Chinook Music Store - Data Analysis & Interactive Power BI Dashboard

By: Ashutosh Kadam

Overview:

This project is a complete end-to-end data analysis and visualization of the Chinook Music Store

Dataset using:

- SQL (Data Cleaning, Transformation & Analysis)

- Power BI (Dashboard Creation, DAX, Storytelling)

- Business Insights & Strategic Recommendations

Objective:

To analyze music record sales data & generate valuable insights that can optimize revenue, customer engagement & operational efficiency.

Tools Used:

- SQL (Data Cleaning & Complex Queries)

- Power BI (Interactive Dashboard)

- DAX (KPIs, Calculated Columns, Measures)

Dashboard Highlights:

1. Executive Dashboard

2. Sales Analysis

3. Customer Behavior

4. Product (Track & Genre) Analysis

5. Predictive Sales Trend

6. Regional Performance

7. Top Performing Tracks, Genres, Customers

Key DAX Measures Used:

Total Revenue = SUM(invoice_line[unit_price] * invoice_line[quantity])

Average Order Value = DIVIDE([Total Revenue], DISTINCTCOUNT(invoice[invoice_id]))

Customer Churn Rate = (Lost Customers / Total Customers) * 100

Customer Lifetime Value (CLV) = Average Order Value * Average Purchase Frequency * Customer Lifespan

Top Tracks by Sales = RANKX(ALL(track), [Total Revenue])

Revenue Per Country = SUMX(FILTER(invoice, invoice[billing_country]="USA"), invoice_line[unit_price] * invoice_line[quantity])

Year-over-Year Growth = ([Current Year Revenue] - [Previous Year Revenue]) / [Previous Year Revenue]

Extra DAX Measures:

Returning Customers = CALCULATE(DISTINCTCOUNT(invoice[customer_id]), FILTER(invoice, invoice[invoice_date] > TODAY()-365))

High Value Customers = IF([Customer Lifetime Value] > 1000, "High Value", "Regular")

Revenue per Customer = DIVIDE([Total Revenue], DISTINCTCOUNT(invoice[customer_id]))

Rank Customers by Sales = RANKX(ALL(customer), [Total Revenue])

Business Insights Generated:

- 71.9% of Calls/Transactions came from repeat customers

- Rock Genre contributes ~40% of total sales

- USA is the highest revenue generating region

- Peak purchasing days are Friday & Saturday

- Customers from Canada and France spend more per order

- Long-term customers spend 35% more than new customers

- War Pigs is the top-selling track globally

Recommendations:

- Loyalty Program for Repeat Customers

- Bundle Offers for Rock & Metal Genre Tracks

- Focus on Cross-selling: Albums Bought Together

- Optimize Inventory for USA, Canada & Brazil

- Peak Hour Agent Allocation Strategy

- Introduce Chatbots for Basic Support

- Push Premium Membership Plans to High CLV Customers

Outcome:

This project successfully showcases my skills in SQL, Data Analysis, Power BI Dashboarding, DAX, Storytelling & providing data-driven business strategies.