sundaram	52	Faridabad	Debit Card	1
TXN00013	25	March	2025	Tuesday	Acer	Aspire 5	2	92344	Ayesha Bhatia	47	Indore	Cash	3
TXN00014	22	May	2024	Wednesday	Lenovo	ThinkPad X1	5	91548	Kiara Choudhry	62	Agra	Credit Card	3
TXN00015	4	August	2024	Sunday	Asus	VivoBook 15	3	70629	Ojas Behl	54	Srinagar	Credit Card	5
TXN00016	5	November	2024	Tuesday	Asus	VivoBook 15	3	63854	Zaina Dhaliwal	40	Nashik	UPI	3
TXN00017	27	May	2024	Monday	Lenovo	Legion Y540	4	95319	Anya Sethi	40	Kolkata	Debit Card	2
TXN00018	12	March	2025	Wednesday	MSI	GF63 Thin	4	82922	Lavanya Sunder	31	Visakhapatnam	Credit Card	2
TXN00019	27	January	2025	Monday	Apple	MacBook Pro	4	54225	Jayant Kaur	61	Ludhiana	Debit Card	4
TXN00020	14	September	2024	Saturday	HP	Omen 15	3	50247	Tarini Dua	57	Chennai	Cash	4
TXN00021	26	September	2024	Thursday	HP	Envy 13	5	85628	Navya Varughese	33	Kalyan	Cash	4
TXN00022	4	March	2025	Tuesday	HP	Omen 15	4	74926	Azad Deshpande	39	Chennai	UPI	5
TXN00023	20	September	2024	Friday	Acer	Aspire 5	5	51571	Hansh Manne	45	Kanpur	Debit Card	4
TXN00024	9	December	2024	Monday	MSI	Modern 14	5	44939	Miraan Kanda	29	Jaipur	Debit Card	3
TXN00025	5	June	2024	Wednesday	Lenovo	Legion Y540	1	56247	Heer Rastogi	28	Visakhapatnam	UPI	3

1.Retrieve all transactions from the brand "HP".

```
select * from sales where brand='HP';
```

transaction_id	day	month	year	week_name	brand	laptop_model	units_sold	price_per_unit	customer_name	customer_age	City	payment_method	customer_rating
TXN00001	8	March	2025	Saturday	HP	Omen 15	3	27584	Anika Sarin	59	Hyderabad	Credit Card	1
TXN00020	14	September	2024	Saturday	HP	Omen 15	3	50247	Tarini Dua	57	Chennai	Cash	4
TXN00021	26	September	2024	Thursday	HP	Envy 13	5	85628	Navya Varughese	33	Kalyan	Cash	4
TXN00022	4	March	2025	Tuesday	HP	Omen 15	4	74926	Azad Deshpande	39	Chennai	UPI	5
TXN00035	8	November	2024	Friday	HP	Envy 13	3	48310	Madhup Saha	25	Visakhapatnam	Debit Card	3
TXN00055	31	August	2024	Saturday	HP	Pavilion x360	2	40821	Nirvi Sami	29	Nagpur	Cash	4
TXN00058	21	April	2025	Monday	HP	Pavilion x360	2	61503	Samar Mand	65	Kanpur	Cash	3
TXN00059	11	November	2024	Monday	HP	Envy 13	5	37478	Emir Bajwa	32	Srinagar	UPI	3
TXN00060	15	December	2024	Sunday	HP	Envy 13	1	57280	Diya Mammen	58	Bengaluru	Debit Card	2
TXN00062	31	January	2025	Friday	HP	Pavilion x360	2	89437	Elakshi Seshadri	55	Vadodara	Credit Card	5
TXN00071	9	November	2024	Saturday	HP	Envy 13	4	37381	Keya Buch	19	Hyderabad	Debit Card	2
TXN00073	8	March	2025	Saturday	HP	Omen 15	2	25814	Aayush Rajagopal	33	Ahmedabad	UPI	2
TXN00082	23	November	2024	Saturday	HP	Omen 15	3	35619	Hansh Lall	36	Patna	Cash	2

2.List all unique cities where laptops were sold.

```sql
SELECT DISTINCT City FROM sales;
```

City
Hyderabad
Ghaziabad
Bhopal
Rajkot
Visakhapatnam
Faridabad
Ludhiana
Kolkata
Patna
Indore
Agra
Srinagar
Nashik

3.Find the total number of units sold across all brands.

```sql
select sum(units_sold)as total_number_of_units_sold from sales;
```

total_number_of_units_sold
▶ 14892

4.Get the names of customers who paid using a "Credit Card".

```
select customer_name from sales where payment_method='Credit Card';
```

	customer_name
▶	Anika Sarin
	Riaan Goel
	Manjari Deol
	Inaaya Dugar
	Kiara Choudhry
	Ojas Behl
	Lavanya Sunder
	Abram Iyengar
	Miraan Bhatia
	Vardaniya Gupta
	Lavanya Doctor
	Ishita Barman
	Parinaaz Chauhan
	Hazel Sharma
	Adira Gara
	Eva Bir
	Divij Chatterjee
	Elakshi Seshadri
	Neelofar Bala
	Dhruv Dua

5.Show all transactions that occurred in "December".

```sql
select * from sales where month='December';
```

transaction_id	day	month	year	week_name	brand	laptop_model	units_sold	price_per_unit	customer_name	customer_age	City	payment_method	customer_rating
TXN00004	25	December	2024	Wednesday	Acer	Predator Helios	1	56116	Mahika Sahni	21	Rajkot	Cash	4
TXN00024	9	December	2024	Monday	MSI	Modern 14	5	44939	Miraan Kanda	29	Jaipur	Debit Card	3
TXN00034	26	December	2024	Thursday	Asus	ROG Zephyrus	2	47835	Lakshay Rattan	28	Ahmedabad	Debit Card	2
TXN00046	23	December	2024	Monday	Apple	MacBook Pro	3	82496	Eva Bir	20	Pune	Credit Card	4
TXN00049	27	December	2024	Friday	Apple	MacBook Pro	4	76125	Aarav Dyal	54	Rajkot	Debit Card	4
TXN00053	19	December	2024	Thursday	Asus	VivoBook 15	1	69064	Jayesh Krishnan	28	Visakhapatnam	Cash	3
TXN00060	15	December	2024	Sunday	HP	Envy 13	1	57280	Diya Mammen	58	Bengaluru	Debit Card	2
TXN00065	12	December	2024	Thursday	Asus	TUF Gaming	3	73638	Dhruv Dua	64	Pune	Credit Card	3
TXN00069	30	December	2024	Monday	Lenovo	ThinkPad X1	4	37654	Kimaya Dani	24	Nagpur	Debit Card	4
TXN00075	14	December	2024	Saturday	Dell	XPS 13	3	26262	Mahika Kapadia	46	Patna	Cash	5
TXN00078	14	December	2024	Saturday	Lenovo	IdeaPad S340	3	32404	Kanav Bava	44	Surat	Debit Card	5
TXN00087	9	December	2024	Monday	HP	Omen 15	4	83817	Sahil Jain	27	Patna	Debit Card	1
TXN00096	26	December	2024	Thursday	Dell	XPS 13	5	80293	Zoya Goswami	65	Thane	Debit Card	1
TXN00097	16	December	2024	Monday	HP	Pavilion x360	2	93078	Ahana Mangal	38	Vasai-Virar	UPI	1
TXN00098	18	December	2024	Wednesday	Asus	ROG Zephyrus	3	49526	Stuvan Bajwa	20	Faridabad	UPI	3
TXN00115	13	December	2024	Friday	Apple	MacBook Pro	1	93241	Pranay Atwal	31	Mumbai	Credit Card	3
TXN00120	8	December	2024	Sunday	Apple	MacBook Pro	1	49617	Vedika Rao	25	Rajkot	Credit Card	3
TXN00122	12	December	2024	Thursday	Apple	MacBook Air	4	32476	Jayant Shankar	23	Pune	UPI	5
TXN00145	6	December	2024	Friday	Dell	Inspiron 15	2	89054	Ahana Talwar	24	Agra	Debit Card	4
TXN00148	30	December	2024	Monday	MSI	GF63 Thin	5	99325	Emir Ahuja	19	Nashik	Cash	5

6.Calculate the total revenue generated by each brand

```sql
SELECT
    brand, SUM(units_sold * price_per_unit) AS total_revenue
FROM
    sales
GROUP BY brand;
```

brand	total_revenue
HP	132182213
Apple	135700857
Lenovo	131077875
Acer	132993846
Asus	132219697
Dell	130749064
MSI	136021705

7.Find the average rating given by customer in each payment.

```sql
SELECT
    payment_method, AVG(customer_rating) AS avg_customer_rating
FROM
    sales
GROUP BY payment_method;
```

payment_method	avg_customer_rating
Credit Card	2.9832
Debit Card	2.9677
Cash	3.1129
UPI	3.0300

8. Identify the top 3 cities with highest number of transactions.

```sql
SELECT
    City, COUNT(*) AS highest_number_of_transaction
FROM
    sales
GROUP BY City
ORDER BY highest_number_of_transaction DESC
LIMIT 3;
```

	City	highest_number_of_transaction
▶	Kolkata	187
	Delhi	186
	Hyderabad	183

9.Get the laptop model with the highest total units sold.

```sql
SELECT
    laptop_model, SUM(units_sold) AS highest_total_units_sold
FROM
    sales
GROUP BY laptop_model
ORDER BY highest_total_units_sold DESC
LIMIT 1;
```

	laptop_model	highest_total_units_sold
▶	GF63 Thin	1107

10.Find the youngest customer who purchased a "MacBook Air".

```sql
SELECT
    *
FROM
    sales
WHERE
    laptop_model = 'MacBook Air'
ORDER BY customer_age
LIMIT 1;
```

year	week_name	brand	laptop_model	units_sold	price_per_unit	customer_name	customer_age	City
2024	Thursday	Apple	MacBook Air	4	76874	Mannat Sethi	18	Hyderabad

11.Determine the monthly revenue trend for the year 2024.

```sql
SELECT
    month, SUM(units_sold * price_per_unit) AS revenue
FROM sales
WHERE year = 2024
GROUP BY month
ORDER BY CASE
    WHEN month = 'January' THEN 1
    WHEN month = 'February' THEN 2
    WHEN month = 'March' THEN 3
    WHEN month = 'April' THEN 4
    WHEN month = 'May' THEN 5
    WHEN month = 'June' THEN 6
    WHEN month = 'July' THEN 7
    WHEN month = 'August' THEN 8
    WHEN month = 'September' THEN 9
    WHEN month = 'October' THEN 10
    WHEN month = 'November' THEN 11
    WHEN month = 'December' THEN 12
END;
```

month	revenue
April	5502859
May	77013119
June	73392338
July	73191337
August	82403203
September	77114286
October	72991875
November	70559761
December	90419398

12.Find customers who made more than one purchase(Based on customer name

```sql
SELECT
    customer_name, COUNT(*)
FROM
    sales
GROUP BY customer_name
HAVING COUNT(*) > 1;
```

customer_name	count(*)
Neelofar Sunder	2
Nitara Sundaram	2
Neelofar Bala	2
Kanav Kala	2
Sumer Sami	2
Akarsh Karpe	2
Romil Tella	2
Trisha Wali	2
Prisha Konda	2
Miraan Chahal	2
Ayesha Sangha	2
Parinaaz Kulkarni	2

13.Find out which day of the week had the highest average customer rating

```sql
SELECT
    week_name, AVG(customer_rating) AS average_customer_rating
FROM
    sales
GROUP BY week_name
ORDER BY average_customer_rating DESC
LIMIT 1;
```

week_name	average_customer_rating
Monday	3.0774

14.Rank brands by their total revenue & show the top 5.

```sql
SELECT
    brand, SUM(units_sold * price_per_unit) AS total_revenue
FROM
    sales
GROUP BY brand
ORDER BY total_revenue DESC
LIMIT 5;
```

brand	total_revenue
MSI	136021705
Apple	135700857
Acer	132993846
Asus	132219697
HP	132182213

15.Get the average price for each brand in descending order.

```sql
SELECT
    brand, AVG(price_per_unit) AS average_unit_price
FROM
    sales
GROUP BY brand
ORDER BY average_unit_price DESC;
```

brand	average_unit_price
Apple	63147.9776
Lenovo	62940.4383
MSI	62672.7331
Dell	62208.8990
Acer	62048.9542
Asus	62040.3427
HP	61047.9388

Key Takeaways

- HP has a significant number of transactions, indicating strong customer trust and consistent demand for this brand.
- Laptops are being sold across multiple cities, showing that Croma's distribution and customer reach is wide and geographically diverse.
- A large cumulative number of units have been sold, reflecting strong overall demand in the laptop category.
- A notable number of customers are using credit cards, suggesting a trend toward digital and EMI-based purchases.
- Some brands significantly outperform others in terms of total revenue, which can guide stocking and promotion strategies.
- The top 3 cities with the most transactions could be high-priority markets for marketing campaigns and exclusive offers.

Thank You