Portfolio Project Proposal

Database

Name: sakila_db
Link: MySQL :: Other MySQL Documentation

The sakila_db is DVD rental store data base featuring things like films, actors, films-actor relationship and inventory table that connects films, store and rentals. We perform analysis on following business areas.

- Genera based Analysis
- Film based Analysis
- Country based analysis
- Inventory based Analysis
- Customer based Analysis

Genera based Analysis

Problem # 1 : total number of films rented in each category.

Impact Data-driven decisions on movie purchases, improved customer satisfaction, and increased rental revenue

Problem # 2 : top 5 genera in terms of revenue and frequency.

Impact by analyzing popular genera we make informed, and data driven decisions to increase rentals and revenues.

Film based Analysis

Problem # 3 : top 5 films in each category in terms of frequency and revenue

Impact by analyzing popular films in each category helps in purchase and inventory management results in customer satisfaction which will increase the revenue and rental frequency.

Problem # 4 : top 5 films for each rating (G, PG, PG-13, R, NC-17)

Impact by analyzing the popular films across each category help us gain insights across each ratings results in data driven decisions.

Country/Geography based Analysis

Problem # 5 : Revenue generated by each country

Impact by analyzing across each country it will provide insights and future data driven decisions on promotions.

Problem # 6 : rank cities by average rental cost

Impact city level analysis provide valuable insights for customer acquisition.

Problem # 7 : count number of customers, frequency of films rented and revenue across cities Each country.

Impact Data-driven decisions on movie purchases, improved customer satisfaction, and increased rental revenue

Inventory based Analysis

Problem # 8 : DVD rental frequency, we want to calculate rental frequency across each category across all geographical locations.

Impact Improved inventory management, reduced stockouts, and increased revenue due to better rental item availability.

Problem # 9 : Returns Analysis/DVD return rate, wants to identify customers with a history of frequently returning DVDs late to implement appropriate policies

Impact Identifying customers with a history of late returns can help implement policies to improve rental turnover and customer satisfaction.

Customer based Analysis

Problem # 10: Customer Segmentation , classify customer into distinct groups based on their rental history. This categorization enables more precise and effective marketing campaigns

Impact Categorizing customers into distinct groups for customized marketing has several significant business impacts.

Focused Marketing Efforts: The store can concentrate marketing campaigns on distinct customer groups, making promotions more relevant.
Increased Customer Engagement: Tailored promotions capture the interest of customers, leading to more interaction with the store.
Higher Sales: Targeted marketing encourages purchases by offering products and deals that align with customer preferences.

Informed Decision-Making: Segmentation provides data for informed marketing and product decisions.
Customer Lifetime Value: Personalized offers can increase customer loyalty and long-term value.

Problem # 11: Customer Churn Analysis,

$$\frac{(\#\text{ of Customers Lost})}{(\#\text{ of Total Customers Started with})} = \text{Churn Rate}$$

Impact: customer churn analysis can provide valuable Insights like

Data-Informed Decisions: Churn analysis provides valuable data for strategic decision-making. It helps the store tailor its offerings and services to meet customer expectations.

Competitive Advantage: A store with a lower churn rate can gain a competitive edge in the market. It can focus on customer satisfaction and loyalty, setting itself apart from competitors.

Revenue Preservation: By identifying and retaining at-risk customers, the store can prevent a decline in revenue that would result from customer churn.

Actor based Analysis

Problem # 12: Popular Actors: wants to identify the most popular actors based on the number of films rented featuring them.

Impact Highlighting popular actors can influence film selection and marketing strategies, potentially increasing rental demand.