

BUSINESS EXPANSION DATA ANALYSIS

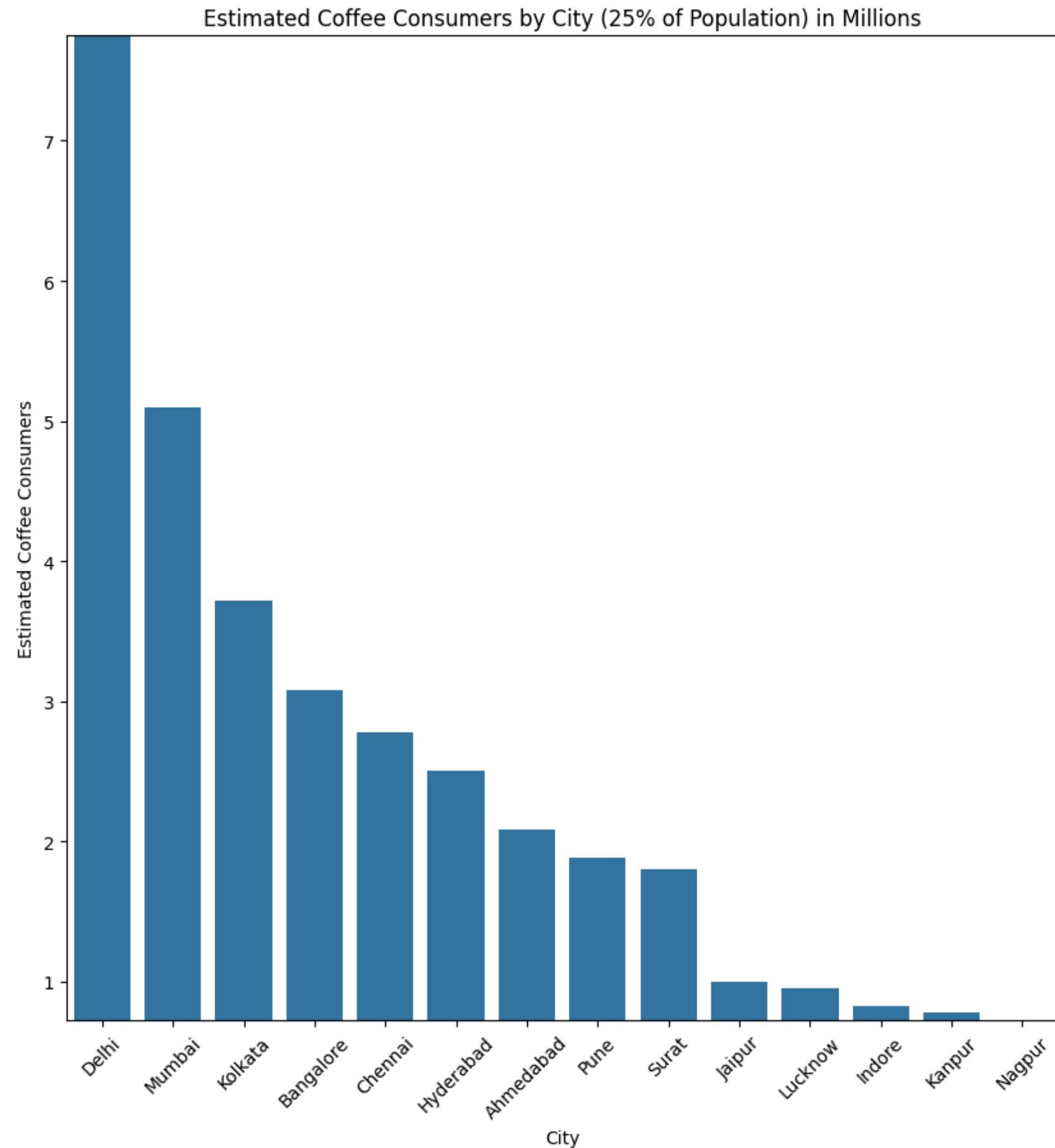
OVERVIEW

The goal of this project is to analyze the sales data of Monday Coffee, a company that has been selling its products online since January 2023, and to recommend the top three major cities in India for opening new coffee shop locations based on consumer demand and sales performance.

```
/*
Q.1 Coffee Consumers Count
How many people in each city are estimated to consume coffee,
given that 25% of the population does?
*/
```

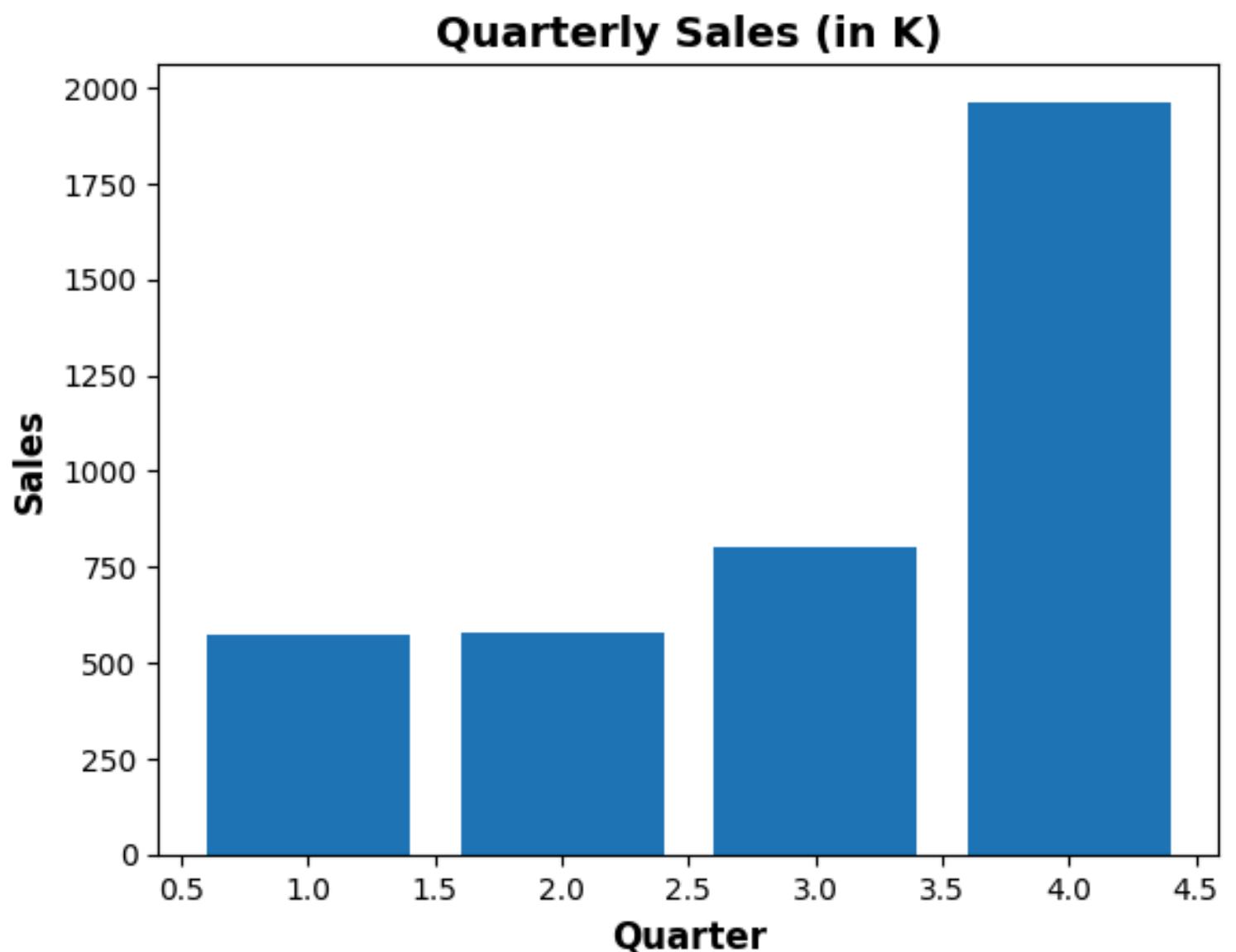
```
SELECT
city_name, (0.25*population) AS coffee_consumer
FROM city;
```

city_name	coffee_consumer
Bangalore	3075000
Chennai	2775000
Pune	1875000
Jaipur	1000000
Delhi	7750000
Mumbai	5100000
Hyderabad	2500000
Ahmedabad	2075000
Kolkata	3725000
Surat	1800000
Lucknow	950000
Kanpur	775000
Nagpur	725000
Indore	825000



```
/*
 Total Revenue from Coffee Sales
 What is the total revenue generated from coffee sales
 across all cities in the last quarter of 2023?
*/
SELECT QUARTER(sale_date) as quarter, SUM(total) AS total_revenue
FROM sales
WHERE YEAR(sale_date) = 2023
GROUP BY QUARTER(sale_date)
ORDER BY 1;
```

quarter	total_revenue
1	574820
2	579570
3	802610
4	1963300

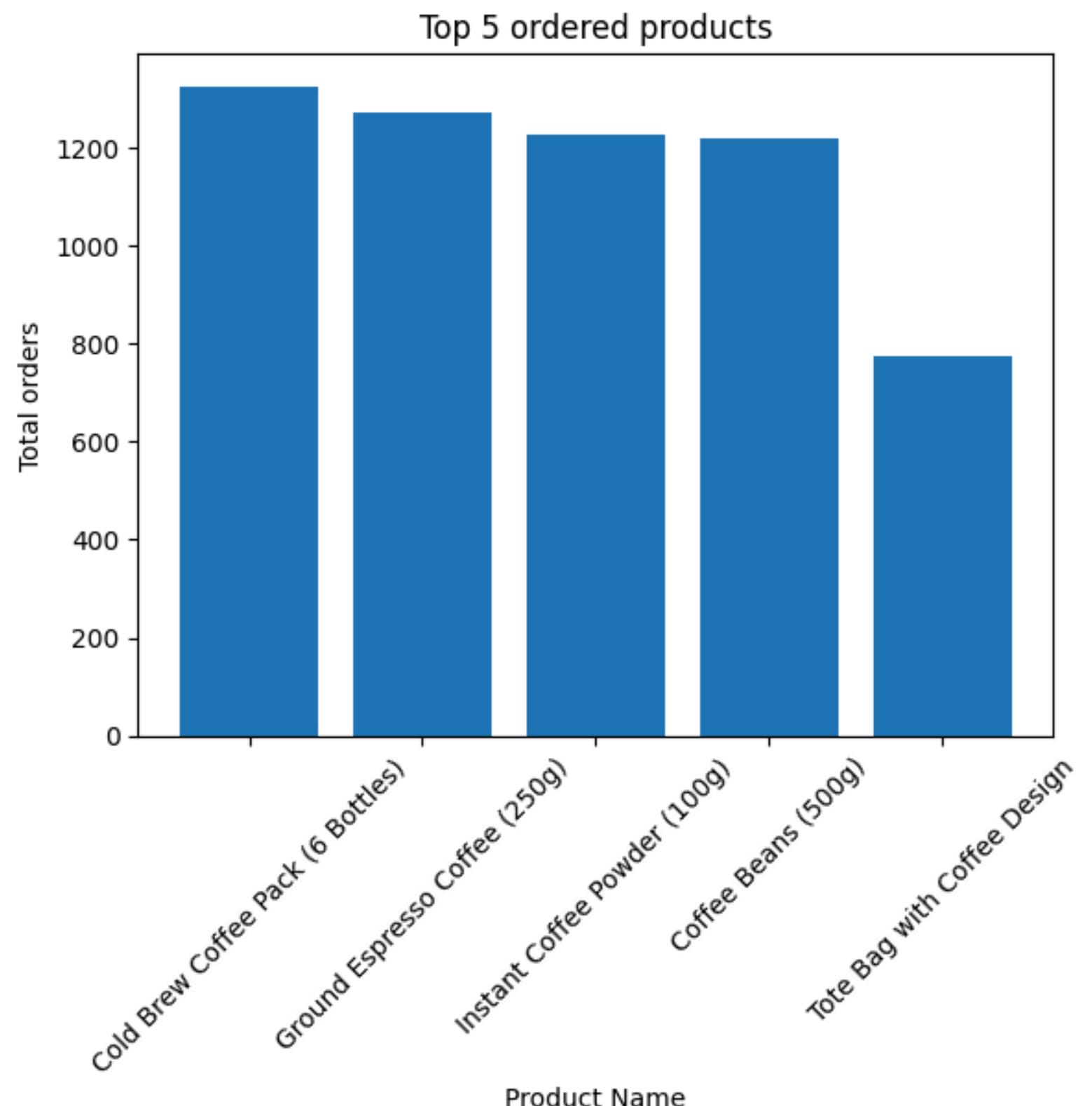


```

/*
-- Sales Count for Each Product
-- How many units of each coffee product have been sold?
*/
SELECT p.product_name,COUNT(s.sale_id) AS total_order
FROM products p
LEFT JOIN sales s ON s.product_id = p.product_id
GROUP BY 1
ORDER BY 2 DESC;

```

product_name	total_order
Cold Brew Coffee Pack (6 Bottles)	1326
Ground Espresso Coffee (250g)	1271
Instant Coffee Powder (100g)	1226
Coffee Beans (500g)	1218
Tote Bag with Coffee Design	776
Vanilla Coffee Syrup (250ml)	762
Cold Brew Concentrate (500ml)	312
Organic Green Coffee Beans (5...	307
Coffee Art Print	296
Flavored Coffee Pods (Pack of 10)	295
Coffee Drip Bags (10 Bags)	289
Insulated Travel Mug	273
Coffee Gift Hamper	270



```

/*
-- Average Sales Amount per City
-- What is the average sales amount per customer in each city?
*/

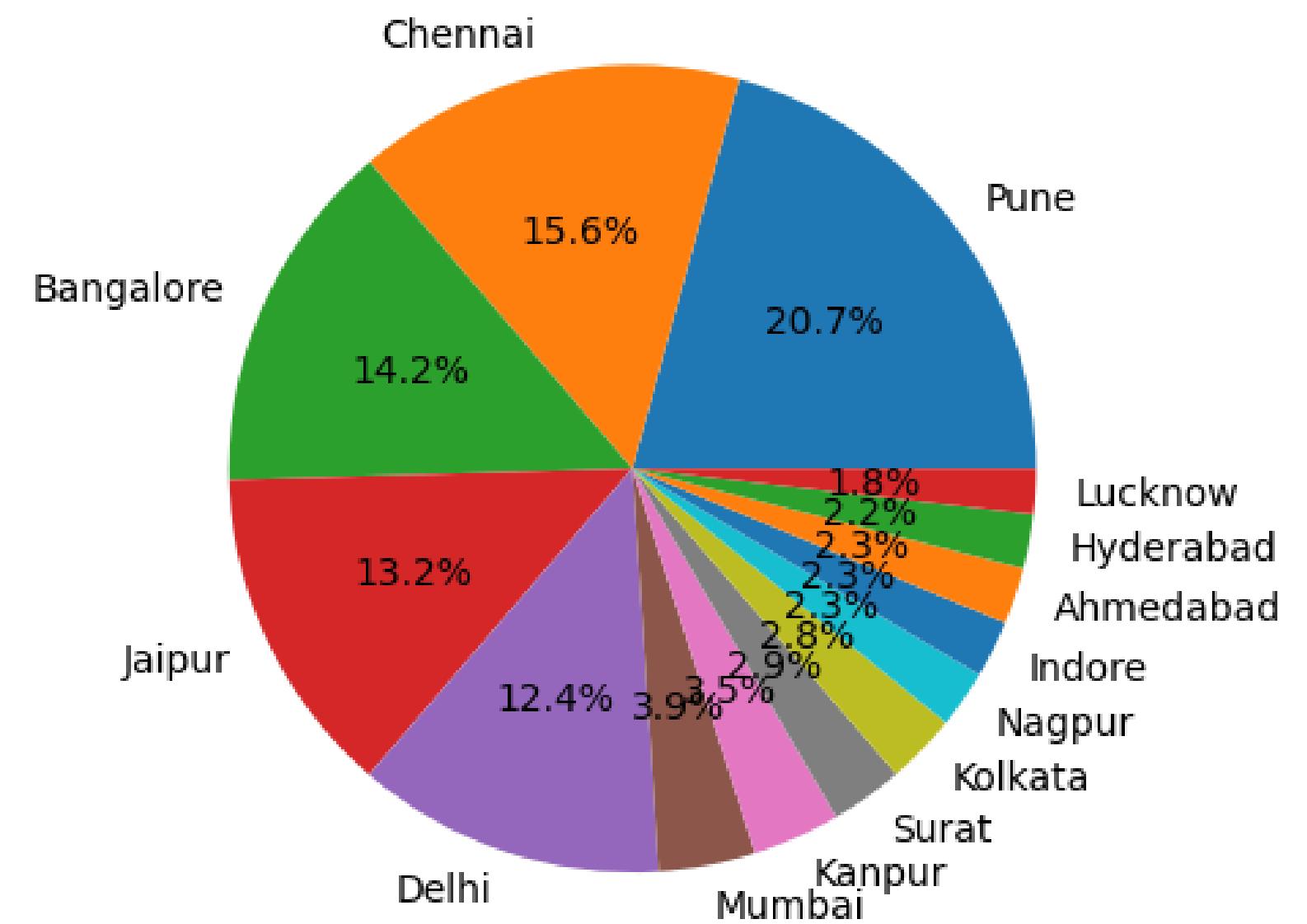
```

```

SELECT c.city_name, SUM(s.total) as total_sales,
COUNT(DISTINCT s.customer_id) as total_cx,
ROUND((SUM(s.total)/COUNT(DISTINCT s.customer_id)),2) as avg_sale_cx
FROM city c
JOIN customers cc ON cc.city_id = c.city_id
JOIN sales s ON s.customer_id = cc.customer_id
GROUP BY 1
ORDER BY 2 DESC;

```

city_name	total_sales	total_cx	avg_sale_cx
Pune	1258290	52	24197.88
Chennai	944120	42	22479.05
Bangalore	860110	39	22054.1
Jaipur	803450	69	11644.2
Delhi	750420	68	11035.59
Mumbai	235000	27	8703.7
Kanpur	213550	35	6101.43
Surat	176540	27	6538.52
Kolkata	171460	28	6123.57
Nagpur	140050	24	5835.42
Indore	138590	21	6599.52
Ahmeda...	137690	23	5986.52
Hyderabad	131520	21	6262.86
Lucknow	109400	21	5209.52



```

/*
-- City Population and Coffee Consumers (25%)
-- Provide a list of cities along with their populations and estimated coffee consumers.
*/
WITH city_table AS
(SELECT city_name, ROUND((population * 0.25)/1000000, 2) as coffee_consumers FROM city
),
customers_table AS
(SELECT ci.city_name,COUNT(DISTINCT c.customer_id) as unique(cx) FROM sales as s
JOIN customers as c ON c.customer_id = s.customer_id
JOIN city as ci ON ci.city_id = c.city_id
GROUP BY 1
)
SELECT
customers_table.city_name,
city_table.coffee_consumers as coffee_consumer_in_millions,
customers_table.unique(cx)
FROM city_table
JOIN customers_table ON city_table.city_name = customers_table.city_name;

```

	city_name	coffee_consumer_in_millions	unique(cx)
►	Ahmedabad	2.08	23
	Bangalore	3.08	39
	Chennai	2.78	42
	Delhi	7.75	68
	Hyderabad	2.5	21
	Indore	0.82	21
	Jaipur	1	69
	Kanpur	0.78	35
	Kolkata	3.72	28
	Lucknow	0.95	21
	Mumbai	5.1	27
	Nagpur	0.72	24
	Pune	1.88	52
	Surat	1.8	27

```

/*
-- Top Selling Products by City
-- What are the top 3 selling products in each city based on sales volume?
*/

SELECT * FROM(
SELECT ci.city_name,p.product_name,SUM(s.total) AS total_sales,
DENSE_RANK() OVER(PARTITION BY ci.city_name ORDER BY SUM(s.total) DESC) AS dnk
FROM sales s
JOIN products p ON p.product_id = s.product_id
JOIN customers c ON c.customer_id = s.customer_id
JOIN city ci ON ci.city_id = c.city_id
GROUP BY 1,2
ORDER BY 1) AS t1
WHERE dnk<=3;

```

city_name	product_name	total_sales	dnk
Ahmedabad	Cold Brew Coffee Pack (6 Bottles)	36000	1
Ahmedabad	Coffee Beans (500g)	21000	2
Ahmedabad	Coffee Gift Hamper	14400	3
Bangalore	Cold Brew Coffee Pack (6 Bottles)	177300	1
Bangalore	Coffee Beans (500g)	84000	2
Bangalore	Coffee Gift Hamper	68400	3
Chennai	Cold Brew Coffee Pack (6 Bottles)	172800	1
Chennai	Coffee Beans (500g)	108600	2
Chennai	Tote Bag with Coffee Design	69500	3
Delhi	Cold Brew Coffee Pack (6 Bottles)	140400	1
Delhi	Coffee Beans (500g)	96600	2
Delhi	Ground Espresso Coffee (250g)	64050	3
Hyderabad	Cold Brew Coffee Pack (6 Bottles)	25200	1
Hyderabad	Coffee Beans (500g)	15600	2
Hyderabad	Coffee Gift Hamper	12600	3

```

/*
-- Customer Segmentation by City
-- How many unique customers are there in each city
who have purchased coffee products?
*/

```

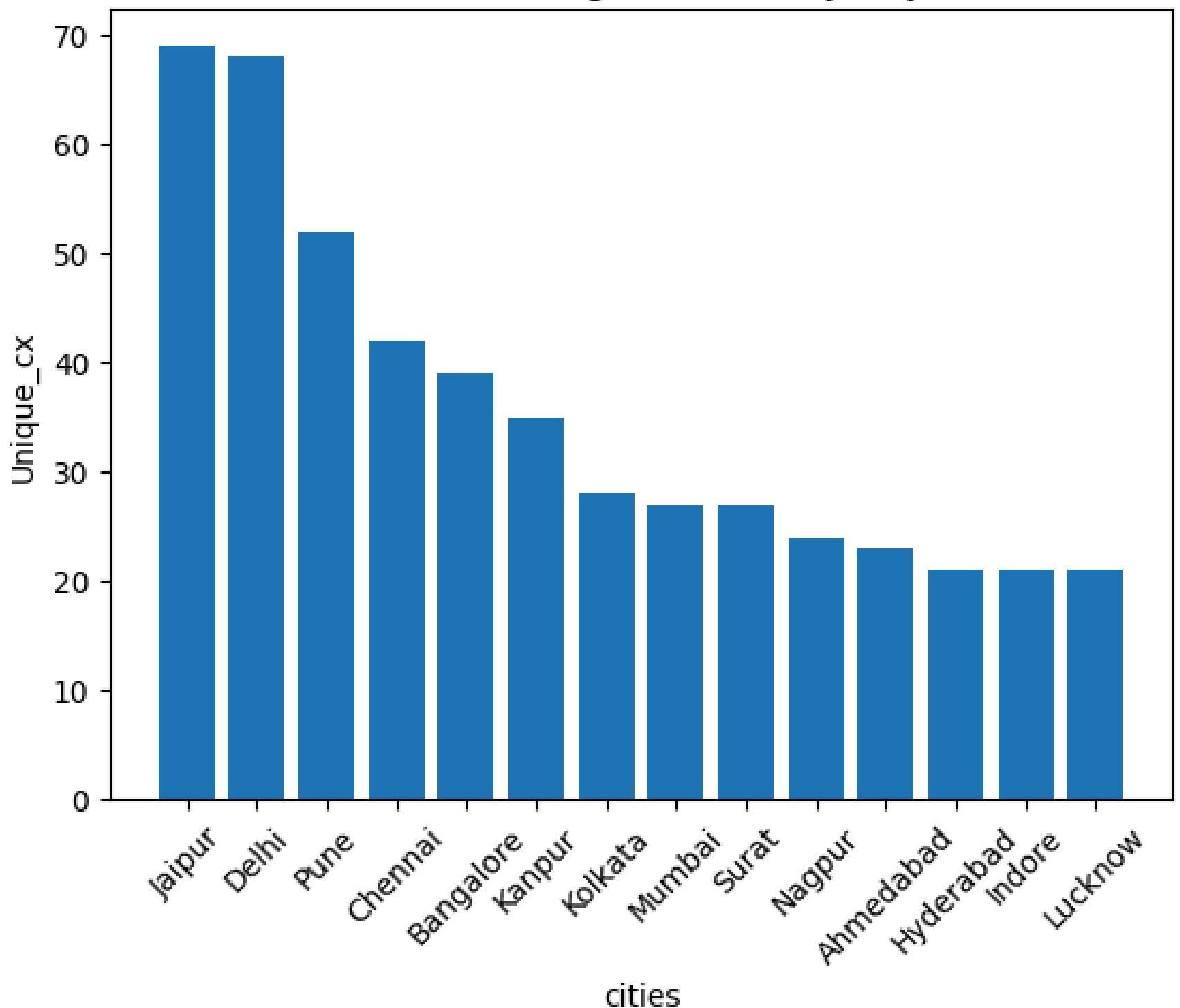
```

SELECT ci.city_name, COUNT(DISTINCT c.customer_id) as unique_cx
FROM sales s
JOIN customers c ON c.customer_id = s.customer_id
JOIN city ci ON ci.city_id = c.city_id
GROUP BY 1
ORDER BY 2 DESC;

```

city_name	unique_cx
Jaipur	69
Delhi	68
Pune	52
Chennai	42
Bangalore	39
Kanpur	35
Kolkata	28
Mumbai	27
Surat	27
Nagpur	24
Ahmedab...	23
Hyderabad	21
Indore	21
Lucknow	21

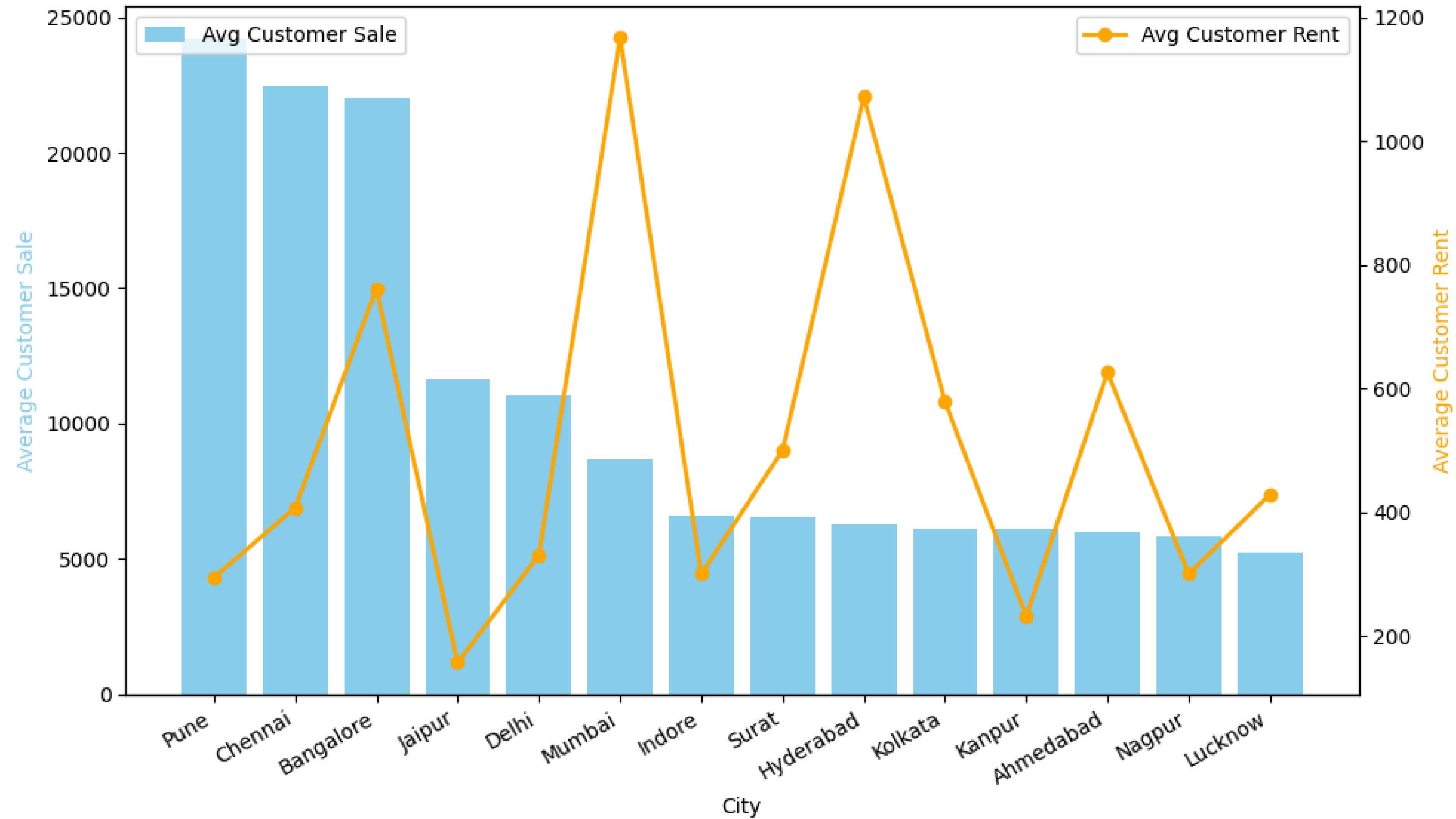
Customer Segmentation by City



```
/*
-- Average Sale vs Rent
-- Find each city and their average sale per customer and avg rent per customer
*/
WITH city_sale AS( SELECT ci.city_name, COUNT(DISTINCT s.customer_id) AS unique_cx,
ROUND((SUM(s.total)/COUNT(DISTINCT s.customer_id)),2) AS avg_sale_pr_cx
FROM sales s
JOIN customers c ON c.customer_id = s.customer_id
JOIN city ci ON ci.city_id = c.city_id
GROUP BY ci.city_name)

SELECT c.city_name,c.estimated_rent,cs.unique_cx,cs.avg_sale_pr_cx,
ROUND(c.estimated_rent/cs.unique_cx,2) AS avg_rent_per_cx
FROM city c
JOIN city_sale cs ON cs.city_name = c.city_name
ORDER BY 4 DESC;
```

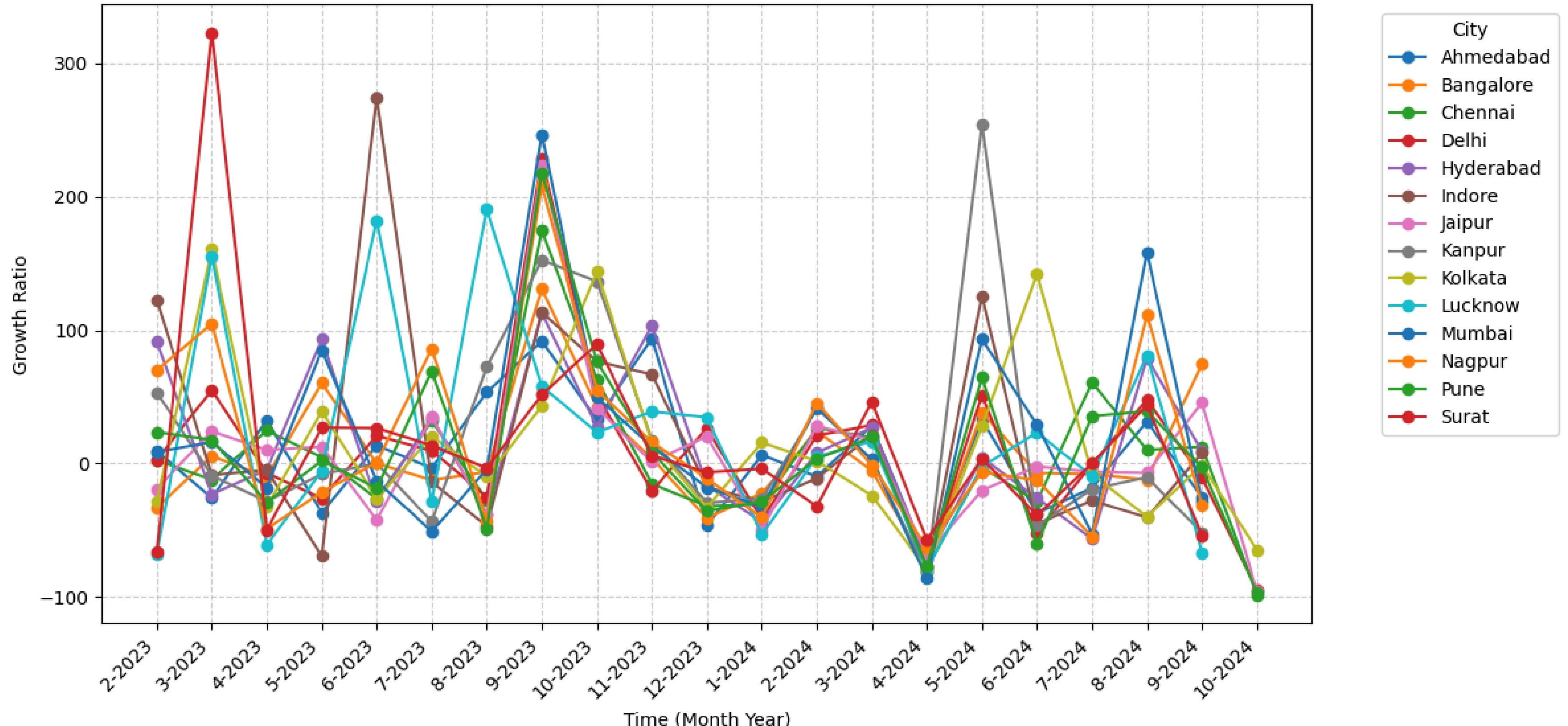
Average Customer Sale and Rent by City



```
-- Monthly Sales Growth
-- Sales growth rate: Calculate the percentage growth (or decline) in sales over different time periods (monthly)
-- by each city
*/
WITH monthly_sales AS
(SELECT ci.city_name,MONTH(sale_date) as month,YEAR(sale_date) as YEAR,SUM(s.total) as total_sale
FROM sales as s
JOIN customers as c ON c.customer_id = s.customer_id
JOIN city as ci ON ci.city_id = c.city_id
GROUP BY 1, 2, 3
ORDER BY 1, 3, 2
),
growth_ratio AS
(SELECT city_name,month,year,total_sale as cr_month_sale,
LAG(total_sale, 1) OVER(PARTITION BY city_name ORDER BY year, month) as last_month_sale
FROM monthly_sales)

SELECT city_name,month,year,cr_month_sale,last_month_sale,
ROUND((cr_month_sale-last_month_sale)/last_month_sale* 100, 2) as growth_ratio
FROM growth_ratio
WHERE last_month_sale IS NOT NULL;
```

Growth Ratio of Shop Across Cities Over Time



RECOMMENDATION

City: Pune

1. Average rent per customer is very low.
2. Highest total revenue.
3. Average sales per customer is also high.

City 2: Delhi

1. Highest estimated coffee consumers at 7.7 million.
2. Highest total number of customers, which is 68.
3. Average rent per customer is 330 (still under 500).

City 3: Jaipur

1. Highest number of customers, which is 69.
2. Average rent per customer is very low at 156.
3. Average sales per customer is better at 11.6k.

THANK YOU

GITHUB LINK