## 📊 Key Insights

1. \*\*Store Revenue Trends\*\*

- \*\*Store 1\*\* consistently generates slightly higher revenue than Store 2 across most months.

- Revenue peaks in \*\*July and August 2005\*\*, indicating \*\*seasonal or promotional effects\*\*.

- Early 2006 shows significantly lower revenue, possibly due to \*\*lower rental activity\*\* or data sparsity.

2. \*\*Movie Categories and Ratings\*\*

- \*\*Sports, Sci-Fi, Animation, and Drama\*\* are the top categories by revenue, showing customer preference for \*\*entertainment and family-friendly genres\*\*.

- Movies rated \*\*PG-13 and NC-17\*\* generate the highest revenue, followed by PG and R, suggesting that \*\*teen and adult-friendly content\*\* drives most sales.

3. \*\*Top Customers\*\*

- Top 10 customers (e.g., KARL SEAL, ELEANOR HUNT) contribute a \*\*significant portion of revenue\*\*, showing a concentration of loyal, high-value users.

- Targeting these customers with \*\*personalized offers or loyalty programs\*\* could increase retention and revenue.

4. \*\*Rental Duration & Late Returns\*\*

- Average rental duration is \*\*~5 days\*\*, in line with typical rental policies.

- \*\*8,121 rentals were returned late\*\*, indicating an opportunity to \*\*improve late-fee policies, reminders, or incentives\*\*.

5. \*\*Staff Performance\*\*

- Staff members \*\*Mike and Jon\*\* processed the most payments and revenue, highlighting \*\*high-efficiency staff\*\*.

- Staff performance tracking helps \*\*optimize scheduling and workflow management\*\*.

6. \*\*Geographic Revenue\*\*

- Revenue is concentrated in \*\*United States cities like Cape Coral and Aurora\*\*, with additional high-contributing cities across \*\*Europe, Asia, and South America\*\*.

- Understanding key markets helps \*\*focus marketing campaigns and expansion decisions\*\*.

7. \*\*Inventory Availability\*\*

- Majority of films are \*\*in stock (2,178)\*\*, but a small portion is \*\*out of stock (92)\*\*.

- Popular titles being out of stock may lead to \*\*lost revenue or customer dissatisfaction\*\*.

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## 💡 Recommendations

1. \*\*Revenue Optimization\*\*

- Focus promotions and marketing on \*\*Store 1 and high-revenue months\*\* to maximize seasonal revenue.

- Expand availability of \*\*high-performing categories\*\* (Sports, Sci-Fi, Animation, Drama).

2. \*\*Customer Engagement\*\*

- Launch \*\*loyalty programs or personalized campaigns\*\* for top-spending customers.

- Use insights from repeat customers to drive \*\*cross-selling or bundle offers\*\*.

3. \*\*Rental Operations\*\*

- Implement \*\*reminder systems or incentives\*\* to reduce late returns.

- Adjust rental policies for high-demand movies to \*\*maximize rental cycles without impacting availability\*\*.

4. \*\*Staff & Workflow\*\*

- Monitor staff performance metrics and consider \*\*knowledge sharing or training\*\* from top performers to others.

5. \*\*Inventory Management\*\*

- Ensure \*\*popular movies remain in stock\*\*, especially in stores with high demand.

- Predict seasonal demand and adjust stock accordingly to \*\*avoid out-of-stock situations\*\*.

6. \*\*Geographic Strategy\*\*

- Focus marketing and expansion on \*\*cities/countries with highest revenue contributions\*\*.

- Explore untapped markets where revenue is currently lower but potential exists.

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## 🏁 Conclusion

The Sakila SQL EDA project provides \*\*valuable insights into store performance, customer behavior, movie preferences, and inventory management\*\*:

- Store 1 leads in revenue, with clear \*\*seasonal trends\*\*.

- Certain \*\*movie categories and ratings drive the most revenue\*\*, highlighting opportunities for targeted promotions.

- Top customers significantly contribute to revenue and should be engaged with \*\*loyalty programs\*\*.

- \*\*Late rentals\*\* and occasional \*\*out-of-stock inventory\*\* indicate areas for operational improvement.

- Staff performance and geographic revenue distribution provide \*\*actionable insights\*\* for business strategy.

\*\*Overall:\*\* The analysis demonstrates the power of SQL-based EDA in extracting actionable insights for \*\*revenue growth, operational efficiency, and customer satisfaction\*\*.