MARKET AND BUSINESS OPPURTUNITY ASSESMENT IN BANGALORE

Our dedication to diligent project management and comprehensive opportunity assessment is reflected in the insights and conclusions highlighted in this project report.

Presented by :

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AGENDA

Project Overview

Objectives

Factor analysis

Results

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PROJECT OVERVIEW

OUR PROJECT FOCUSES ON EMPOWERING OUR CLIENT TO ESTABLISH A SUCCESSFUL NEW BUSINESS IN BANGALORE WITH A PRIMARY EMPHASIS ON CHOOSING THE IDEAL BUSINESS LOCATION AND THE BEST PRODUCT OFFERINGS. THROUGH COMPREHENSIVE ANALYSIS OF BANGALORE RETAIL LANDSCAPE AND A DATA DRIVEN APPROACH WE AIM TO UNCOVER MARKET TRENDS, CONSUMER PREFERENCES, COMPETITIVE DYNAMICS AND REGIONAL INTRICACIES. OUR MISSION IS TO PROVIDE OUR CLIENT WITH A STRATEGIC ROADMAP FOR SUCCESS IN BANGALORE'S DYNAMIC BUSINESS ENVIRONMENT.

OBJECTIVES – 1

Annual sales analysis

Top Revenue Year

Top 5 Region Sales

Area-wise Bestsellers

OBJECTIVES -2

Leading Product-Region
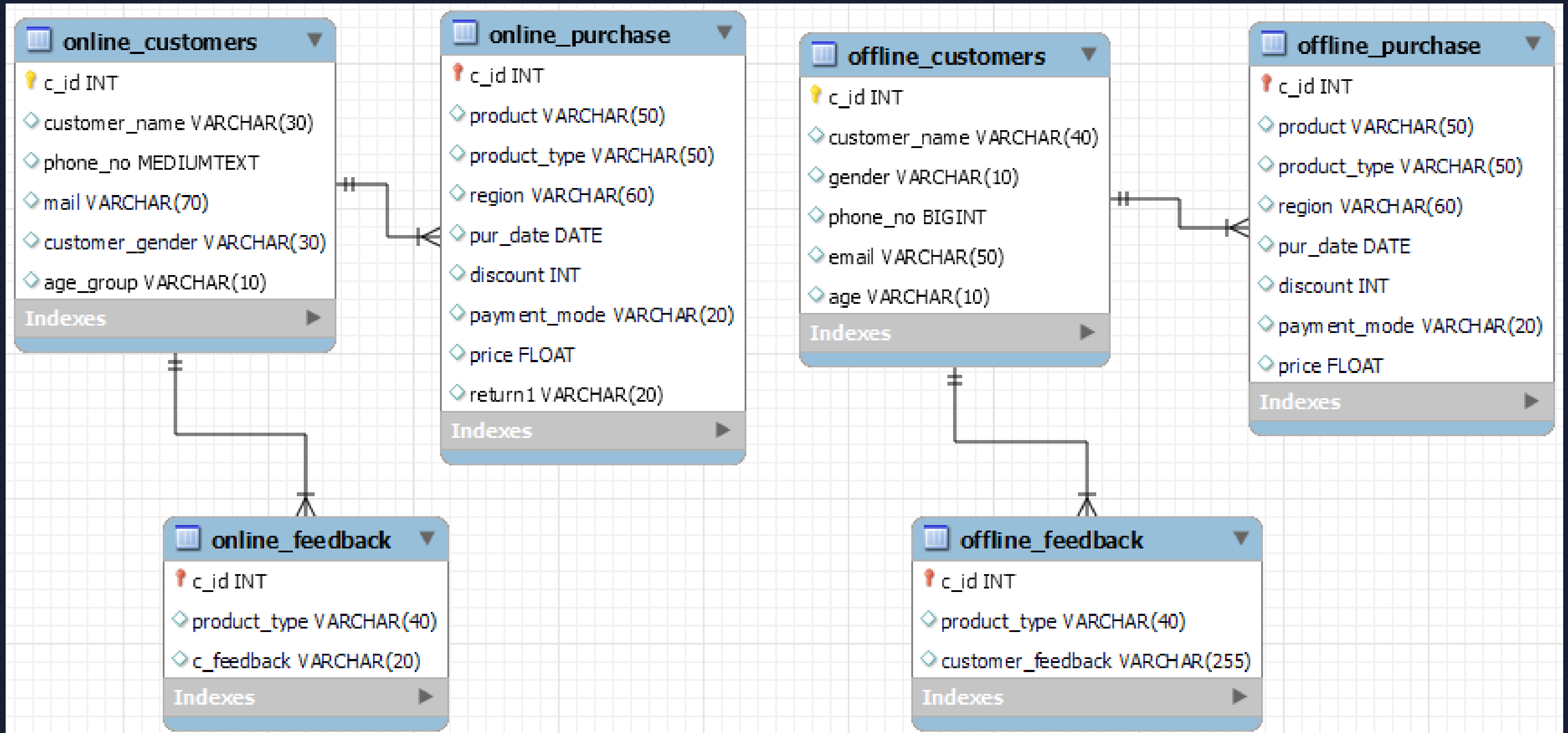
Product Category Sales Breakdown

Correlation Analysis for Customer Feedback

Age Demographic Sales Analysis

DATABASE DESIGN

online_customers
- 🔑 c_id INT
- ◇ customer_name VARCHAR(30)
- ◇ phone_no MEDIUMTEXT
- ◇ mail VARCHAR(70)
- ◇ customer_gender VARCHAR(30)
- ◇ age_group VARCHAR(10)

Indexes ►

online_purchase
- 🔑 c_id INT
- ◇ product VARCHAR(50)
- ◇ product_type VARCHAR(50)
- ◇ region VARCHAR(60)
- ◇ pur_date DATE
- ◇ discount INT
- ◇ payment_mode VARCHAR(20)
- ◇ price FLOAT
- ◇ return1 VARCHAR(20)

Indexes ►

offline_customers
- 🔑 c_id INT
- ◇ customer_name VARCHAR(40)
- ◇ gender VARCHAR(10)
- ◇ phone_no BIGINT
- ◇ email VARCHAR(50)
- ◇ age VARCHAR(10)

Indexes ►

offline_purchase
- 🔑 c_id INT
- ◇ product VARCHAR(50)
- ◇ product_type VARCHAR(50)
- ◇ region VARCHAR(60)
- ◇ pur_date DATE
- ◇ discount INT
- ◇ payment_mode VARCHAR(20)
- ◇ price FLOAT

Indexes ►

online_feedback
- 🔑 c_id INT
- ◇ product_type VARCHAR(40)
- ◇ c_feedback VARCHAR(20)

Indexes ►

offline_feedback
- 🔑 c_id INT
- ◇ product_type VARCHAR(40)
- ◇ customer_feedback VARCHAR(255)

Indexes ►

OFFLINE – PURCHASE TABLE

c_id	product	product_type	region	pur_date	discount	payment_mode	price
1	rice	groceries	koramangala	2021-08-14	15	cash	79.99
2	mobile	electronics	indiranagar	2022-03-22	10	credit card	1199
3	children	clothing	jayanagar	2021-12-05	8	debit card	82.5
4	wall art	home&decores	btm layout	2022-11-30	5	cash	69.75
5	soap	beauty	whitefield	2021-06-15	12	credit card	62.99
6	dalls	groceries	electronic city	2022-09-12	20	debit card	78.5
7	laptops	electronics	marathahalli	2021-07-03	10	cash	1299.99
8	formal	clothing	jp nagar	2022-08-18	15	credit card	99.5
9	table lamp	home&decores	hsr layout	2021-05-10	8	debit card	89.99
10	lip balm	beauty	bannerghatta	2022-02-14	5	cash	75.99
11	bread	groceries	indiranagar	2021-09-01	12	credit card	87.75
12	headsets	electronics	koramangala	2022-04-25	20	debit card	89.5
13	womens	clothing	rajajinagar	2021-07-22	10	cash	99
14	flower vase	home&decores	bellandur	2022-12-10	15	credit card	84.99
15	shampoo	beauty	marathahalli	2021-08-08	8	debit card	69.25
16	bread	groceries	indiranagar	2022-01-05	12	cash	89.99
17	mobile	electronics	bannerghatta	2021-09-30	15	credit card	1199
18	mens	clothing	hsr layout	2022-11-15	5	debit card	79.75
19	wallclock	home&decores	rajajinagar	2021-07-12	10	cash	94.99
20	perfumes	beauty	koramangala	2022-06-01	8	credit card	82.5

ONLINE – PURCHASE TABLE

c_id	product	product_type	region	pur_date	discount	payment_mode	price
1	table lamp	home decor	bellandhur	2021-08-10	5	online	318.5
2	gaming console	electronics	marathahalli	2022-07-11	10	offline	280.75
3	toothbrush	beauty	hebbal	2022-09-12	8	online	252.25
4	women jeans	clothing	jp nagar	2021-10-13	15	offline	300
5	bluetooth speaker	electronics	btm layout	2022-08-14	10	online	340.25
6	bed pillows	home decor	whitefield	2021-07-15	5	offline	312.5
7	baby food	groceries	electronic city	2022-09-16	12	online	308.75
8	women handbag	accessories	bellandhur	2022-04-17	20	offline	355
9	vacuum cleaner	appliances	marathahalli	2021-02-18	5	online	360.25
10	skincare cream	beauty	hebbal	2022-07-19	8	offline	315.5
11	men shirts	clothing	jp nagar	2021-08-20	10	online	355.75
12	microwave oven	appliances	btm layout	2022-09-21	12	offline	380.5
13	nail polish	beauty	whitefield	2022-10-22	5	online	356.25
14	sports shoes	footwear	bellandhur	2021-07-23	15	offline	370
15	iron box	appliances	marathahalli	2022-08-24	10	online	375.25
16	books	stationery	hebbal	2021-02-25	5	offline	310.5
17	television	electronics	electronic city	2022-09-26	8	online	350
18	baby clothes	clothing	jp nagar	2021-08-27	12	offline	328.75
19	umbrella	accessories	btm layout	2022-09-28	5	online	312.5
20	kettle	appliances	bellandhur	2022-07-29	10	offline	330.25

OFFLINE – FEEDBACK

c_id	product_type	customer_feedback
1	groceries	good
2	electronics	average
3	clothing	good
4	home&decores	bad
5	beauty	average
6	groceries	bad
7	electronics	good
8	clothing	good
9	home&decores	average
10	beauty	good
11	groceries	good
12	electronics	average
13	clothing	good
14	home&decores	bad
15	beauty	average
16	groceries	bad
17	electronics	good
18	clothing	good
19	home&decores	average
20	beauty	good

ONLINE – FEEDBACK

c_id	product_type	c_feedback
1	home decor	good
2	electronics	average
3	beauty	good
4	clothing	bad
5	electronics	average
6	home decor	bad
7	groceries	good
8	accessories	good
9	appliances	average
10	beauty	good
11	clothing	good
12	appliances	average
13	beauty	good
14	footwear	bad
15	appliances	average
16	stationery	bad
17	electronics	good
18	clothing	good
19	accessories	average
20	appliances	good

OFFLINE – CUSTOMERS

c_id	customer_name	gender	phone_no	email	age
1	Aarav	male	9000000001	aarav@gmail.com	16-25
2	Aadhya	female	9000000002	aadhya@gmail.com	26-35
3	Aarush	male	9000000003	aarush@gmail.com	16-25
4	Aanya	female	9000000004	aanya@gmail.com	26-35
5	Advait	male	9000000005	advait@gmail.com	16-25
6	Ananya	female	9000000006	ananya@gmail.com	26-35
7	Aryan	male	9000000007	aryan@gmail.com	36-45
8	Avni	female	9000000008	avni@gmail.com	16-25
9	Ayush	male	9000000009	ayush@gmail.com	26-35
10	Diya	female	9000000010	diya@gmail.com	26-35
11	Dhruv	male	9000000011	dhruv@gmail.com	26-35
12	Isha	female	9000000012	isha@gmail.com	16-25
13	Ishan	male	9000000013	ishan@gmail.com	36-45
14	Kavya	female	9000000014	kavya@gmail.com	26-35
15	Krish	male	9000000015	krish@gmail.com	16-25
16	Mira	female	9000000016	mira@gmail.com	26-35
17	Reyansh	male	9000000017	reyansh@gmail.com	26-35
18	Riya	female	9000000018	riya@gmail.com	26-35
19	Shaurya	male	9000000019	shaurya@gmail.com	36-45
20	Sia	female	9000000020	sia@gmail.com	16-25

ONLINE – CUSTOMERS

c_id	customer_name	phone_no	mail	customer_gender	age_group
1	Kimberly Baker	8038293313	michaelevans@example.org	Male	16-25
2	Joseph Weaver	9740031239	autumn02@example.com	female	26-35
3	Rebecca Myers	9259060234	stephen90@example.com	female	45+
4	Mr. Richard Rivera	1981702343	george07@example.com	female	45+
5	Scott Arnold	8306568815	zmartinez@example.com	Male	45+
6	Joshua Griffin	6222398499	qramirez@example.net	female	45+
7	Francisco Gregory	7144985351	norrissteven@example.org	Male	36-45
8	Sarah Hernandez	9152941221	vgardner@example.net	female	45+
9	Thomas Mason	6477099008	vjackson@example.org	female	26-35
10	Mark Aguilar	1736162086	brookecannon@example.org	Male	26-35
11	Mary Rojas	7353737196	cynthiastewart@example.com	female	45+
12	Philip Greene	391823698	jasonmullen@example.org	female	36-45
13	Leslie Gutierrez	8334573871	matthewfaulkner@example....	Male	16-25
14	Jacob Farley	4588179961	elizabeth78@example.org	female	45+
15	Michael Irwin	4769814766	samantha27@example.com	female	45+
16	Sarah Roberts	4617117089	robinsonconnie@example.com	Male	16-25
17	Heather Burgess	683087759	paynejesse@example.com	female	45+
18	Robert Little	9960009862	michelleking@example.net	female	26-35
19	Kevin Curtis	3524681308	ashleeryan@example.com	Male	26-35
20	Joseph Williamson	2235121264	salazarangela@example.net	Male	45+

```sql
SELECT YEAR(pur_date) AS sales_year,
Round(SUM(price),0)AS total_sales
FROM offline_purchase
GROUP BY sales_year;
```

	sales_year	total_sales
▶	2021	89367
	2022	79738

ANNUAL SALES ANALYSIS – OFFLINE

```sql
SELECT YEAR(pur_date) AS sales_year,
Round(SUM(price),0)AS total_sales
FROM online_purchase
GROUP BY sales_year;
```

| sales_year	total_sales
2021	89950
2022	123486

ANNUAL SALES ANALYSIS – ONLINE

```sql
SELECT YEAR(pur_date) AS sales_year,
 round(SUM(price),0) AS total_sales
FROM offline_purchase
GROUP BY sales_year
LIMIT 1;
```

sales_year	total_sales
2021	89367

TOP REVENUE YEAR – OFFLINE

```sql
SELECT YEAR(pur_date) AS sales_year,
round(SUM(price),0) AS total_sales
FROM online_purchase
GROUP BY sales_year
LIMIT 1;
```

Result Grid | Filter Rows:

	sales_year	total_sales
▶	2021	89950

TOP REVENUE YEAR – ONLINE

TOP 5 REGION SALES – OFFLINE

```sql
SELECT region, round(SUM(price),0)
  AS total_sales
FROM offline_purchase
GROUP BY region
ORDER BY total_sales DESC
LIMIT 5;
```

region	total_sales
electronic city	25473
jp nagar	22710
bannerghatta	20143
koramangala	16419
malleshwaram	15214
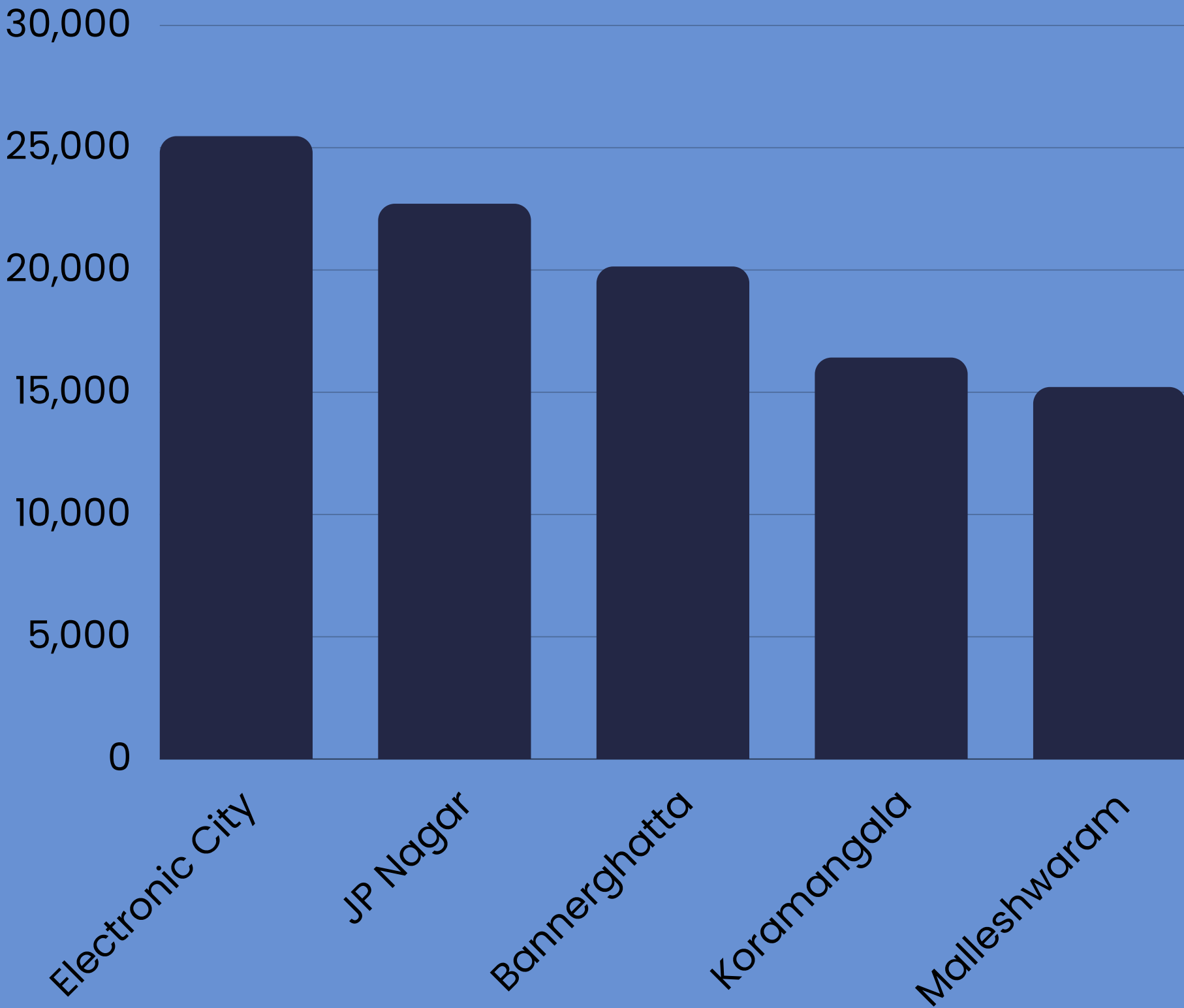
TOP 5 REGION SALES – ONLINE

```sql
SELECT region, round(SUM(price),0)
 AS total_sales
FROM online_purchase
GROUP BY region
ORDER BY total_sales DESC
LIMIT 5;
```

region	total_sales
bellandhur	43636
hebbal	34833
jp nagar	34309
btm layout	34222
marathahalli	33184
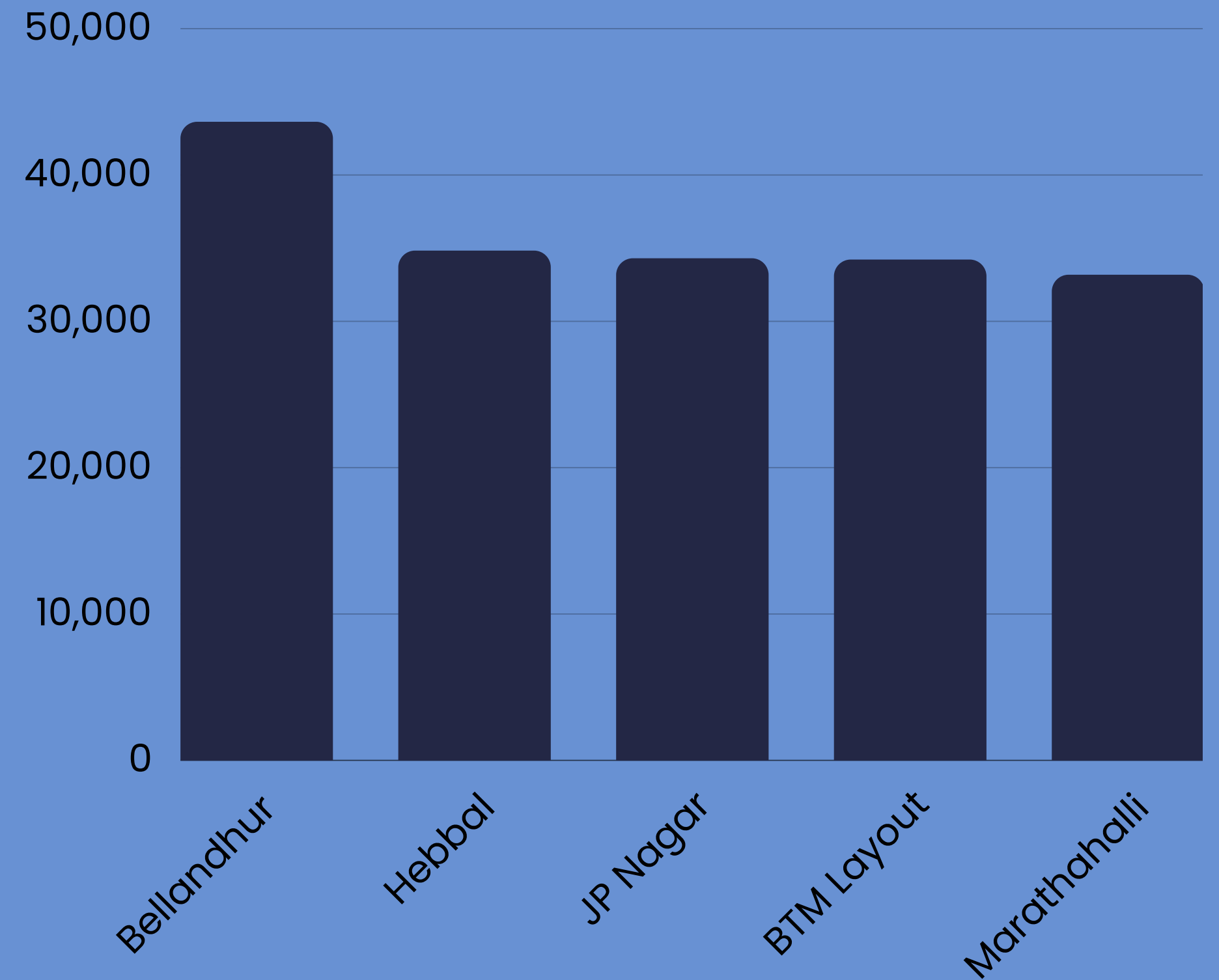
AREA WISE BEST SELLERS – OFFLINE

```sql
SELECT region, product_type, total_sales
FROM (
    SELECT region, product_type, round(SUM(price),0) AS total_sales,
            ROW_NUMBER() OVER (PARTITION BY region ORDER BY SUM(price) DESC) AS rn
    FROM offline_purchase
    GROUP BY region, product_type
) ranked
WHERE rn = 1;
```

region	product_type	total_sales
bannerghatta	electronics	12416
bellandur	clothing	7698
btm layout	home&decores	166
electronic city	electronics	11092
hebbal	clothing	4314
hsr layout	home&decores	185
indiranagar	clothing	4260
jayanagar	home&decores	4556
jp nagar	electronics	18040
koramangala	beauty	6854
malleshwaram	electronics	15066
marathahalli	electronics	8859
rajajinagar	beauty	7156
whitefield	home&decores	2708

AREA WISE BEST SELLERS – ONLINE

```sql
SELECT region, product_type, total_sales
FROM (
    SELECT region, product_type, round(SUM(price),0) AS total_sales,
            ROW_NUMBER() OVER (PARTITION BY region ORDER BY SUM(price) DESC) AS rn
    FROM offline_purchase
    GROUP BY region, product_type
) ranked
WHERE rn = 1;
```

region	product_type	total_sales
bellandhur	clothing	8046
btm layout	electronics	10864
electronic city	electronics	3650
hebbal	appliances	7790
jp nagar	clothing	8044
marathahalli	clothing	11898
whitefield	accessories	5655

LEADING PRODUCT AND REGION – OFFLINE

```sql
SELECT product_type, region, SUM(price)
AS total_sales
FROM offLINE_purchase
GROUP BY product, product_type, region
ORDER BY total_sales DESC
limit 1;
```

Result Grid | Filter Rows:

product_type	region	total_sales
electronics	jp nagar	18040

PRODUCT ELECTRONICS

REGION JP NAGAR

TOTAL SALES 18040

LEADING PRODUCT AND REGION – ONLINE

```sql
SELECT product, region, SUM(price)
AS total_sales
FROM online_purchase
GROUP BY product, region
ORDER BY total_sales DESC
limit 1;
```

| product	region	total_sales
coffee maker	hebbal	4777.5

PRODUCT COFFEE MAKER

REGION HEBBAL

TOTAL SALES 4777.5

PRODUCT CATEGORY SALES BREAKDOWN – OFFLINE

```sql
SELECT product_type, round(SUM(price),0)
AS total_sales
FROM offline_purchase
GROUP BY product_type
ORDER BY total_sales DESC;
```
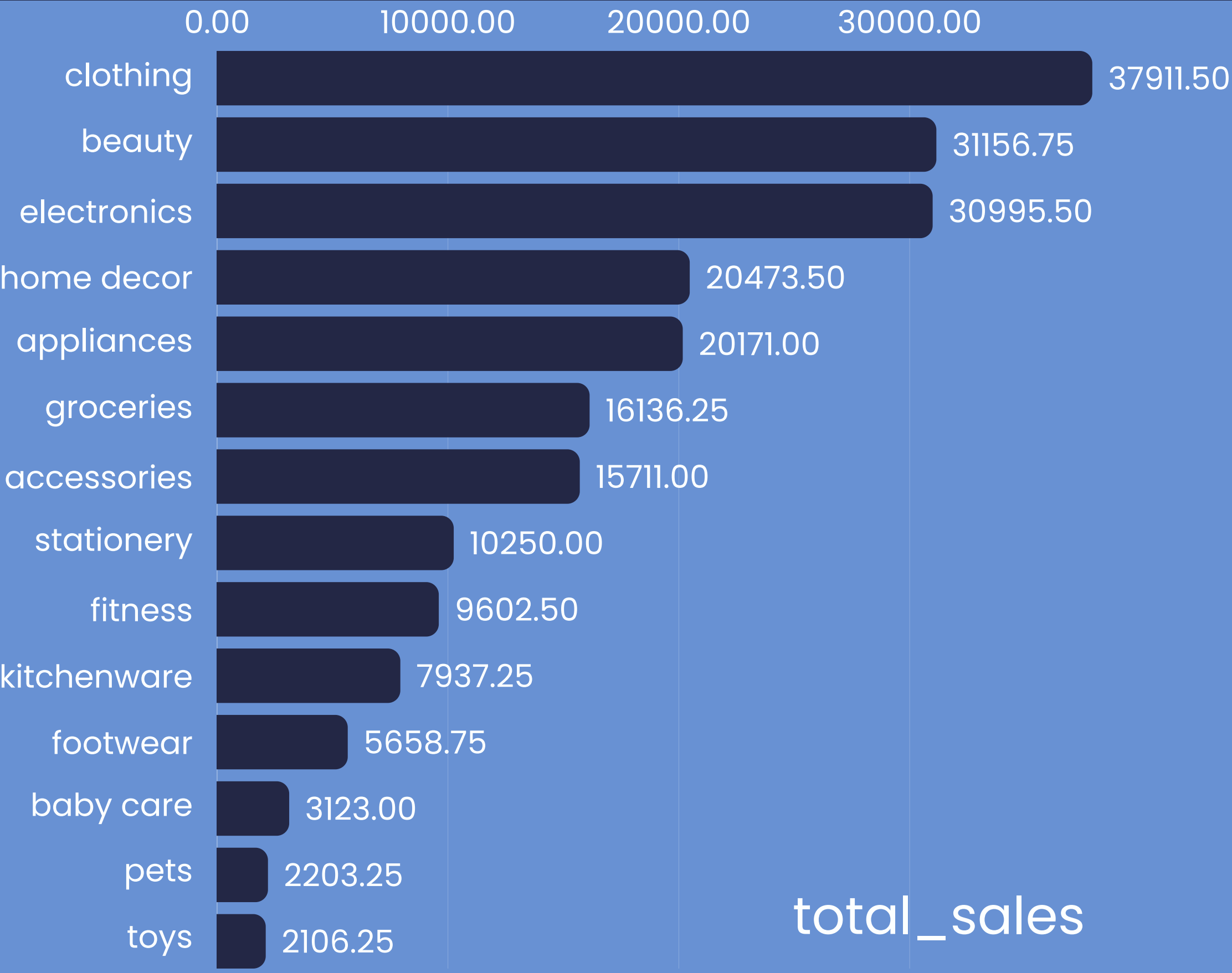
Result Grid | Filter Rows:

product_type	total_sales
electronics	73210
home&decores	27021
clothing	23565
groceries	22712
beauty	22596

Beauty 13.4%

Groceries 13.4%

Electronics 43.3%

Clothing 13.9%

home and decors 16%
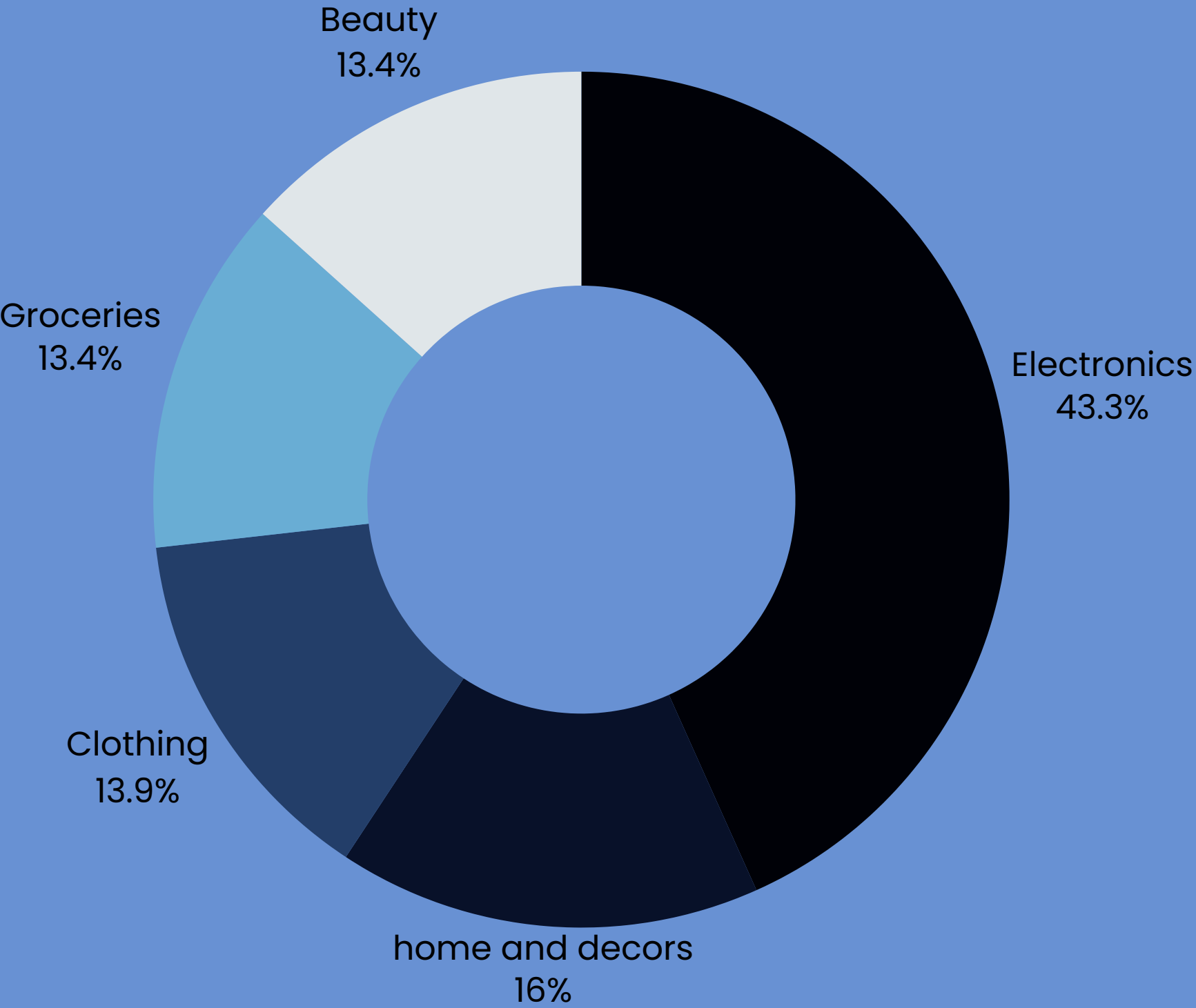
PRODUCT CATEGORY SALES BREAKDOWN – ONLINE

```sql
SELECT product_type, SUM(price) AS total_sales
FROM online_purchase
GROUP BY product_type
ORDER BY total_sales DESC;
```

product_type	total_sales
clothing	37911.5
beauty	31156.75
electronics	30995.5
home decor	20473.5
appliances	20171
groceries	16136.25
accessories	15711
stationery	10250
fitness	9602.5
kitchenware	7937.25

| category	total_sales
clothing	37911.50
beauty	31156.75
electronics	30995.50
home decor	20473.50
appliances	20171.00
groceries	16136.25
accessories	15711.00
stationery	10250.00
fitness	9602.50
kitchenware	7937.25
footwear	5658.75
baby care	3123.00
pets	2203.25
toys	2106.25

total_sales

CORRELATION ANALYSIS FOR CUSTOMER FEEDBACK – OFFLINE

```sql
SELECT p.region, p.product_type,
  COUNT(f.customer_feedback) AS good_feedback_count
FROM offline_purchase p
JOIN offline_feedback f ON p.c_id = f.c_id
WHERE f.customer_feedback = 'good'
GROUP BY p.region, p.product_type
ORDER BY good_feedback_count DESC;
```

| region	product_type	good_feedback_count
rajajinagar	beauty	16
koramangala	beauty	14
malleshwaram	electronics	13
electronic city	groceries	13
bellandur	clothing	13
marathahalli	electronics	10
indiranagar	groceries	8
koramangala	clothing	8
bannerghatta	beauty	7
bannerghatta	electronics	7
hebbal	clothing	7

Sum of good_feedback_count by product_type
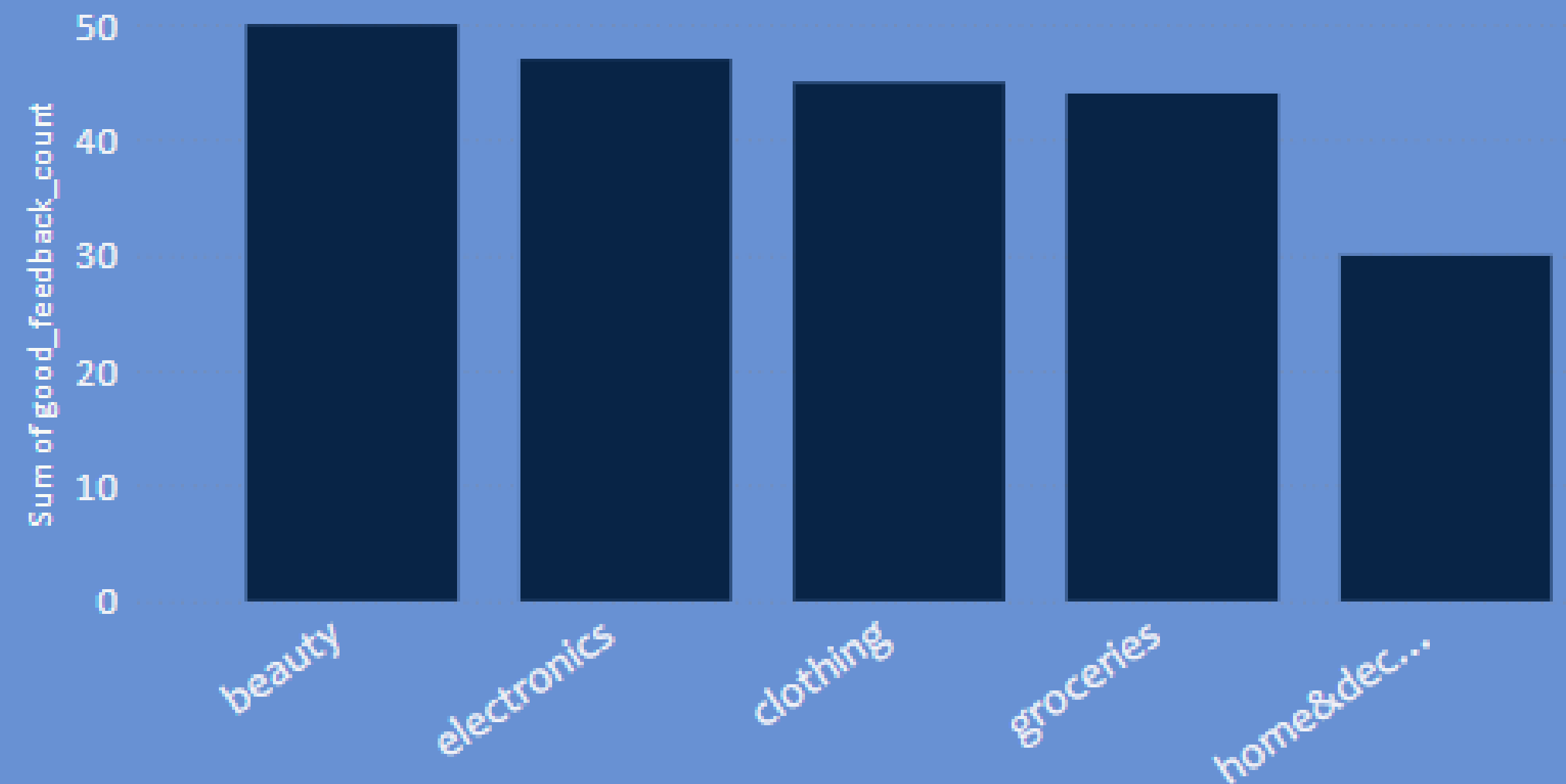
CORRELATION ANALYSIS FOR CUSTOMER FEEDBACK – ONLINE

```sql
SELECT p.region, p.product_type, COUNT(f.c_feedback)
AS good_feedback_count
FROM online_purchase p
JOIN online_feedback f ON p.c_id = f.c_id
WHERE f.c_feedback = 'good'
GROUP BY p.region, p.product_type
ORDER BY good_feedback_count DESC;
```

region	product_type	good_feedback_count
marathahalli	clothing	12
btm layout	beauty	10
btm layout	electronics	9
bellandhur	stationery	8
hebbal	appliances	8
whitefield	accessories	7
whitefield	appliances	7
bellandhur	beauty	7
hebbal	beauty	6
bellandhur	home decor	6
hebbal	clothing	6
hebbal	home decor	6
bellandhur	clothing	6
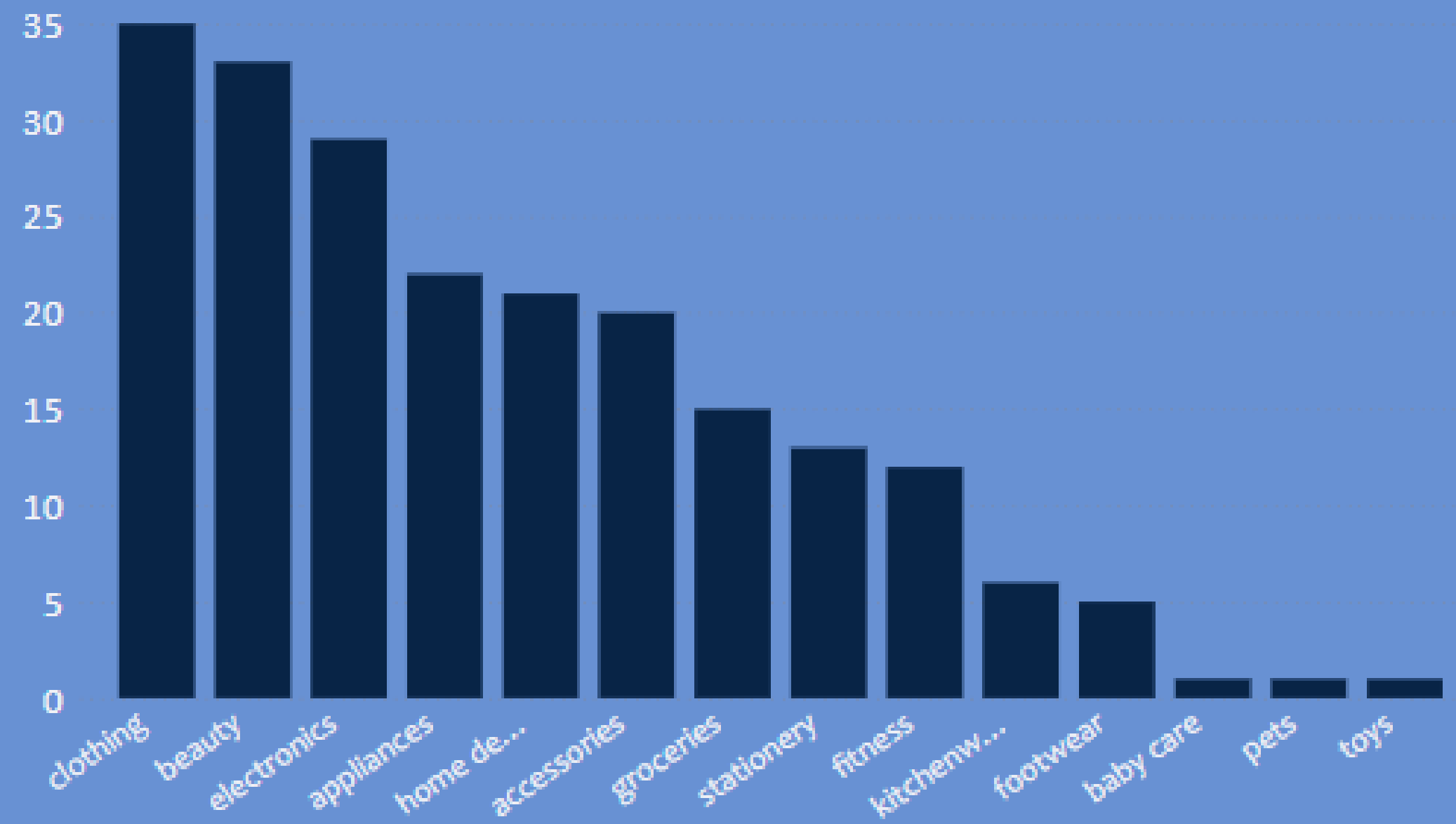
AGE ANALYSIS – OFFLINE

```sql
SELECT age, COUNT(offline_purchase.c_id)
 AS purchase_count
FROM offline_customers
JOIN offline_purchase ON
offline_customers.c_id = offline_purchase.c_id
GROUP BY age
ORDER BY purchase_count DESC;
```
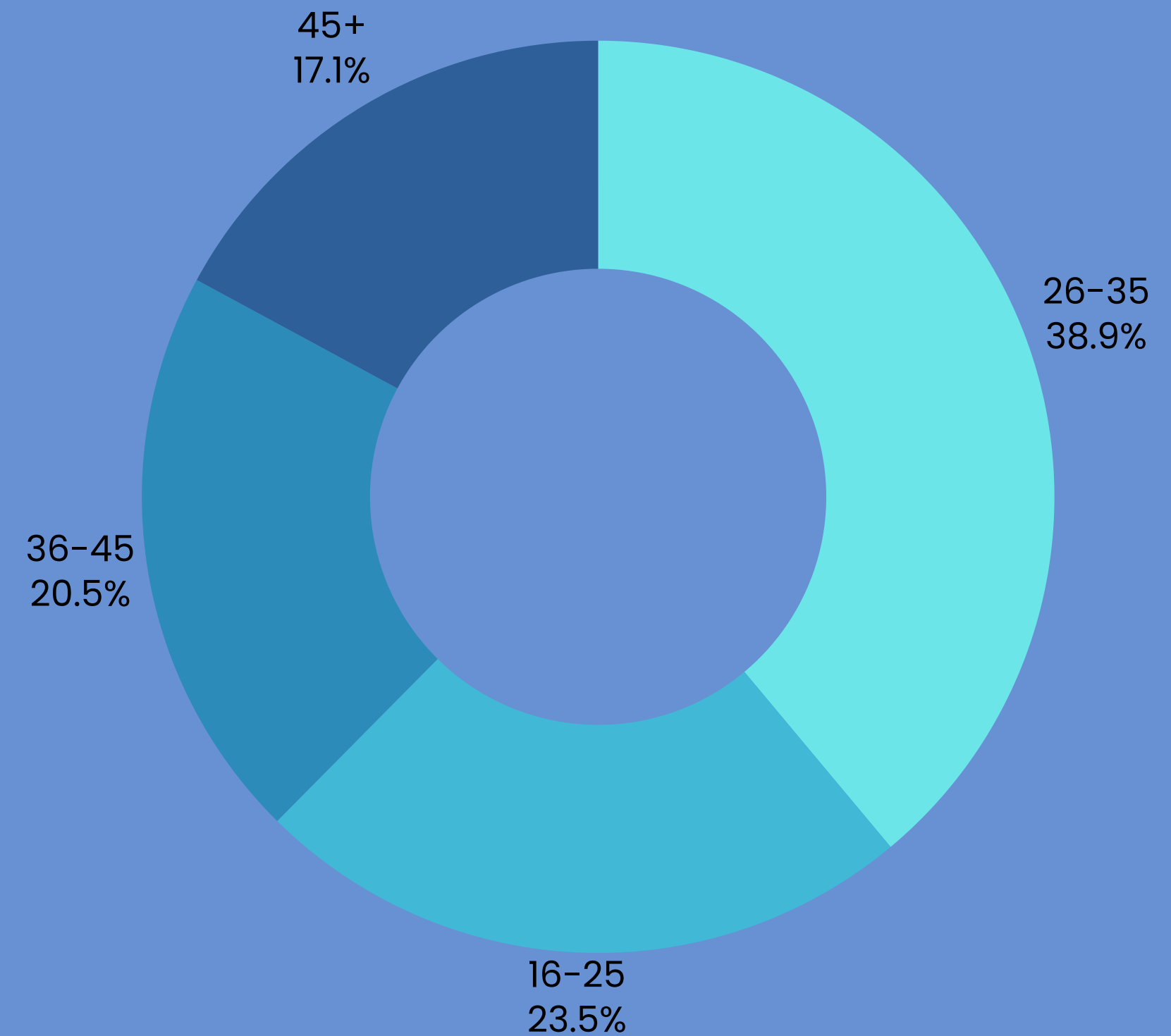
age	purchase_count
26-35	176
16-25	96
36-45	17
45+	10
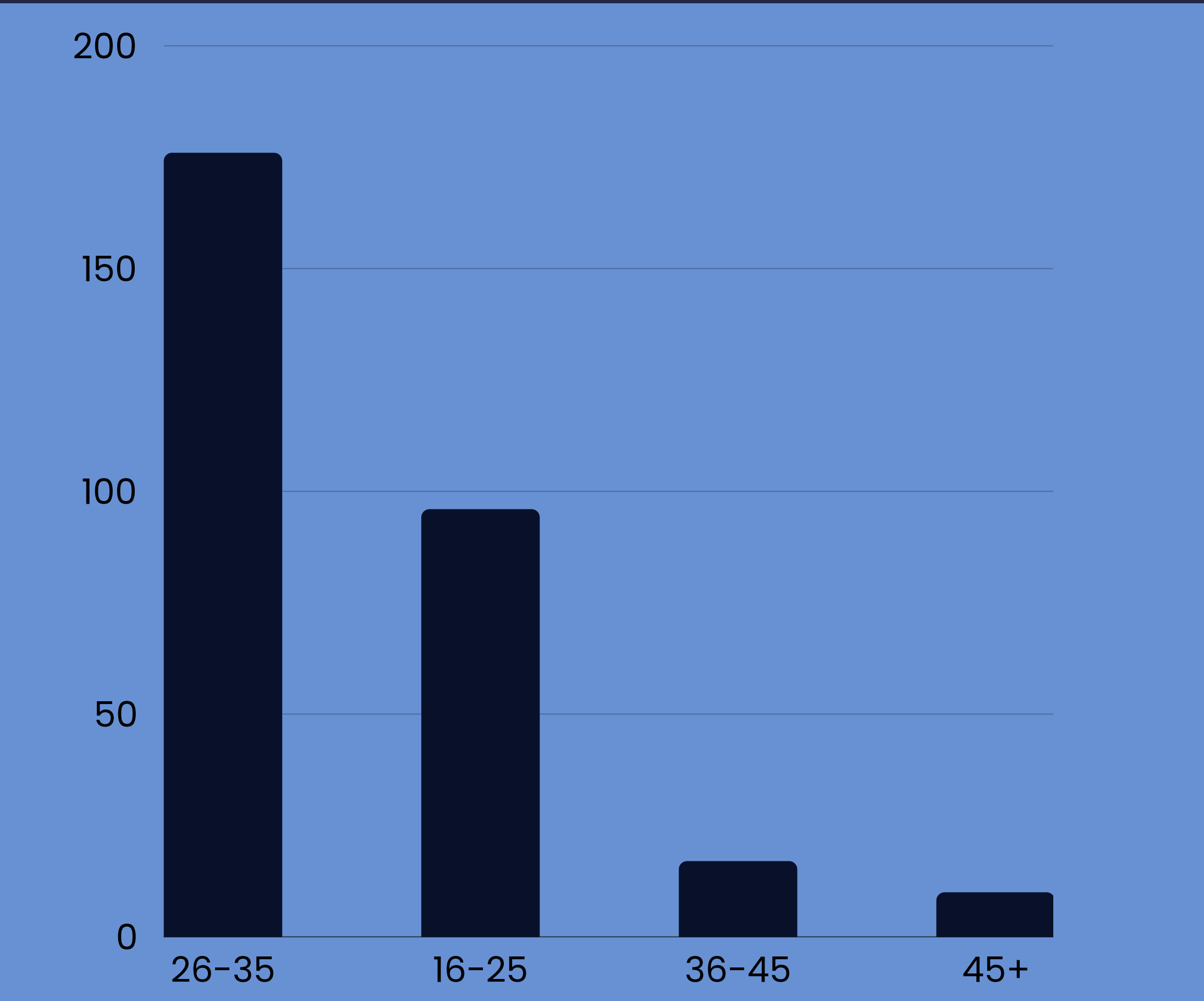
AGE ANALYSIS – ONLINE

```sql
SELECT age_group, COUNT(online_purchase.c_id)
 AS purchase_count
FROM online_customers
JOIN online_purchase ON online_customers.c_id =
online_purchase.c_id
GROUP BY age_group
ORDER BY purchase_count DESC;
```

age_group	purchase_count
26-35	116
16-25	70
36-45	61
45+	51

45+
17.1%

26–35
38.9%

36–45
20.5%

16–25
23.5%

Thank You!