

iTunes Music Store Data Analysis Report

Executive Summary

This report presents a comprehensive SQL-based analysis of the iTunes Music Store database. The objective was to evaluate customer purchasing behavior, revenue performance, product popularity, and operational efficiency using structured query techniques including joins, aggregations, CTEs, and window functions.

1. Data Validation & Cleaning

- Verified record counts across all major tables including customer, employee, track, invoice, genre, and artist.
- Checked for NULL values in critical columns such as customer email and track unit_price; no major issues detected.
- Confirmed no duplicate primary keys across core entities.
- Validated referential integrity; no orphaned records identified.
- Insight: The dataset was clean and structurally consistent, ensuring reliable analytical outputs.

2. Customer Analytics Insights

- Best Customer: František Wichterlová with total spending of \$144.54.
- Rock music listeners represent the dominant customer segment.
- Top customers were identified per country using ranking functions.
- Insight: A small group of high-value customers significantly contributes to overall revenue.

3. Sales & Revenue Analysis

- USA generated the highest number of invoices (131), followed by Canada (76) and Brazil (61).
- Top 3 invoice values: \$23.76, \$19.80, \$18.81.
- Prague generated the highest city-level revenue (\$273.24).
- Revenue is concentrated in North America and parts of Europe.
- Insight: Revenue concentration suggests strong regional dependency.

4. Product & Content Performance

- Most popular song identified based on highest quantity sold.
- Top 5 Artists: Led Zeppelin, U2, Deep Purple, Iron Maiden, Pearl Jam.
- Top Rock Artists by track count: Led Zeppelin (114), U2 (112), Deep Purple (92), Iron Maiden (81).
- Average pricing across media types remains relatively consistent.
- Insight: Rock genre dominance strongly influences overall sales performance.

5. Geographic & Market Trends

- Rock is the most popular genre in nearly all countries.
- Canada recorded 333 Rock purchases; Brazil 205; France 211; Germany 194.
- Prague ranked highest in total city revenue.
- Insight: Geographic demand patterns highlight strong European and North American markets.

6. Operational Insights

- Senior-most employee: Andrew Adams (General Manager, Level L6, Canada).
- Top customer-artist spending combination: Hugh O'Reilly on Queen (\$27.72).
- Insight: Artist-based customer segmentation presents upselling opportunities.

Strategic Recommendations

- Implement loyalty programs for repeat and high-spending customers.
- Leverage Rock genre dominance through targeted campaigns.
- Bundle top-selling artists to increase average invoice value.
- Expand marketing in high-invoice countries such as USA and Canada.
- Diversify revenue streams in emerging markets.

Conclusion

- The SQL-driven analysis provides actionable insights into customer behavior, genre dominance, and geographic revenue trends.
- Rock music leads global demand, North America dominates transactions, and high-value customers drive disproportionate revenue.
- Strategic marketing, segmentation, and geographic expansion can support sustainable growth.