

Monday Coffee: SQL-Based Market Analysis for Retail Expansion

Overview

This project analyzes the online sales data for "Monday Coffee" since January 2023. The primary objective is to leverage this data to identify the top three most promising cities in India for opening new physical coffee shops. The analysis delves into sales performance, customer demographics, and market potential to provide data-driven recommendations for strategic expansion.

Business Problem

Monday Coffee has been operating online since the beginning of 2023 and is now looking to expand into physical retail. The company needs to determine which Indian cities offer the best market opportunity. This analysis aims to answer that question by examining sales data to recommend three cities for new store locations based on consumer demand and financial viability.

Data Source

The analysis is based on a relational database consisting of four main tables:

- **city:** Contains information about cities, including population and estimated rent.
- **products:** Details about the coffee products offered by Monday Coffee.
- **customers:** Stores information about individual customers and their associated city.
- **sales:** Contains transactional data, including customer ID, product ID, sale date, and total amount.

Methodology

The analysis was conducted entirely using SQL to query the database and answer key business questions. The approach involved several steps:

1. **Data Exploration:** Initial queries were run to understand the structure and content of the tables.
2. **Answering Key Questions:** A series of targeted SQL queries were developed to address specific questions about the business. Advanced SQL techniques like **CTEs (Common Table Expressions)**, **Window Functions** (`DENSE_RANK()`, `LAG()`), and **Joins** were used to

extract meaningful insights.

3. **Synthesis & Recommendation:** The results from the queries were synthesized to build a final market potential analysis, which formed the basis for the final recommendations.

Key Questions Addressed:

- **Coffee Consumers Count:** How many people in each city are estimated to consume coffee?
- **Total Revenue from Coffee Sales:** What was the total revenue in the last quarter of 2023?
- **Sales Count for Each Product:** How many units of each coffee product have been sold?
- **Average Sales Amount per City:** What is the average sales amount per customer in each city?
- **City Population and Coffee Consumers:** What is the relationship between a city's population and its number of coffee consumers?
- **Top Selling Products by City:** What are the top 3 selling products in each city by sales volume?
- **Customer Segmentation by City:** How many unique customers are there in each city?
- **Average Sale vs. Rent:** What is the average sale and average rent per customer in each city?
- **Monthly Sales Growth:** What is the month-over-month sales growth rate for each city?
- **Market Potential Analysis:** Which cities show the highest potential based on sales, customer base, and estimated coffee consumers?

Technologies Used

- **Database:** PostgreSQL
- **Language:** SQL

Key Findings

- **Top Revenue Generator:** Pune stands out with the highest total revenue among all cities.
- **Largest Potential Market:** Delhi has the highest number of estimated coffee consumers (7.7 million), indicating a massive untapped market.
- **Strong Customer Base:** Jaipur and Delhi have the largest number of unique customers, with 69 and 68 respectively, showing strong existing engagement.
- **High Customer Value:** Pune also has a high average sales value per

customer, making it a lucrative market.

- **Cost-Effective Markets:** Cities like Pune and Jaipur offer an attractive combination of high sales potential and low average rent per customer, suggesting better profitability.

Result & Recommendations 🏆

Based on the analysis, the following three cities are recommended for opening new Monday Coffee locations:

City 1: Pune

Pune is the top recommendation due to its outstanding financial performance and favorable market conditions.

- 🏆 **Highest Total Revenue:** It generated more sales revenue than any other city.
- 💰 **High Average Sales:** Customers in Pune spend more on average, indicating strong purchasing power.
- 📉 **Low Rent:** The average rent per customer is very low, which translates to lower operational costs and higher potential profit margins.

City 2: Delhi

Delhi is recommended for its immense market size and growth potential.

- 👤 **Largest Potential Market:** With an estimated 7.7 million coffee consumers, it has the largest potential customer base.
- 📈 **Strong Existing Customer Base:** It already has one of the highest numbers of active customers (68).
- 🏠 **Manageable Rent:** The average rent per customer is moderate (\$330), making it a viable market for expansion.

City 3: Jaipur

Jaipur is a strong candidate due to its engaged customer base and cost-effectiveness.

- 🏆 **Highest Customer Count:** It boasts the highest number of unique customers (69), indicating a loyal and established market.
- 💵 **Very Low Rent:** The average rent per customer is extremely low (\$156), maximizing profitability.
- ☕ **Solid Sales Performance:** The average sales value per customer is healthy, ensuring a steady revenue stream.