


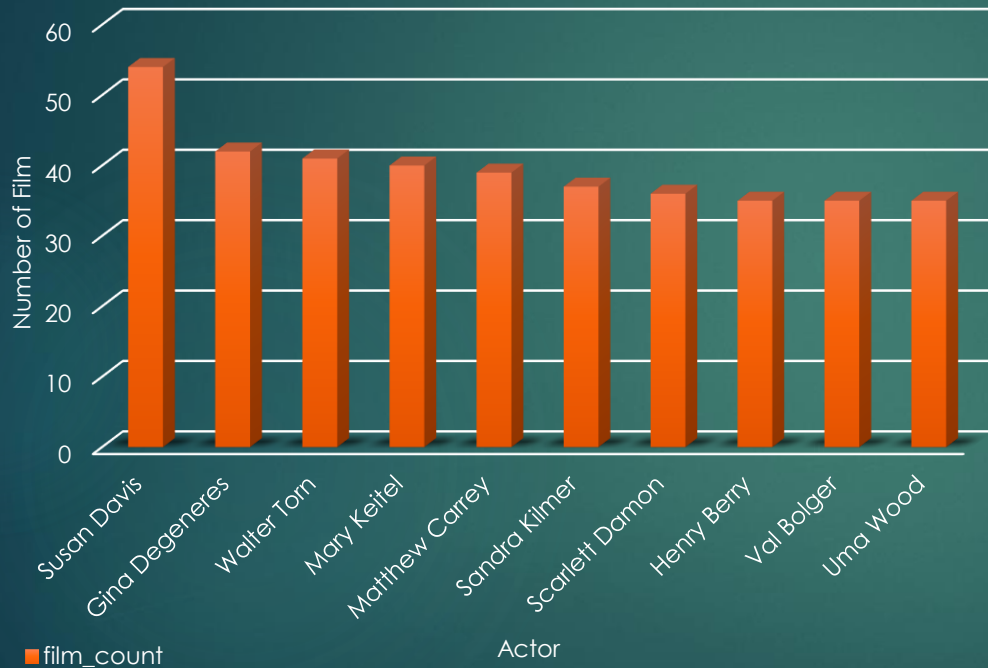
Programming for Data Science with Python



Project 1 : Investigate a Relational Database
DVD-Rental

Question 1: Find the top 10 actors with the highest number of films they have appeared in.

Top 10 Actor



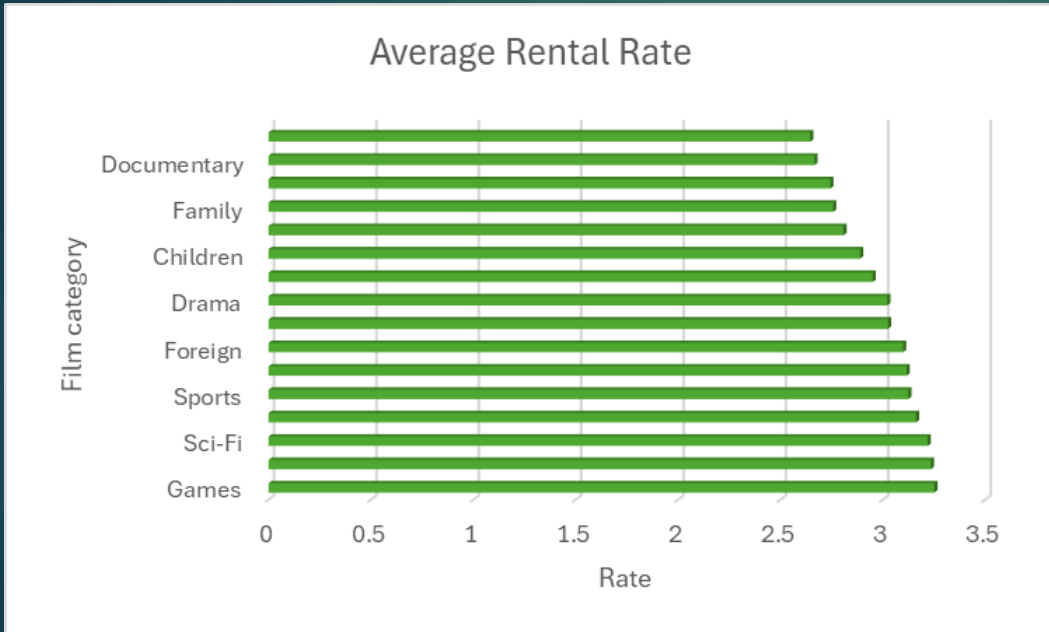
Blockbuster Brilliance: The Top and Bottom Stars

Susan Davis: Leads with an impressive 54 films, solidifying her status as a cinematic powerhouse.

Uma Wood: Ties at the bottom with 35 films, showcasing consistent dedication to her craft.

Susan Davis shines as the top performer with 54 films, while Uma Wood holds her own with 35 films, demonstrating resilience and commitment in the world of cinema.

Question 2: Calculate the average rental rate for films in each category.



1. ****Games (3.25)****: Thrilling adventures for adrenaline junkies.
2. ****Travel (3.24)****: Journeys to exotic destinations for armchair explorers.
3. ****Sci-Fi (3.22)****: Futuristic worlds brimming with imagination.
4. ****Comedy (3.16)****: Light-hearted laughs for all ages.
5. ****Sports (3.13)****: Adrenaline-pumping action and triumph.
6. ****New (3.12)****: Fresh releases for staying current.
7. ****Foreign (3.10)****: Diverse cultures and international flair.
8. ****Horror (3.03)****: Spine-chilling thrills and scares.
9. ****Drama (3.02)****: Compelling narratives and emotional depth.
10. ****Music (2.95)****: Melodic journeys and rhythmic beats.

From heart-pounding adventures to tear-jerking dramas, each genre offers a unique cinematic experience, catering to diverse tastes and preferences

Question 3: The top 10 customers based on the total amount they have spent.



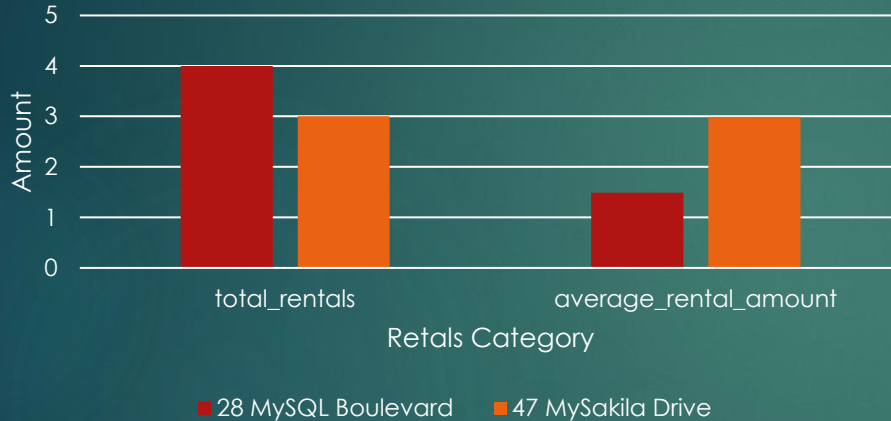
Top Spenders:

1. ****Eleanor Hunt****: Leading the pack with \$211.55 spent.
2. ****Karl Seal****: Close behind with \$208.58 spent.
3. ****Marion Snyder****: Rounds out the top three with \$194.61 spent.
4. ****Rhonda Kennedy****: Fourth place with \$191.62 spent.
5. ****Clara Shaw****: Fifth place with \$189.60 spent.
6. ****Tommy Collazo****: Sixth place with \$183.63 spent.
7. ****Ana Bradley****: Seventh place with \$167.67 spent.
8. ****Curtis Irby****: Eighth place with \$167.62 spent.
9. ****Marcia Dean****: Ninth place with \$166.61 spent.
10. ****Mike Way****: Tenth place with \$162.67 spent.

These top spenders contribute significantly to the business, demonstrating their loyalty and support through their purchases.

Question 4: The total number of rentals for each store and the average rental amount.

Total and average rental amount of each store

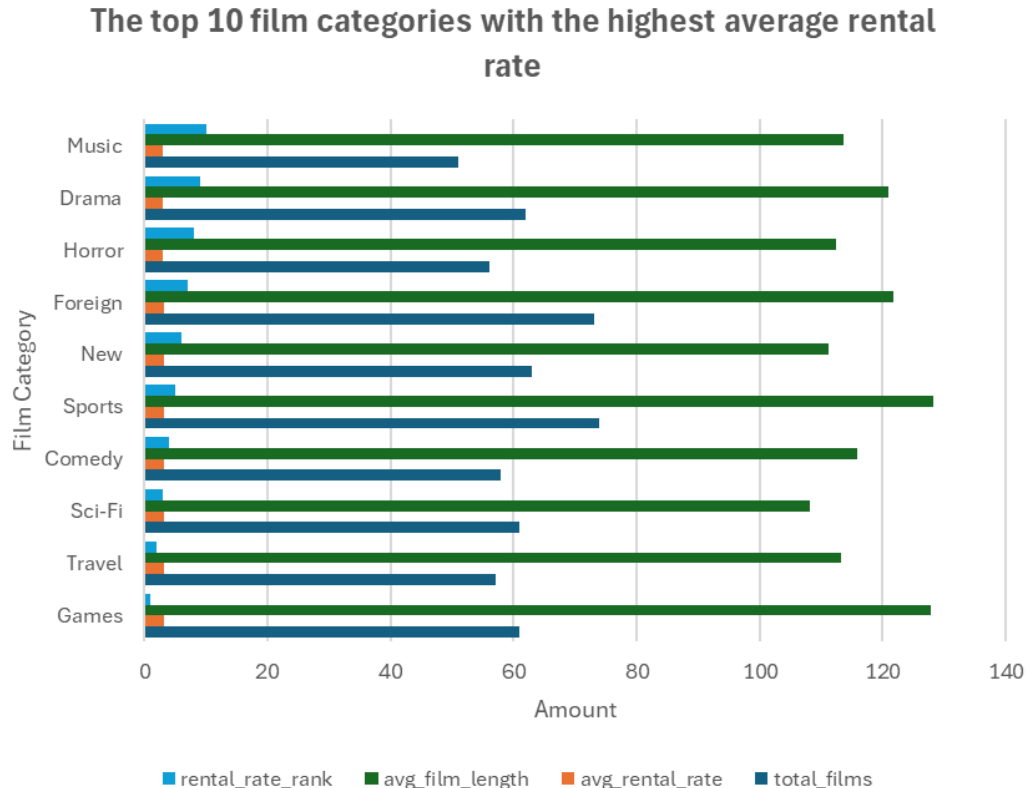


Store Performance.

1. ****Store 2 (28 MySQL Boulevard)****: Processed 4 rentals with an average rental amount of \$1.49.
2. ****Store 1 (47 MySakila Drive)****: Processed 3 rentals with an average rental amount of \$2.99.

These statistics provide a snapshot of each store's rental activity and average rental amount, offering insights into their performance and customer engagement.

Question 5 : The top 10 film categories with the highest average rental rate.



Film Category Analysis:

1. ****Games****: 61 films, average rental rate: 3.25, average length: 127.84 mins.
2. ****Travel****: 57 films, avg. rental rate: 3.24, avg. length: 113.32 mins.
3. ****Sci-Fi****: 61 films, avg. rental rate: 3.22, avg. length: 108.20 mins.
4. ****Comedy****: 58 films, avg. rental rate: 3.16, avg. length: 115.83 mins.
5. ****Sports****: 74 films, avg. rental rate: 3.13, avg. length: 128.20 mins.
6. ****New****: 63 films, avg. rental rate: 3.12, avg. length: 111.13 mins.
7. ****Foreign****: 73 films, avg. rental rate: 3.10, avg. length: 121.70 mins.
8. ****Horror****: 56 films, avg. rental rate: 3.03, avg. length: 112.48 mins.
9. ****Drama****: 62 films, avg. rental rate: 3.02, avg. length: 120.84 mins.
10. ****Music****: 51 films, avg. rental rate: 2.95, avg. length: 113.65 mins.

This condensed summary provides key information about each film category's film count, average rental rate, and average film length in a more concise format.



Thank you very much.