

Music Store Data Analysis

Extracting business insights from a relational music store database using SQL to analyze customer behavior, revenue trends, and music preferences.



Transforming Data into Business Intelligence



This project analyzes a comprehensive music store database using advanced SQL techniques including joins, subqueries, CTEs, and window functions.

The analysis spans 11 relational tables covering music catalog data, customer demographics, sales transactions, and music classifications to identify top customers, best-selling artists, popular genres, and high-revenue locations.

Dataset Architecture



Music Catalog

Artist, album, and track details including duration, composer, genre, media type, and pricing information.



Customer Data

Demographics, contact details, geographic location, and assigned support representatives.



Sales Records

Invoice and transaction data capturing purchases, billing details, quantities, and total sales amounts.



Classification

Genre and media type categorization with curated playlist management for organized music collections.

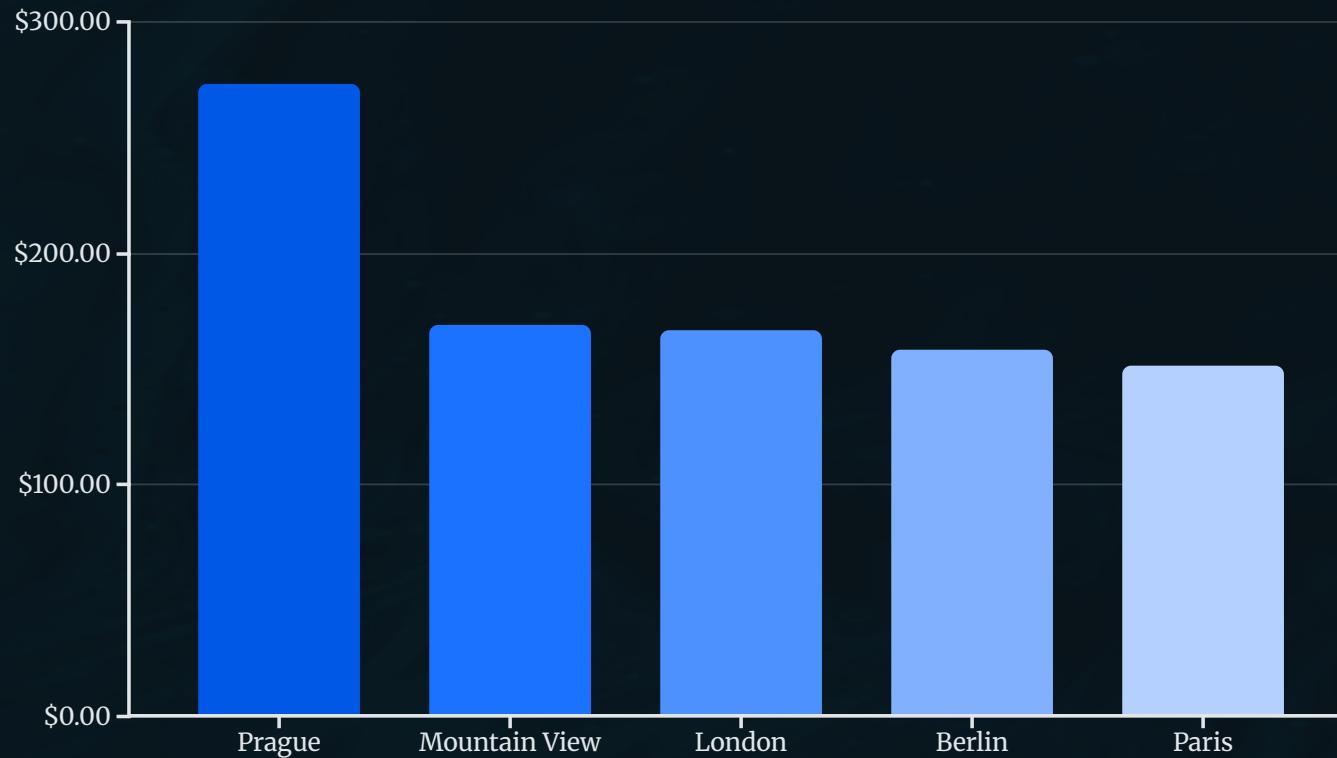
Three-Tiered SQL Analysis Approach



The dataset was analyzed through 11 carefully designed business questions grouped by complexity level.

This structured approach uncovered customer purchasing patterns, revenue-generating locations, popular genres, and top-performing artists—providing actionable insights for strategic decision-making and sales optimization.

Key Findings: Geographic Revenue Leaders



Top Revenue Cities

Prague leads with \$273.24 in total invoice revenue, making it the ideal location for promotional music festivals.

USA generated 131 invoices—the highest count globally—followed by Canada with 76 and Brazil with 61.



Rock Music Dominates Customer Preferences

59

Rock Listeners

Total customers
who purchased
Rock music tracks

10

Top Rock
Artists

Led Zeppelin leads
with 40M
milliseconds of
content

333

Canadian
Purchases

Rock genre
purchases in
Canada, the
highest volume

High-Value Customer Analysis

Best Customer

R Madhav (Customer ID: 5)

Total Spending: **\$144.54**

This customer represents the highest lifetime value and should be prioritized for loyalty programs.

Artist Spending Leader

Hugh O'Reilly spent \$27.72 on Queen—the best-selling artist with total sales leading all competitors.

Queen's popularity spans multiple countries, with customers in Germany, France, and Brazil showing strong purchasing patterns.

Country-Specific Genre Preferences



Brazil: Rock
205 purchases—
Rock dominates
with the highest
volume in South
America.



Canada: Rock
333 purchases—
Rock is the clear
favorite among
Canadian
customers.



Argentina:
Alternative
17 purchases—
Alternative &
Punk leads in
this market
segment.



Australia:
Rock
34 purchases—
Rock maintains
strong appeal in
the Australian
market.

Six Data-Driven Business Strategies



Target High-Revenue Locations

Focus marketing campaigns and concerts in Prague, Mountain View, and London to maximize ROI.



Promote Regional Genres

Tailor playlists and recommendations based on country-specific genre preferences like Rock in Canada.



Partner with Top Artists

Collaborate with Queen, Led Zeppelin, and other top-selling artists for exclusive releases.



Launch Loyalty Programs

Retain high-value customers like R Madhav with personalized discounts and early access.



Optimize Recommendations

Implement AI-driven suggestions based on purchase history to boost cross-selling.



Plan Strategically

Use sales trends to optimize inventory, pricing, and seasonal promotional campaigns.

Driving Growth Through Data Intelligence

This SQL-based analysis demonstrates how relational database querying transforms raw transaction data into actionable business intelligence.

By identifying revenue patterns, customer preferences, and geographic opportunities, the music store can make informed decisions that enhance customer satisfaction, optimize marketing spend, and drive sustainable revenue growth.

"Data-driven insights enable strategic decision-making that turns customer behavior into competitive advantage."

