

# **Sakila Database: Unleashing Business Insights**

**EMPOWERING DATA-DRIVEN  
DECISIONS WITH SQL AND TABLEAU  
VISUALIZATION**



# Introduction to the Sakila Database

- The Sakila database, emulates a DVD rental store's data for real-world data management scenarios.
- This database includes information on movies, actors, the relationships between films and actors, as well as a central inventory table that links films, stores, and rentals.



# OBJECTIVES

01

## SQL UTILIZATION

To demonstrate the Power of SQL Queries on the Sakila Database in Tackling Real-World Business Challenges.

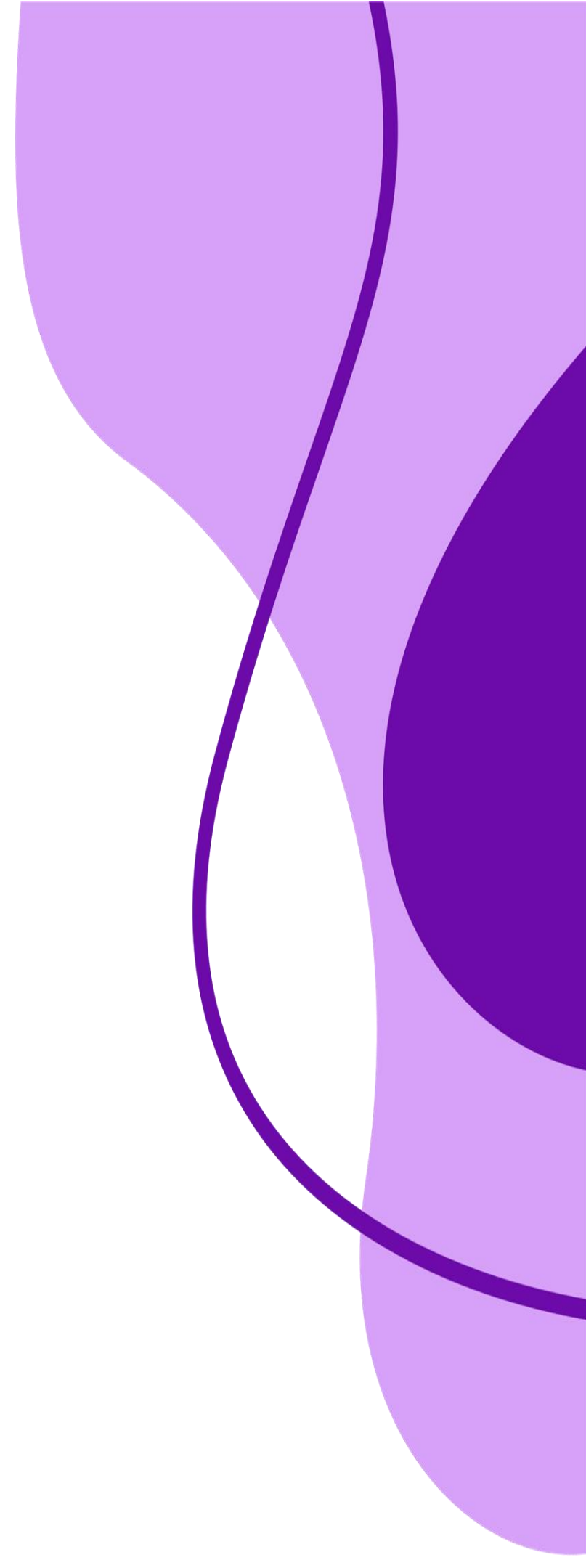
02

## TABLEAU INTEGRATION

To Illustrate how Tableau can be integrated to visually represent the outcomes of SQL queries, making data-driven insights more accessible and actionable for businesses.

# Exploratory Data Analysis

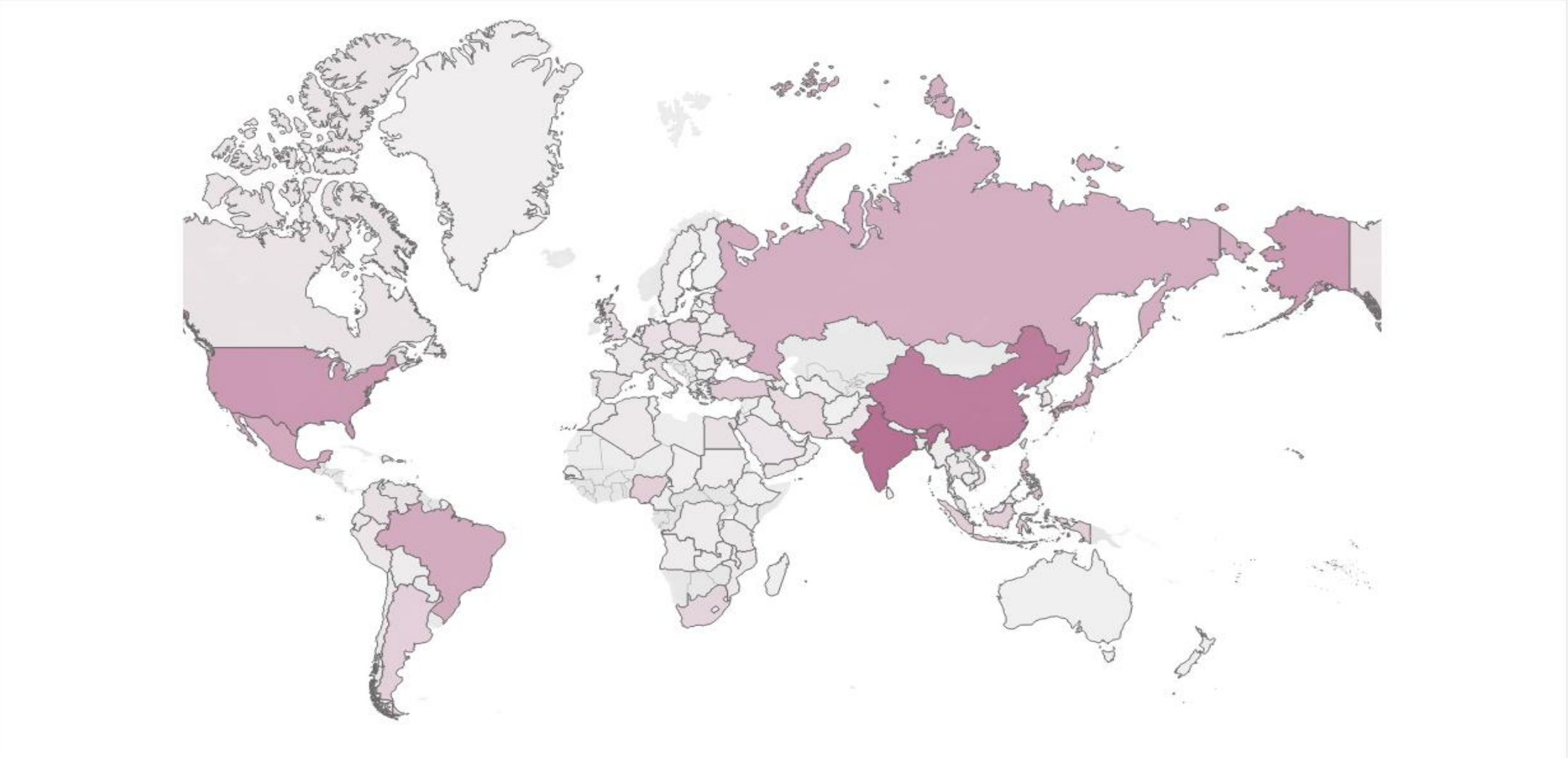
- Data Span: **May, June, July & August 2005**
- Total Countries: **109**
- Cities: **600**
- Customers: **599**
- Total Rental Count: **16044**
- Total Revenue: **67406**
- Categories: **16**
- Movies: **958**



# COUNTRY ANALYSIS

- Analyzing Revenue, Customer Distribution, and Rental Activity by Country

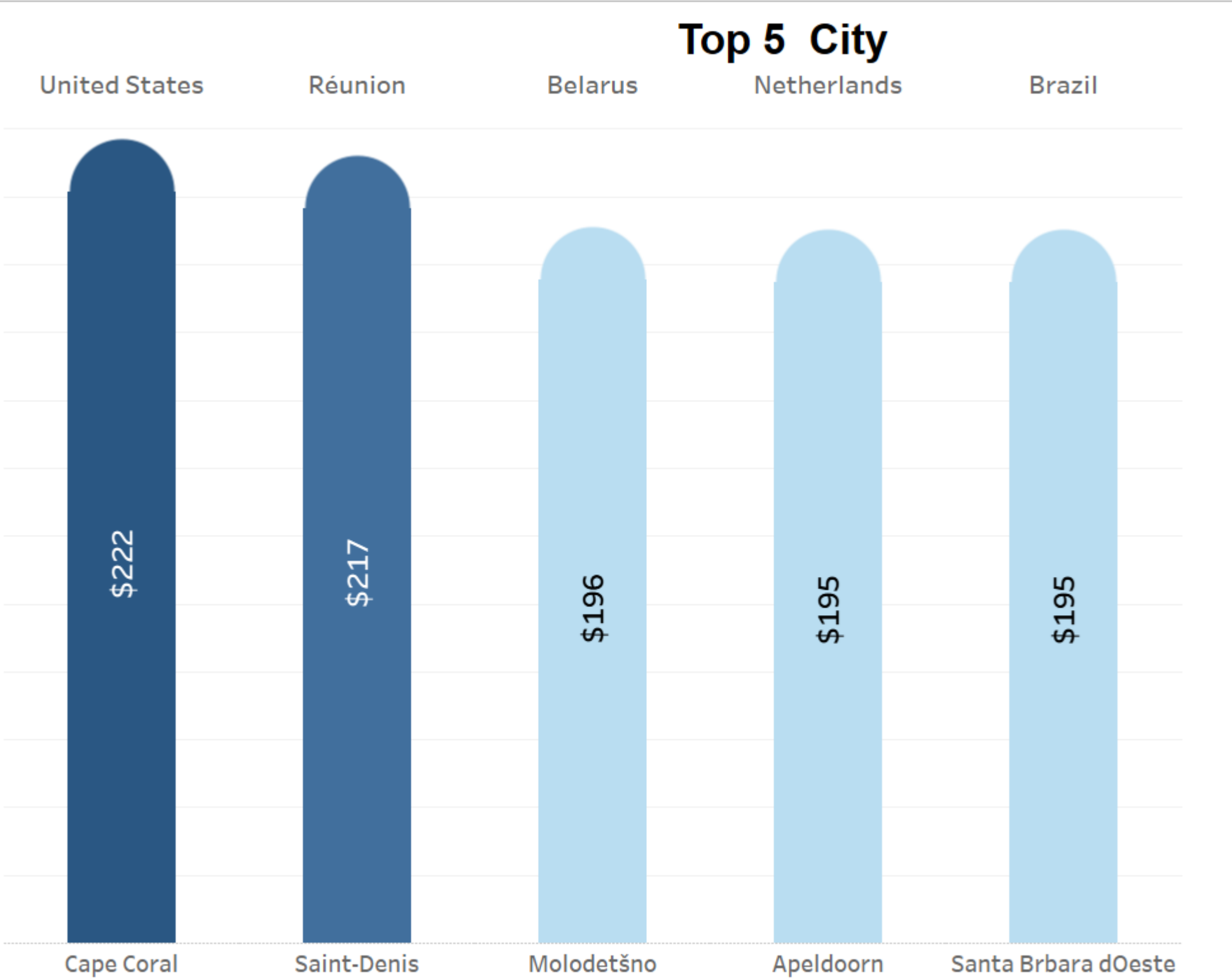
Country Detail



<div>Rental Count</div> <div>1,572</div>	<div>Revenue</div> <div>\$6,628.28</div>	<div>Total Customers</div> <div>60</div>	<div>Top Category</div> <div>Action</div>	<div>Popular Actor</div> <div>GINA</div>
--	--	--	---	--

# CITY ANALYSIS

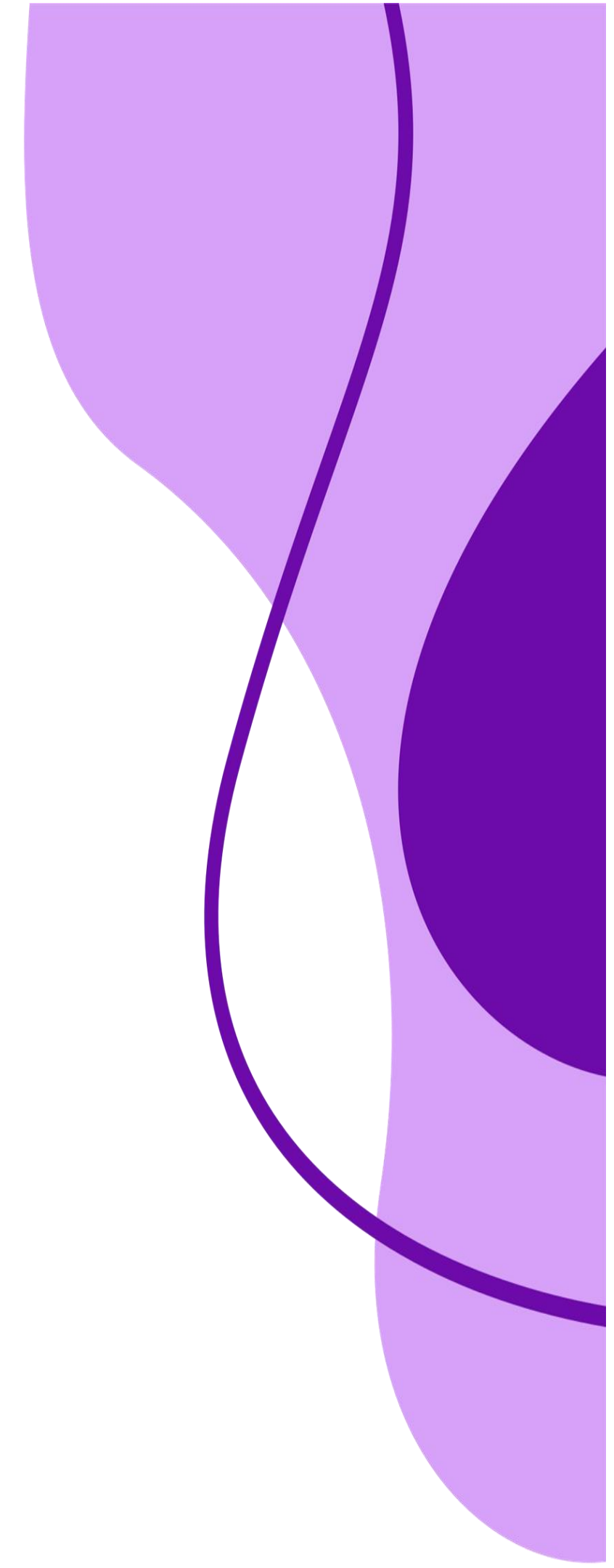
Retrieving the top 5 cities by total revenue, along with their corresponding countries, to identify the highest revenue-generating cities and their associated countries





# Impact

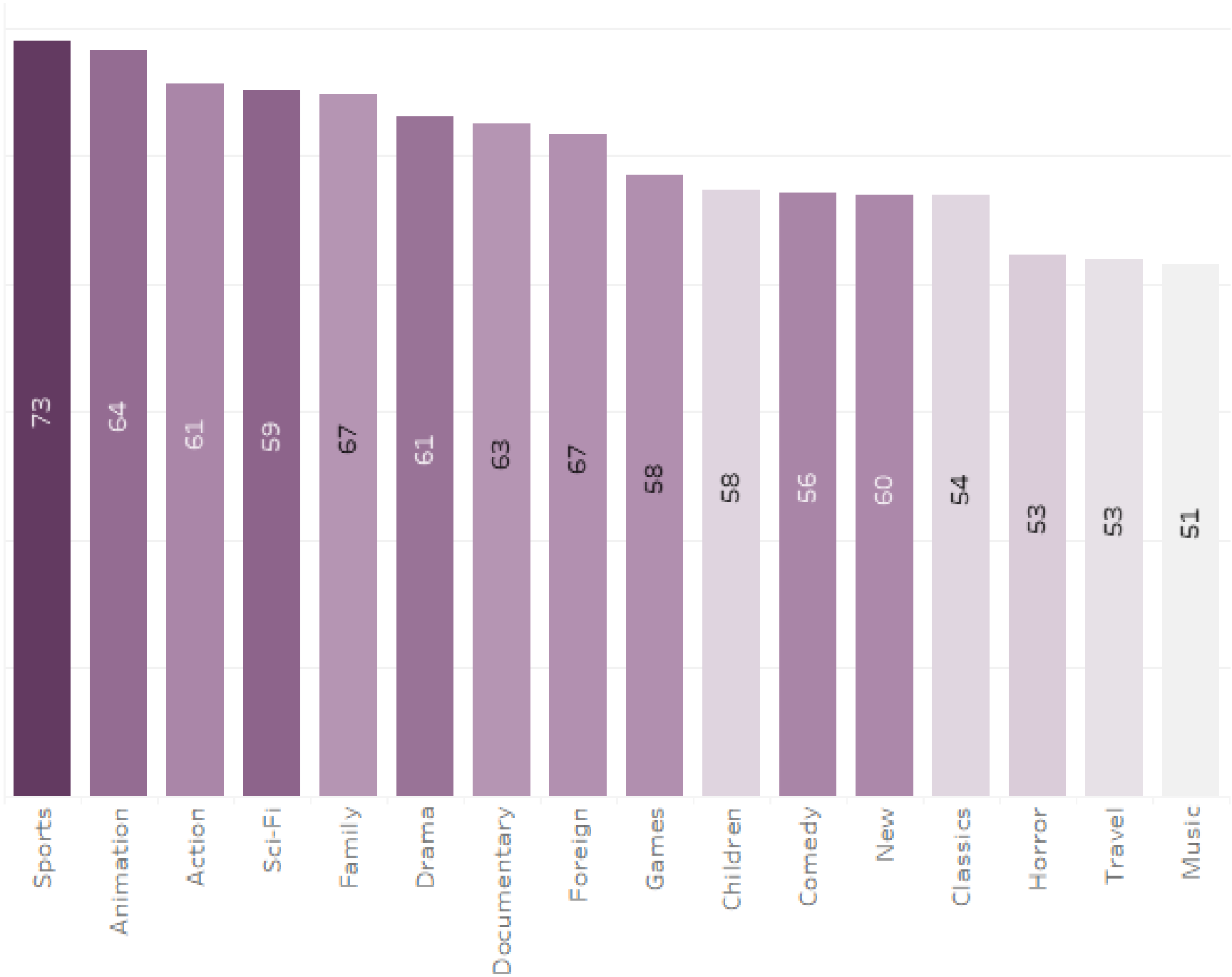
- Optimized Resource Allocation
- Market Expansion and Localization
- Target Audience
- Demand Forecasting
- Inventory Management
- Improved Decision-Making



# Movie Analysis

Category	Total_Films	Rental_Count	Revenue
Sports	73	1179	5314.21
Animation	64	1166	4656.30
Drama	61	1060	4587.39
Comedy	56	941	4383.58
Action	61	1112	4375.85
New	60	940	4651.62
Games	58	969	4281.33
Foreign	67	1033	4270.67
Family	59	1101	4756.21

Films in category

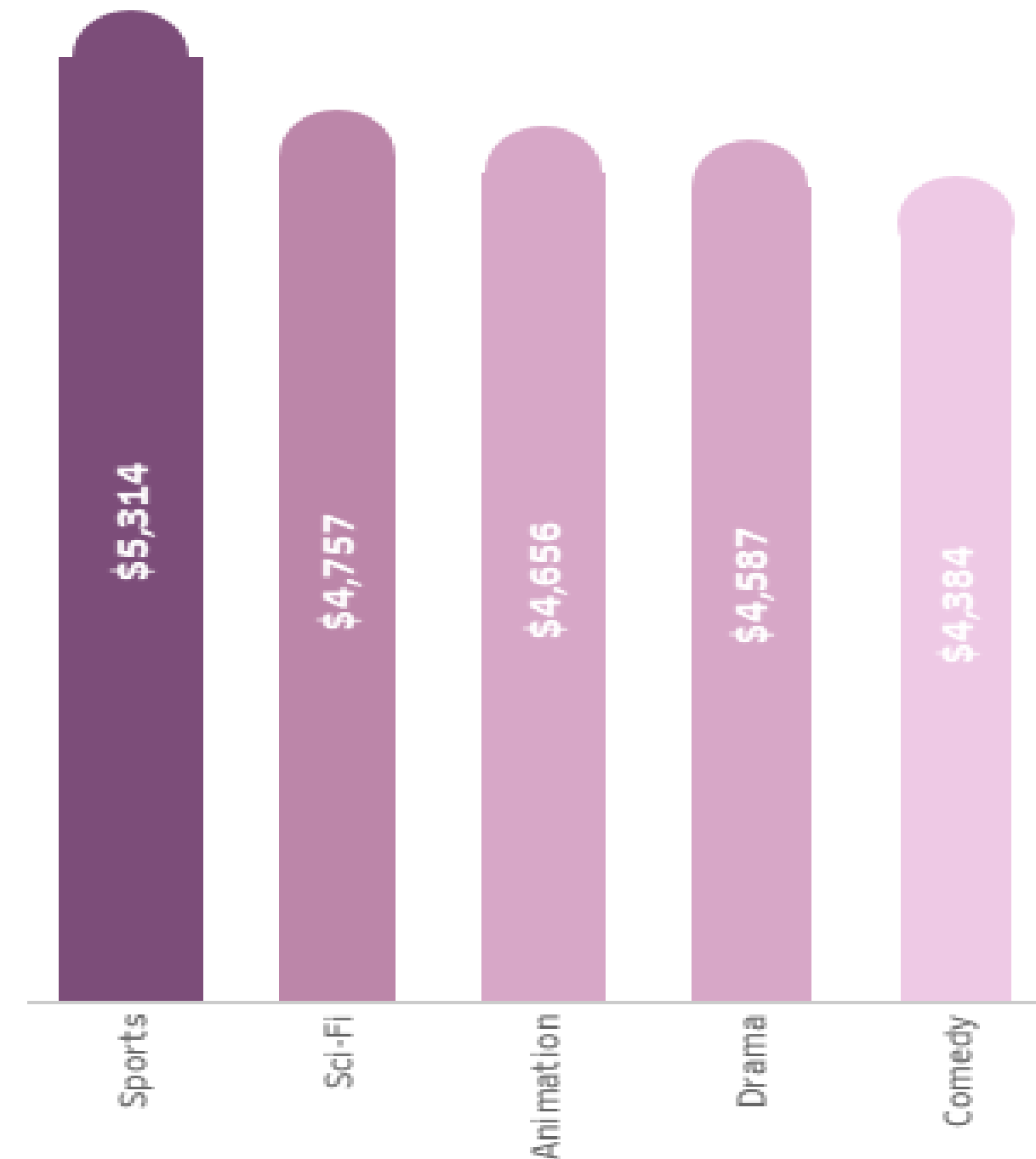




# TOP 5 CATEGORIES

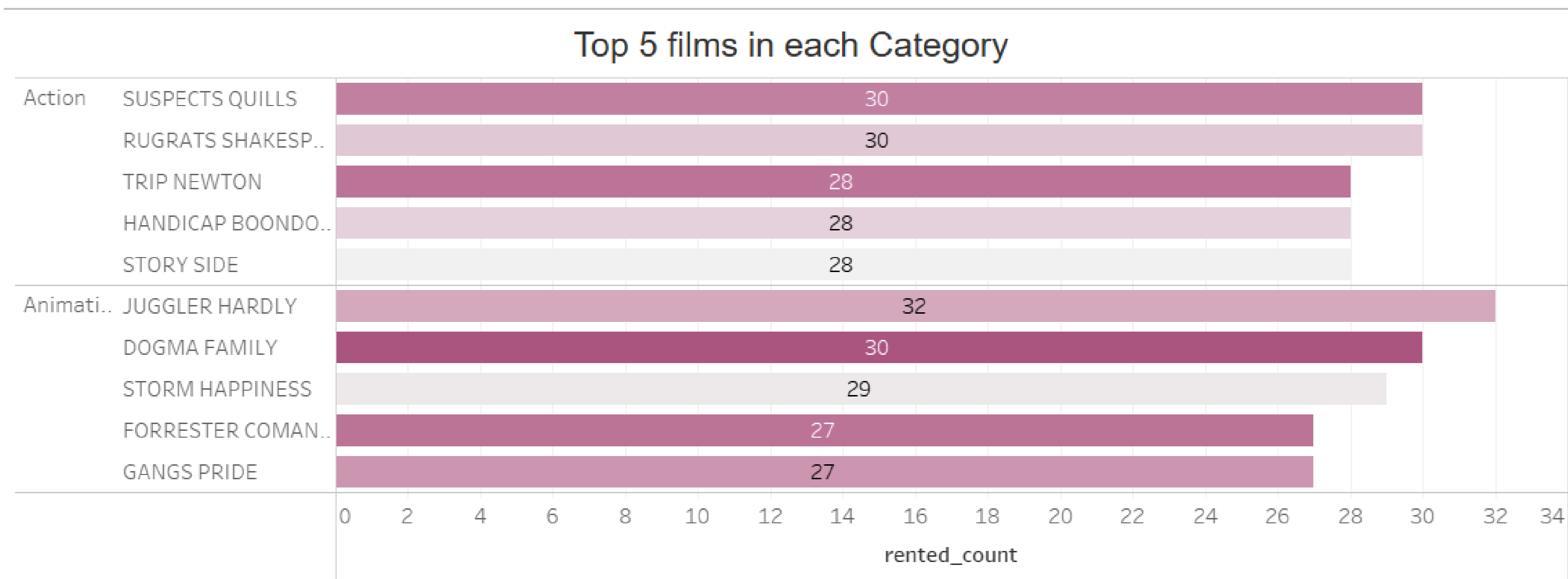
Identifying the top-performing film categories in terms of Revenue

*Top 5 Revenue Generating categories*



# TOP 5 MOVIES EACH CATEGORY

- Identifying the top-performing films within each film category based on rental count and revenue



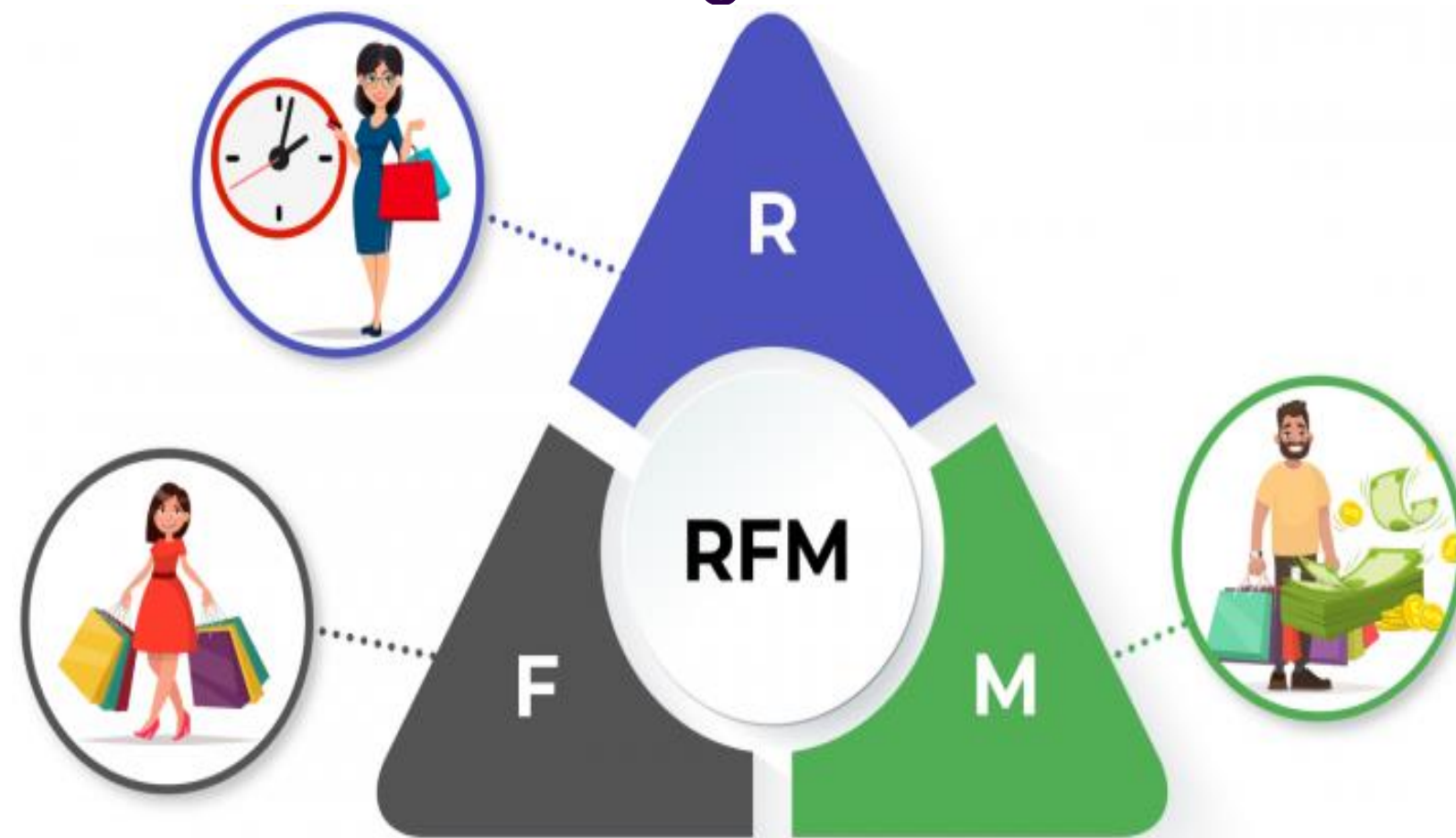
# Impact

- Optimize Inventory
- Pricing Strategies
- Revenue Maximization
- Content Selection
- Rental Durations
- Cost Control



# RFM ANALYSIS

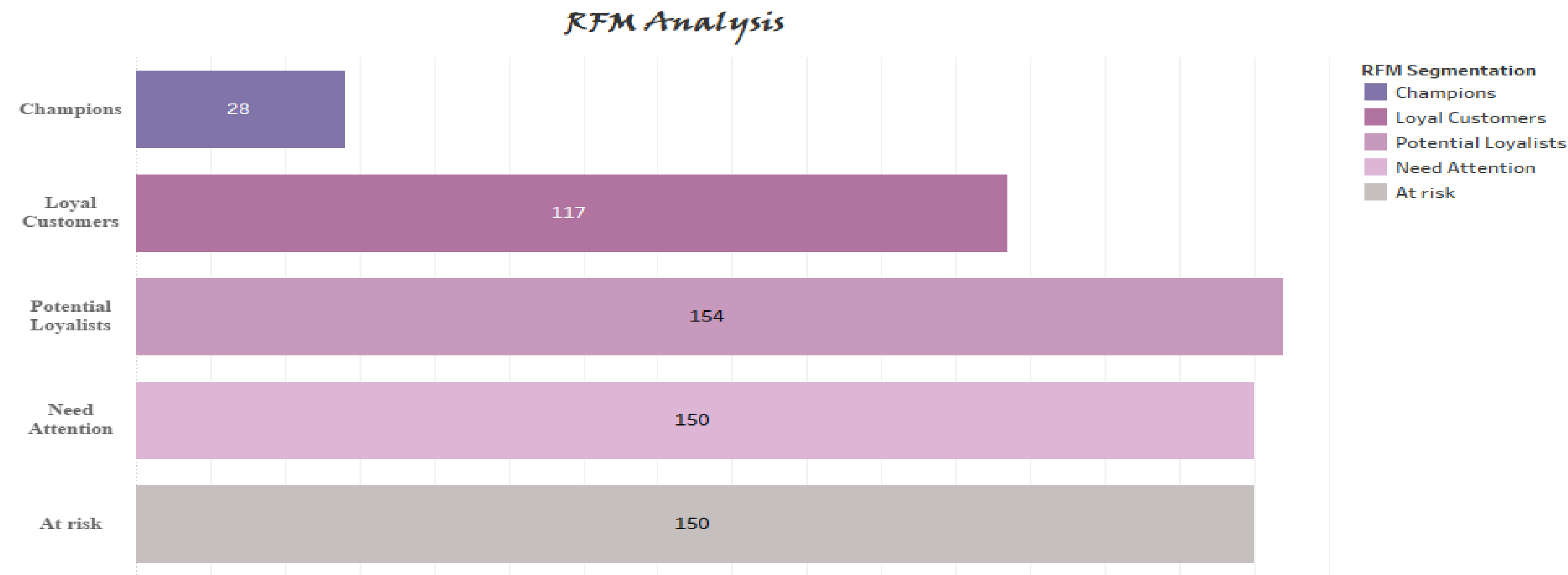
- Categorizing customers into distinct RFM segments based on their recent, frequency and monetary.
- **R – Recency** is Time since last order
- **F– Frequency** is the number of times a customer place an order.
- **M–Monetary** is the total amount spent by customer
- RFM is divided into 4 segments where. the segment with the lowest value is 1 and highest is 4.



# RFM ANALYSIS

R	F	M	Segment
4	4	4	Champion
3-4	3-4	2-4	Loyal Customers
3-4	1-4	1-4	Potential Loyalist
4	1	1	New Customers
3	1-3	1-3	Promising
2-3	1-4	1-4	Need Attention
2	1	2	About to Sleep
<=2	1-4	1-4	At Risk
<=2	3-4	3-4	Can not lose them
1	2	1	Hibernating
1	1	1	Lost

# RFM ANALYSIS



Count of Customers for each RFM Segmentation. Color shows details about RFM Segmentation. The marks are labeled by count of RFM.



<b>Customers</b>	<b>Marketing Strategy</b>
Champion	Give the big bonus points when they shop & special Promos.
Loyal Customers	Offer personalized recommendations
Potential Loyalist	Offer personalized recommendations, encourage them to buy more frequently
Need Attention	Reach them and revive their interest by a specific discount on specific product
At Risk	Personalized and targeted communication is crucial.

# Impact

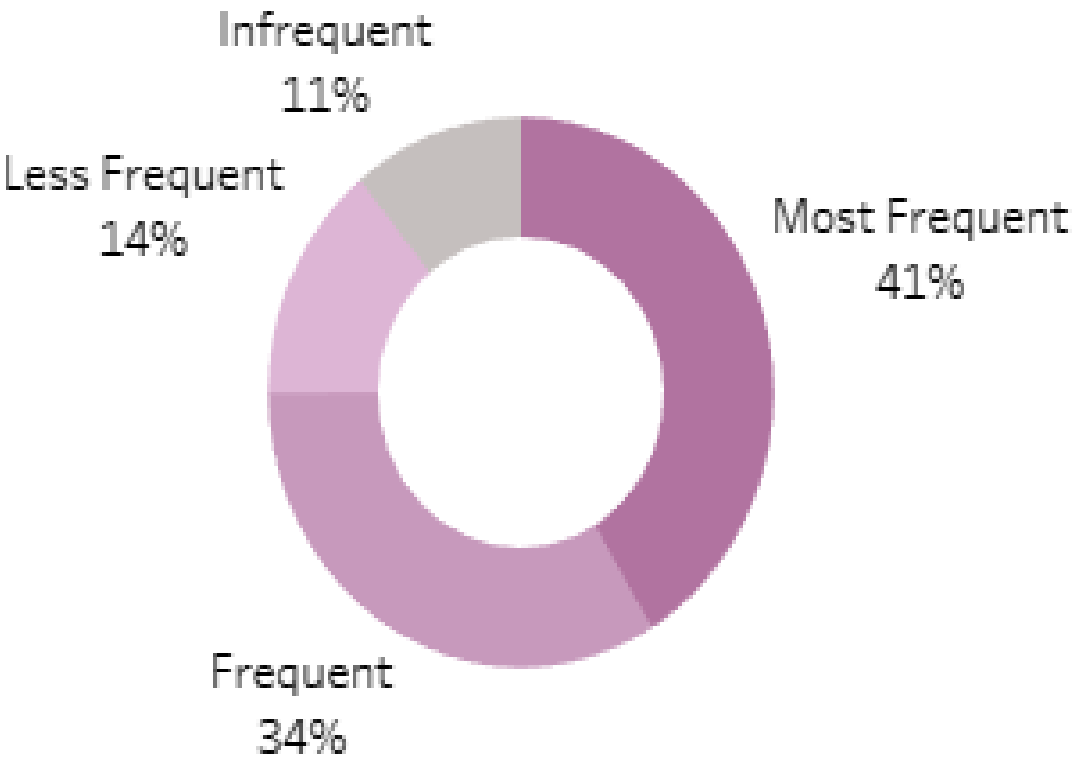
- Customer Segmentation
- Personalized Marketing
- Pricing Strategies
- Customer Retention
- Competitive Advantage



# CUSTOMER FREQUENCY

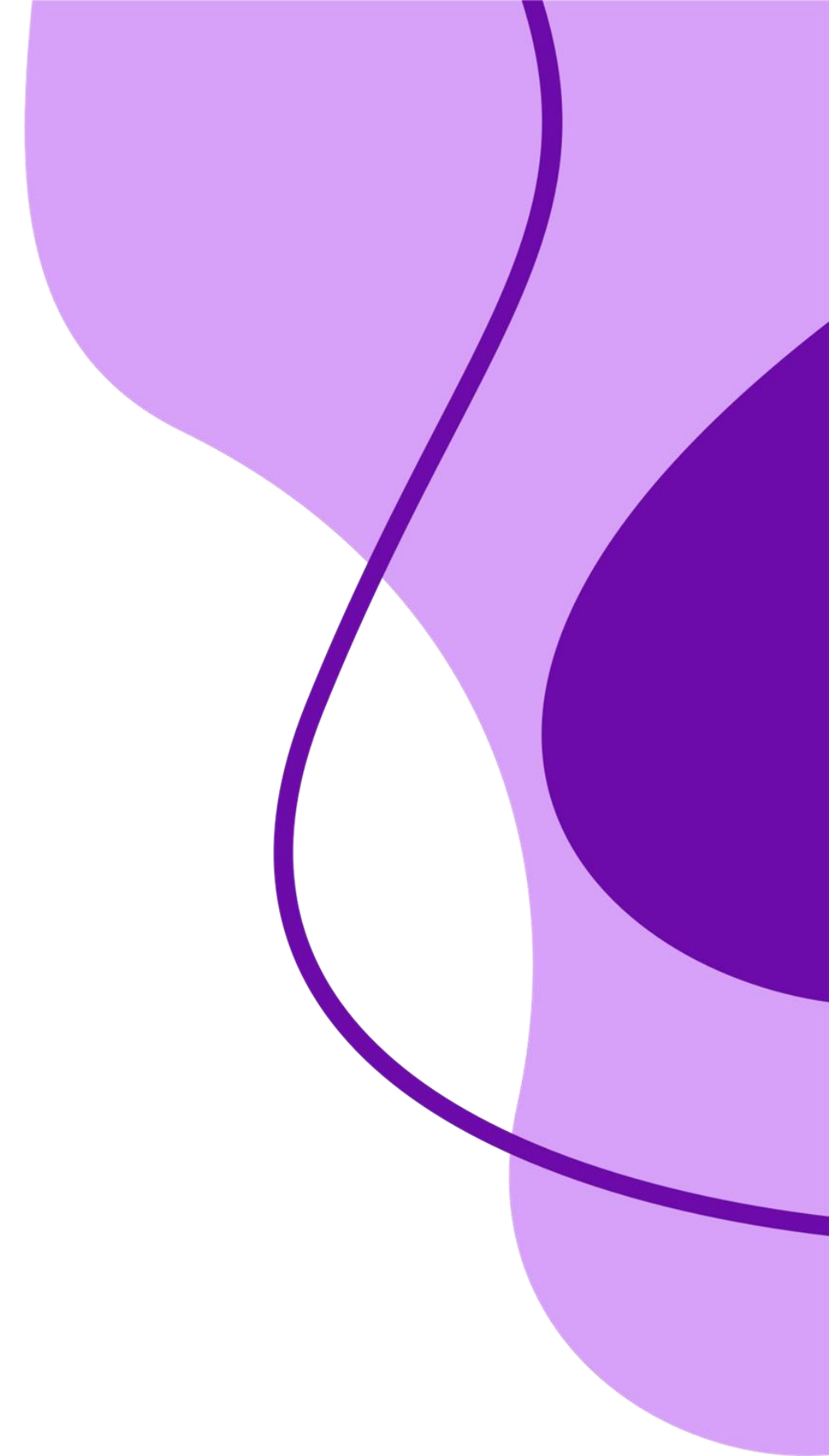
An analysis of customer rental behavior to categorize customers based on their rental frequency.

Most frequent	1–3 days
Frequent	4–7 days
Less frequent	8–10 days
Infrequent	Above 10 days



# Impact

- Revenue Generation
- Customer Loyalty
- Customer Engagement
- Inventory Management
- Marketing & Promotions
- Subscription Model



# CHURN ANALYSIS

- Analyzing customer rental data to identify patterns in customer retention and churn

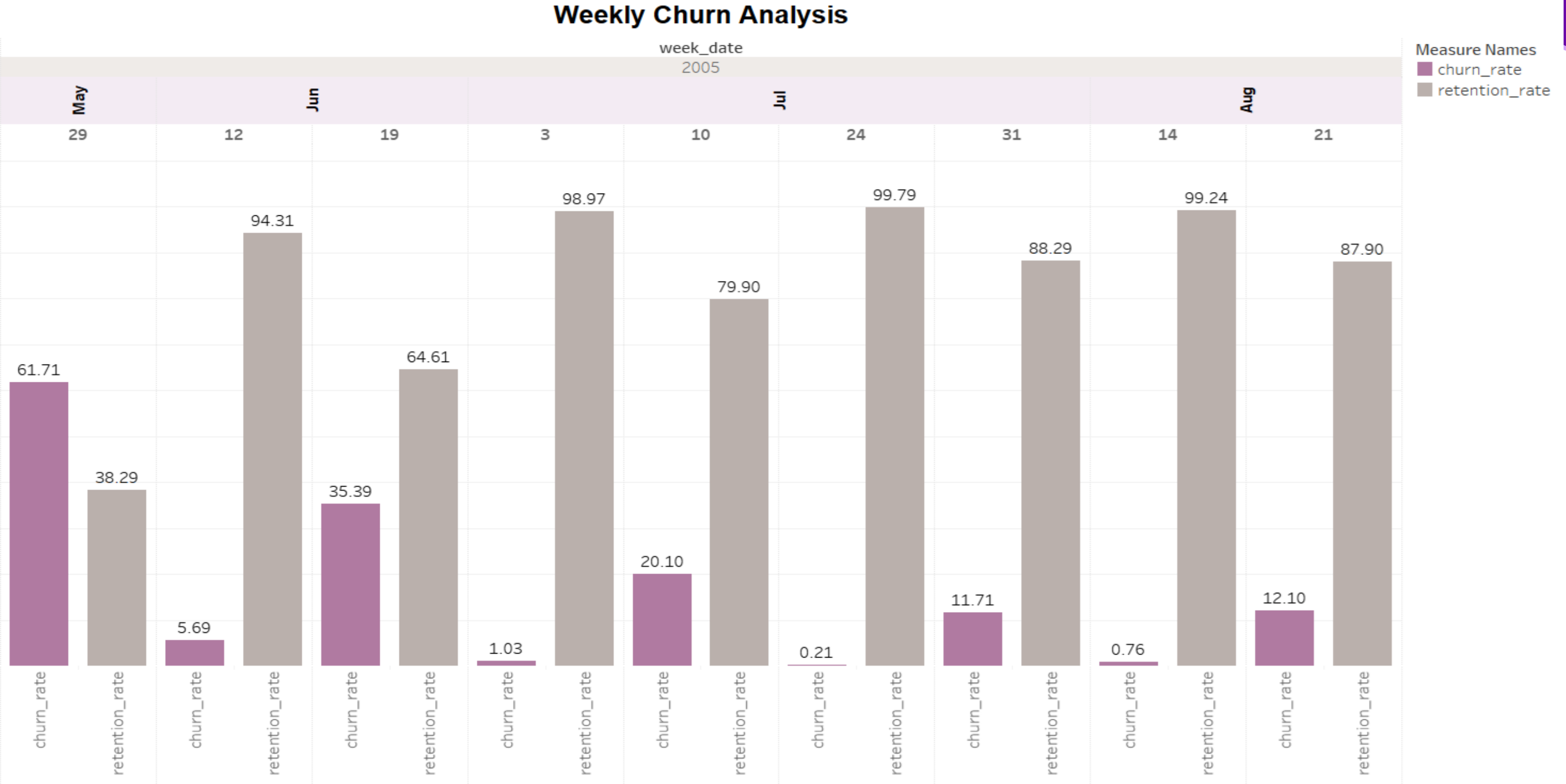
Retention Rate	Churn Rate
Customers that stick	Customers that leave
Daily,weekly,monthly, Annually	Daily,weekly,monthly, Annually

# CHURN ANALYSIS

- A high churn rate indicates that a business is losing significant customers, certainly more than it is bringing in.
- Retention Rate =  $\left( \text{Retained Customers} / \text{Previous Week's Customers} \right) * 100$
- Churn Rate =  $100 - \text{Retention Rate}$



# CHURN ANALYSIS



Churn\_rate and retention\_rate for each week\_date Day broken down by week\_date Year, week\_date Quarter and week\_date Month. Color shows details about churn\_rate and retention\_rate. The marks are labeled by churn\_rate and retention\_rate. The view is filtered on week\_date Day, which excludes 22.

# Impact

- Customer Retention Strategies
- Churn Reduction
- Cost Saving
- Customer Satisfaction
- Financial Impact
- Competitive Advantage



# CUSTOMER ANALYSIS

- When select any customer it show all detail about that customer.
- Recommend movies to customers based on their previous rental history and the popularity of movie categories

Customer Name

ALEXANDER

Country

Italy

City

Bergamo

Rental Count

1,296

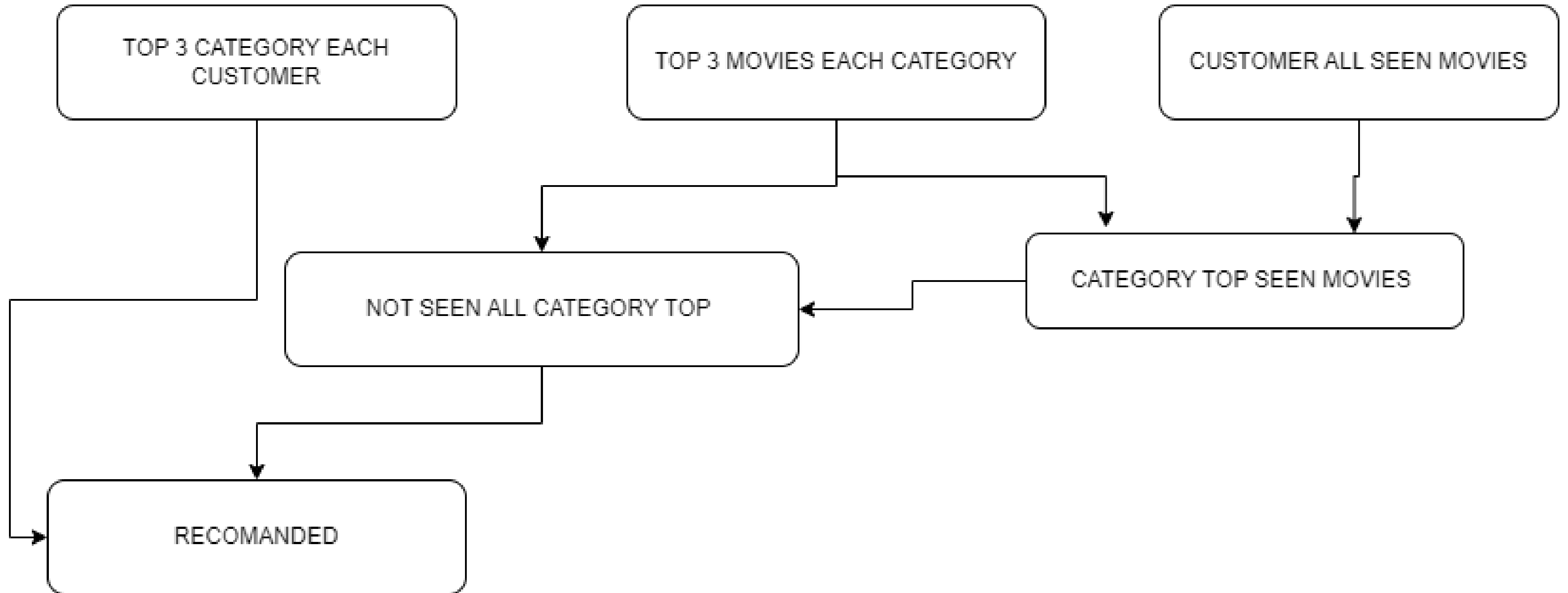
Revenue

5,459

Movies Recommendation

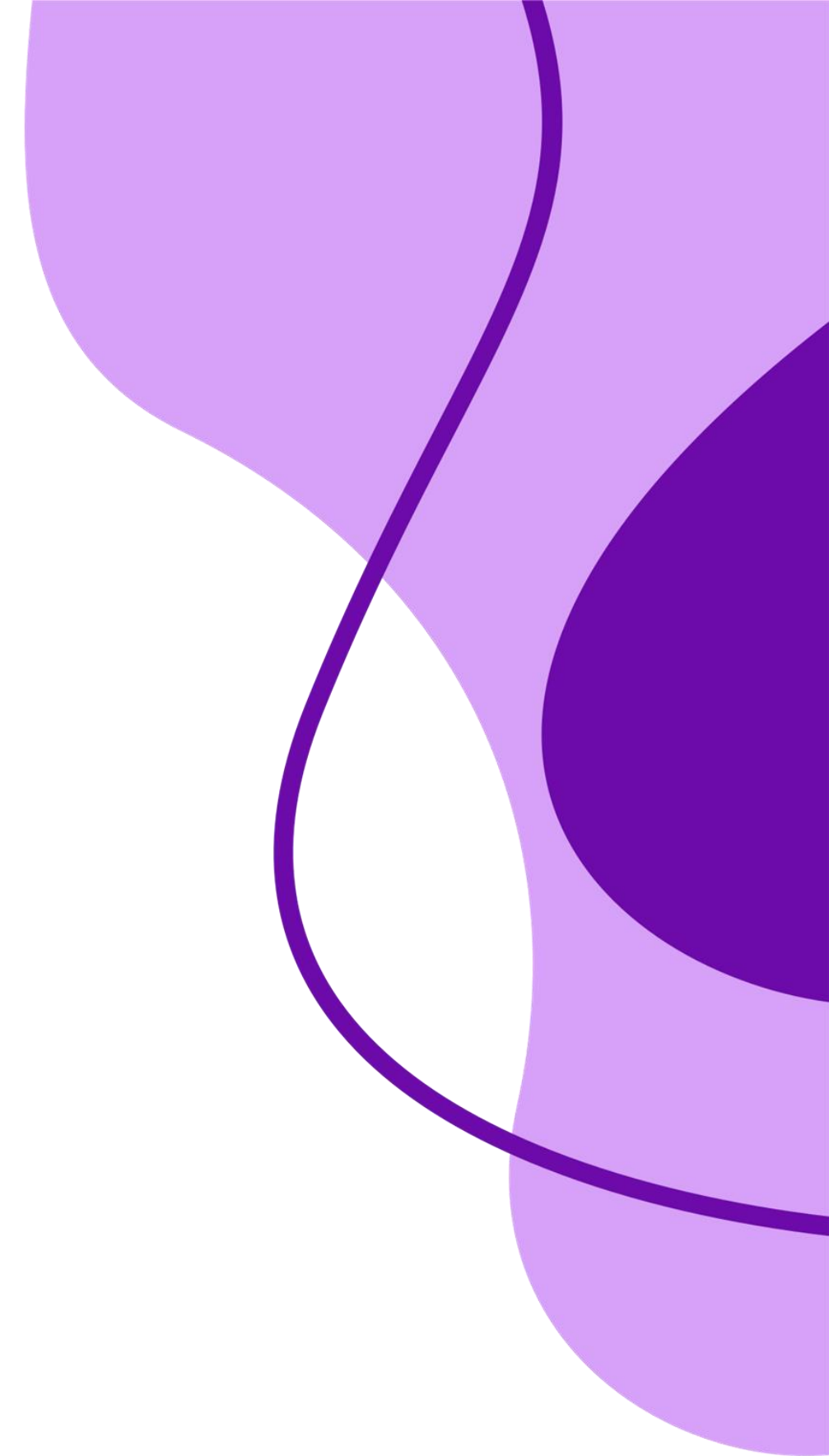
First Name_	Category_	Film Title
ALEXANDER	Children	IDOLS SNATCHERS
		SWEETHEARTS SUSPECTS
	Family	APACHE DIVINE
		NETWORK PEAK
		RUSH GOODFELLAS

# RECOMMENDED FLOW CHART



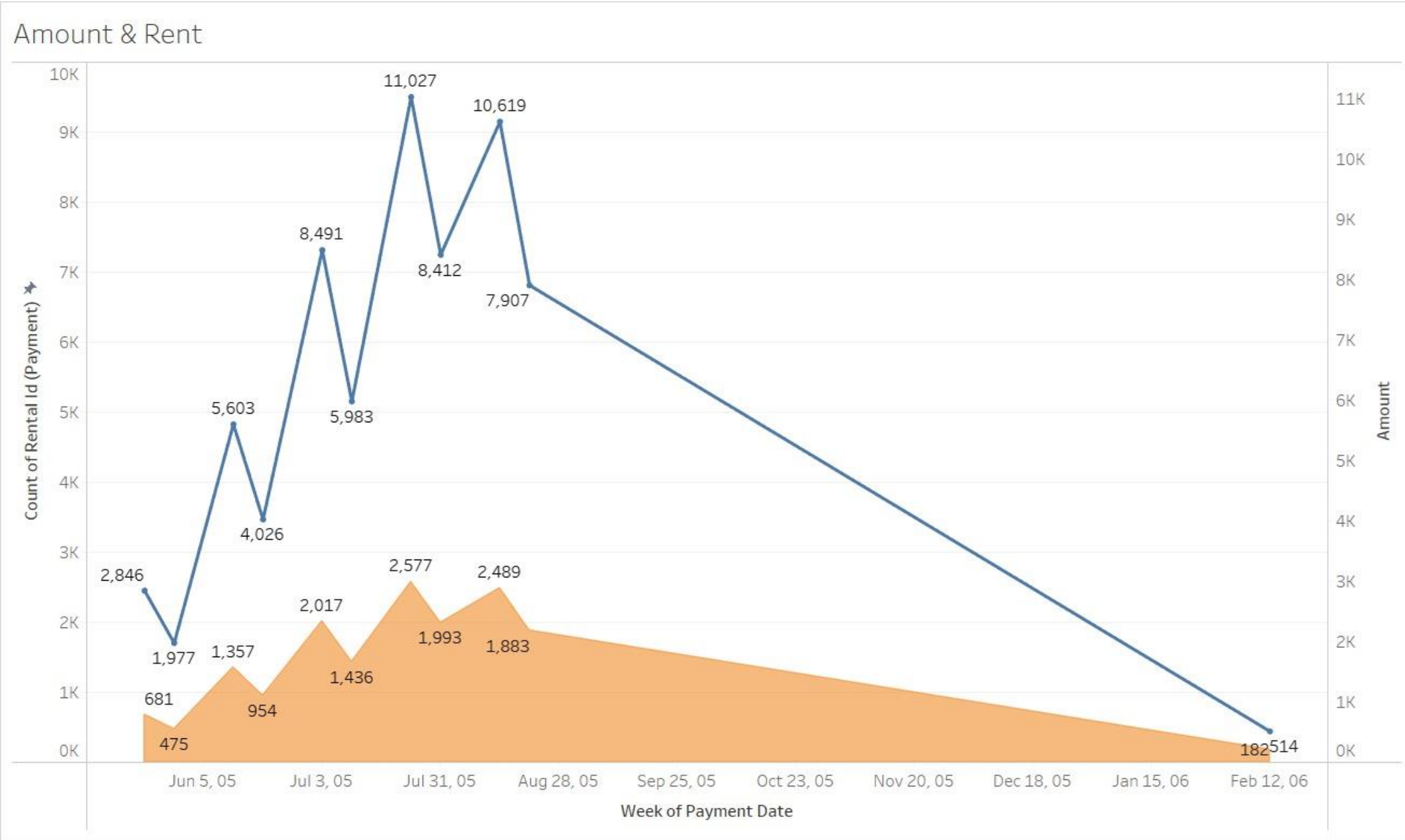
# Business Impact

- Enhanced Customer Experience
- Profit Optimization
- Customer Engagement
- Inventory Management
- Marketing Strategy



# WEEKLY REVENUE & RENTAL COUNT

- This visualization helps us identify sales peaks, revenue drivers, and sales trends that enable us to make data-informed decisions

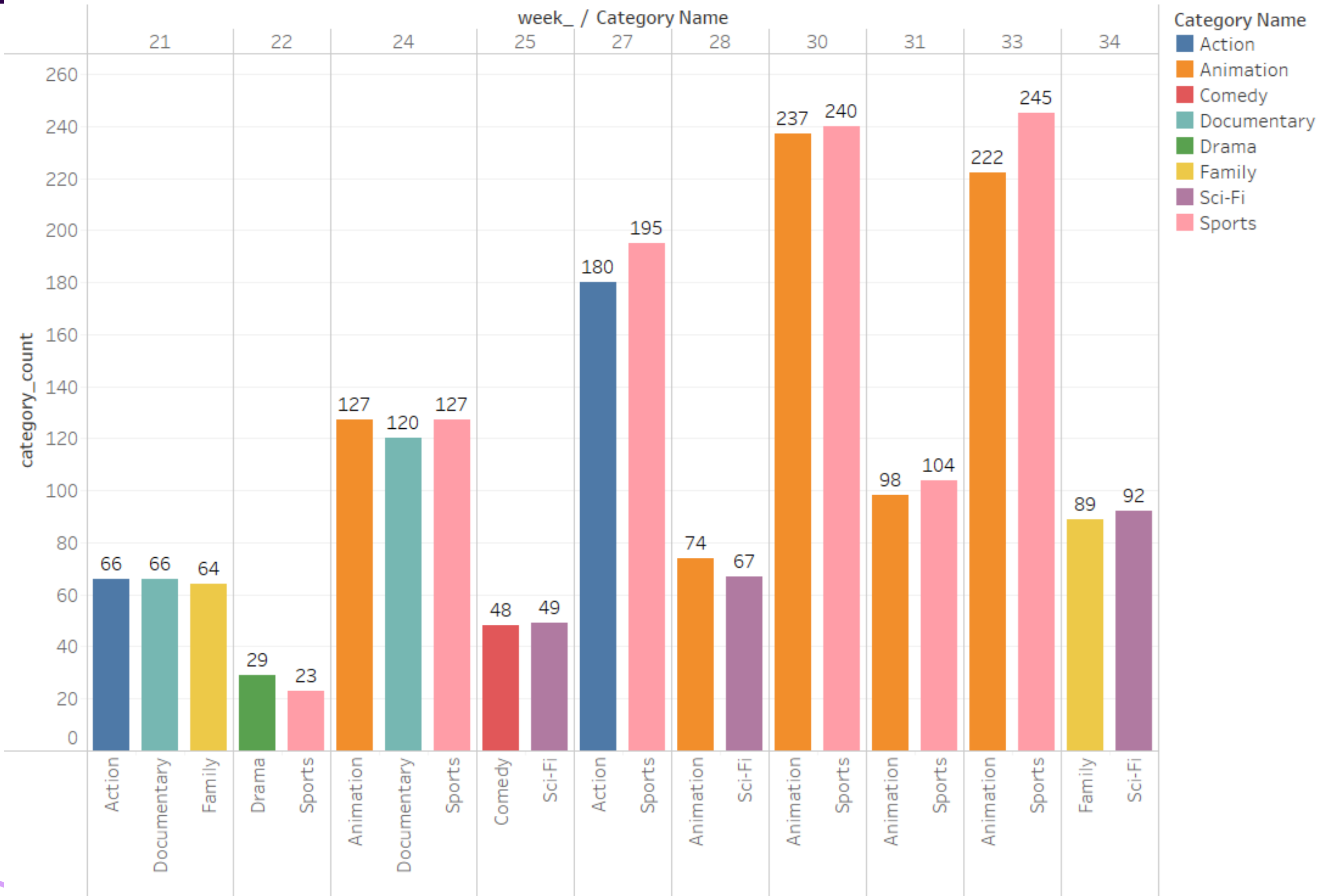




# DAILY REVENUE & RENTAL COUNT



# TOP CATEGORY of WEEK



Sum of category\_count for each Category Name broken down by week\_. Color shows details about Category Name. The marks are labeled by sum of category\_count. The view is filtered on week\_, which excludes 07.

# Impact

- Streamlined inventory management
- Targeted Marketing
- Efficient Resource allocation
- Revenue Maximization
- Improved Customer selection





**THANK  
YOU**