

# Customer Shopping Behavior Analysis

Analyzing 3,900 purchases to uncover spending patterns, customer segments, and strategic insights



Database

Index	Details	Demographic		Product Info		Order Status		Financials	
		Gender	Age Group	Category	Sub-Category	Quantity	Unit Price	Total Cost	Gross Profit
1	Chen, F, 17	Male	18-24	COM	Smartphones	-	500	320000	110000
2	Li, M, 25	Female	25-34	Electronics	Cameras	-	100	12000	10000
3	Wang, F, 30	Male	25-34	Electronics	Smartwatches	-	50	8000	4000
4	Zhang, M, 28	Female	25-34	Electronics	Smartphones	-	150	30000	15000
5	Guo, M, 22	Male	18-24	Electronics	Smartphones	-	200	28000	14000
6	He, F, 20	Female	18-24	Electronics	Smartphones	-	100	15000	7500
7	Chen, M, 26	Male	25-34	Electronics	Smartphones	-	100	18000	9000
8	Wu, F, 24	Female	25-34	Electronics	Smartphones	-	100	16000	8000
9	Lin, M, 21	Male	18-24	Electronics	Smartphones	-	100	14000	7000
10	Yuan, F, 23	Female	25-34	Electronics	Smartphones	-	100	17000	8500
11	Wang, M, 27	Male	25-34	Electronics	Smartphones	-	100	19000	9500
12	Zhang, F, 29	Female	25-34	Electronics	Smartphones	-	100	18000	9000
13	Chen, M, 25	Male	25-34	Electronics	Smartphones	-	100	17000	8500
14	Li, M, 26	Female	25-34	Electronics	Smartphones	-	100	18000	9000
15	Wang, M, 24	Male	25-34	Electronics	Smartphones	-	100	16000	8000
16	Zhang, F, 22	Female	18-24	Electronics	Smartphones	-	100	15000	7500
17	Chen, M, 20	Male	18-24	Electronics	Smartphones	-	100	14000	7000
18	Li, M, 21	Female	18-24	Electronics	Smartphones	-	100	15000	7500
19	Wang, M, 23	Male	25-34	Electronics	Smartphones	-	100	17000	8500
20	Zhang, F, 25	Female	25-34	Electronics	Smartphones	-	100	18000	9000
21	Chen, M, 27	Male	25-34	Electronics	Smartphones	-	100	19000	9500
22	Li, M, 29	Female	25-34	Electronics	Smartphones	-	100	18000	9000
23	Wang, M, 26	Male	25-34	Electronics	Smartphones	-	100	17000	8500
24	Zhang, F, 24	Female	25-34	Electronics	Smartphones	-	100	16000	8000
25	Chen, M, 22	Male	18-24	Electronics	Smartphones	-	100	15000	7500
26	Li, M, 20	Female	18-24	Electronics	Smartphones	-	100	14000	7000
27	Wang, M, 18	Male	18-24	Electronics	Smartphones	-	100	13000	6500
28	Zhang, F, 19	Female	18-24	Electronics	Smartphones	-	100	14000	7000
29	Chen, M, 21	Male	18-24	Electronics	Smartphones	-	100	15000	7500
30	Li, M, 23	Female	18-24	Electronics	Smartphones	-	100	16000	8000
31	Wang, M, 25	Male	25-34	Electronics	Smartphones	-	100	17000	8500
32	Zhang, F, 27	Female	25-34	Electronics	Smartphones	-	100	18000	9000
33	Chen, M, 29	Male	25-34	Electronics	Smartphones	-	100	19000	9500
34	Li, M, 31	Female	25-34	Electronics	Smartphones	-	100	18000	9000
35	Wang, M, 30	Male	25-34	Electronics	Smartphones	-	100	17000	8500
36	Zhang, F, 32	Female	25-34	Electronics	Smartphones	-	100	16000	8000
37	Chen, M, 33	Male	25-34	Electronics	Smartphones	-	100	15000	7500
38	Li, M, 35	Female	25-34	Electronics	Smartphones	-	100	14000	7000
39	Wang, M, 34	Male	25-34	Electronics	Smartphones	-	100	13000	6500
40	Zhang, F, 36	Female	25-34	Electronics	Smartphones	-	100	14000	7000
41	Chen, M, 38	Male	25-34	Electronics	Smartphones	-	100	15000	7500
42	Li, M, 40	Female	25-34	Electronics	Smartphones	-	100	16000	8000
43	Wang, M, 39	Male	25-34	Electronics	Smartphones	-	100	17000	8500
44	Zhang, F, 41	Female	25-34	Electronics	Smartphones	-	100	18000	9000
45	Chen, M, 43	Male	25-34	Electronics	Smartphones	-	100	19000	9500
46	Li, M, 45	Female	25-34	Electronics	Smartphones	-	100	18000	9000
47	Wang, M, 44	Male	25-34	Electronics	Smartphones	-	100	17000	8500
48	Zhang, F, 46	Female	25-34	Electronics	Smartphones	-	100	16000	8000
49	Chen, M, 48	Male	25-34	Electronics	Smartphones	-	100	15000	7500
50	Li, M, 50	Female	25-34	Electronics	Smartphones	-	100	14000	7000
51	Wang, M, 49	Male	25-34	Electronics	Smartphones	-	100	13000	6500
52	Zhang, F, 51	Female	25-34	Electronics	Smartphones	-	100	14000	7000
53	Chen, M, 53	Male	25-34	Electronics	Smartphones	-	100	15000	7500
54	Li, M, 55	Female	25-34	Electronics	Smartphones	-	100	16000	8000
55	Wang, M, 54	Male	25-34	Electronics	Smartphones	-	100	17000	8500
56	Zhang, F, 56	Female	25-34	Electronics	Smartphones	-	100	18000	9000
57	Chen, M, 58	Male	25-34	Electronics	Smartphones	-	100	19000	9500
58	Li, M, 60	Female	25-34	Electronics	Smartphones	-	100	18000	9000
59	Wang, M, 59	Male	25-34	Electronics	Smartphones	-	100	17000	8500
60	Zhang, F, 61	Female	25-34	Electronics	Smartphones	-	100	16000	8000
61	Chen, M, 63	Male	25-34	Electronics	Smartphones	-	100	15000	7500
62	Li, M, 65	Female	25-34	Electronics	Smartphones	-	100	14000	7000
63	Wang, M, 64	Male	25-34	Electronics	Smartphones	-	100	13000	6500
64	Zhang, F, 66	Female	25-34	Electronics	Smartphones	-	100	14000	7000
65	Chen, M, 68	Male	25-34	Electronics	Smartphones	-	100	15000	7500
66	Li, M, 70	Female	25-34	Electronics	Smartphones	-	100	16000	8000
67	Wang, M, 69	Male	25-34	Electronics	Smartphones	-	100	17000	8500
68	Zhang, F, 71	Female	25-34	Electronics	Smartphones	-	100	18000	9000
69	Chen, M, 73	Male	25-34	Electronics	Smartphones	-	100	19000	9500
70	Li, M, 75	Female	25-34	Electronics	Smartphones	-	100	18000	9000
71	Wang, M, 74	Male	25-34	Electronics	Smartphones	-	100	17000	8500
72	Zhang, F, 76	Female	25-34	Electronics	Smartphones	-	100	16000	8000
73	Chen, M, 78	Male	25-34	Electronics	Smartphones	-	100	15000	7500
74	Li, M, 80	Female	25-34	Electronics	Smartphones	-	100	14000	7000
75	Wang, M, 79	Male	25-34	Electronics	Smartphones	-	100	13000	6500
76	Zhang, F, 81	Female	25-34	Electronics	Smartphones	-	100	14000	7000
77	Chen, M, 83	Male	25-34	Electronics	Smartphones	-	100	15000	7500
78	Li, M, 85	Female	25-34	Electronics	Smartphones	-	100	16000	8000
79	Wang, M, 84	Male	25-34	Electronics	Smartphones	-	100	17000	8500
80	Zhang, F, 86	Female	25-34	Electronics	Smartphones	-	100	18000	9000
81	Chen, M, 88	Male	25-34	Electronics	Smartphones	-	100	19000	9500
82	Li, M, 90	Female	25-34	Electronics	Smartphones	-	100	18000	9000
83	Wang, M, 89	Male	25-34	Electronics	Smartphones	-	100	17000	8500
84	Zhang, F, 91	Female	25-34	Electronics	Smartphones	-	100	16000	8000
85	Chen, M, 93	Male	25-34	Electronics	Smartphones	-	100	15000	7500
86	Li, M, 95	Female	25-34	Electronics	Smartphones	-	100	14000	7000
87	Wang, M, 94	Male	25-34	Electronics	Smartphones	-	100	13000	6500
88	Zhang, F, 96	Female	25-34	Electronics	Smartphones	-	100	14000	7000
89	Chen, M, 98	Male	25-34	Electronics	Smartphones	-	100	15000	7500
90	Li, M, 100	Female	25-34	Electronics	Smartphones	-	100	16000	8000
91	Wang, M, 99	Male	25-34	Electronics	Smartphones	-	100	17000	8500
92	Zhang, F, 101	Female	25-34	Electronics	Smartphones	-	100	18000	9000
93	Chen, M, 103	Male	25-34	Electronics	Smartphones	-	100	19000	9500
94	Li, M, 105	Female	25-34	Electronics	Smartphones	-	100	18000	9000
95	Wang, M, 104	Male	25-34	Electronics	Smartphones	-	100	17000	8500
96	Zhang, F, 106	Female	25-34	Electronics	Smartphones	-	100	16000	8000
97	Chen, M, 108	Male	25-34	Electronics	Smartphones	-	100	15000	7500
98	Li, M, 110	Female	25-34	Electronics	Smartphones	-	100	14000	7000
99	Wang, M, 109	Male	25-34	Electronics	Smartphones	-	100	13000	6500
100	Zhang, F, 111	Female	25-34	Electronics	Smartphones	-	100	14000	7000

## DATASET OVERVIEW

1000 Total Rows

Customer transactions analyzed

14 Data Columns

Key features tracked

3 Core Categories

Customer, Product, Order details

# Data Preparation & Exploration

01

## Data Loading

Imported dataset using pandas

02

## Structure Check

Used df.info() to verify data types

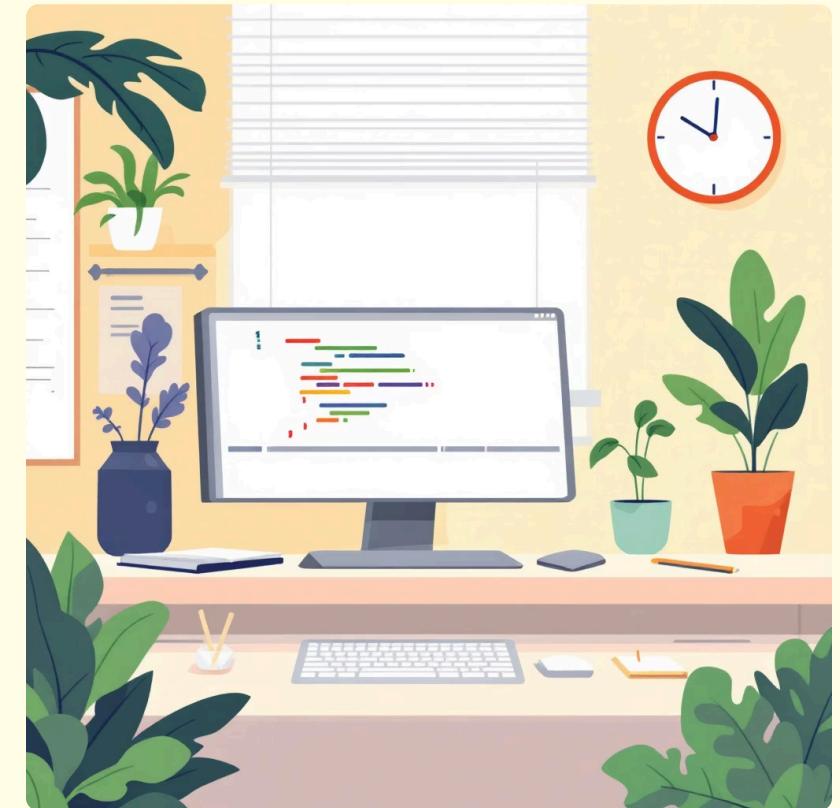
03

## Summary Statistics

Applied .describe() for insights

## Key Statistics

- Average Age: 41 years
- Average Rating: 2.98/5
- Average Quantity: 4.9 units
- Average Sales: ₹1,306



# Peak Sales Period



**August**

₹145,564 - Highest sales month



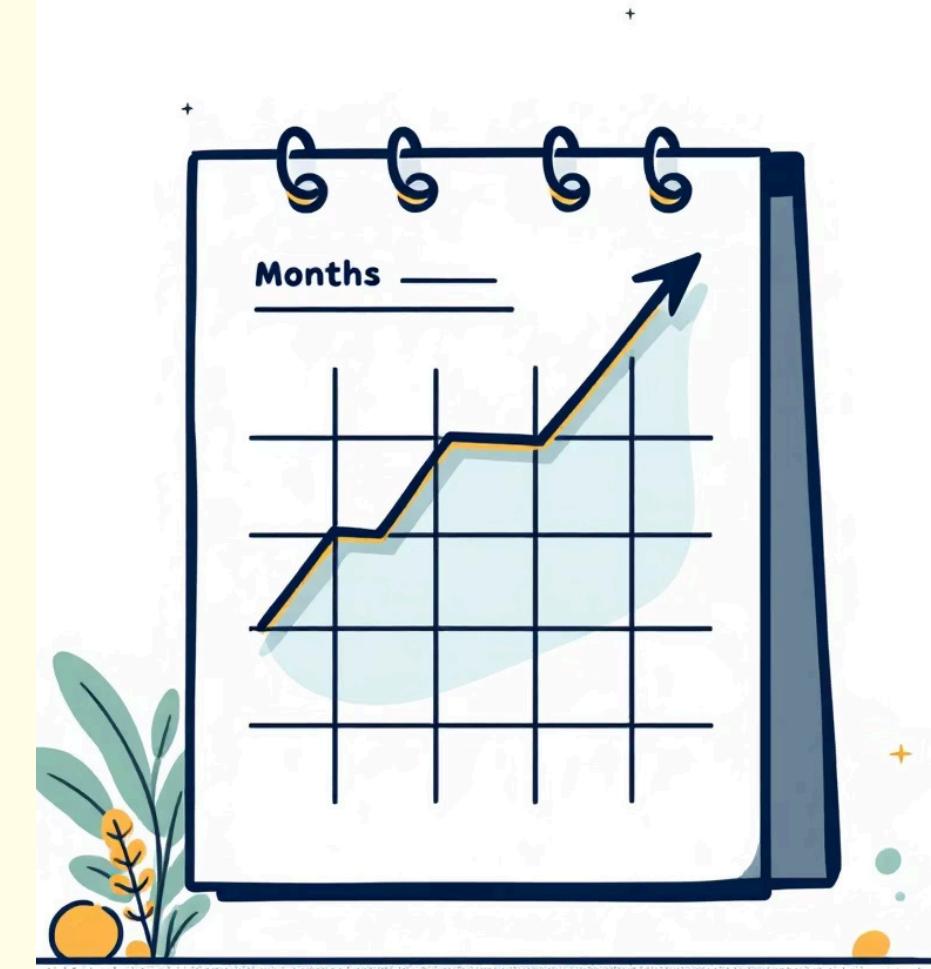
**February**

₹132,834 - Strong performance



**July**

₹126,921 - Summer peak



# Top Revenue Contributors

## Elite Customers

Top 10 customers driving significant revenue

- Faiyaz Ahuja: ₹6,116
- Sumer Talwar: ₹6,014
- Anahita Tella: ₹6,014
- Jiya Vora: ₹6,014
- Parinaaz Golla: ₹6,014

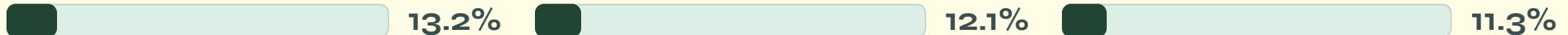


# Category Performance



Electronics dominates with 63% of total revenue, while Fashion contributes 37%

# Product Contribution Analysis



**Laptop**

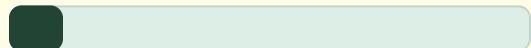
Leading product category

**Smartphone**

Strong mobile demand

**Keyboard**

Accessories growth



**Shoes**

Fashion leader

**Backpack**

Lifestyle essential



# Business Intelligence Insights

1

## Top Rated Products

Keyboard leads with 3.23 avg rating

Mouse (3.12), Laptop (3.08) follow

2

## Payment Preferences

Cash most popular: 225 transactions

Net Banking (204), UPI (199) strong

3

## Category Revenue

Electronics: ₹823,526

Fashion: ₹482,939

# Interactive Analytics

## Total Revenue

₹81.74K

## Total Orders

69 transactions

## AOV

₹1.18K per order

## Profit Margin

0.06%





# Key Takeaway

Full-cycle data analytics combining **Python**, **SQL**, and **Power BI** to deliver actionable business insights



## Data Preparation

Python exploration & cleaning

## Business Analysis

SQL structured queries

## Visual Insights

Power BI dashboards