Movie Dashboard using MongoDB

Project Report Submitted By:

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1. Description of Data

The dataset used in this project is the **MongoDB sample movie dataset** (sample_mflix.movies). It contains metadata about movies, including title, genre, ratings, language, and actors. This dataset is structured in **JSON format** and is stored in a NoSQL database, allowing for flexible querying and data manipulation.

2. Dataset Attributes Description

The dataset consists of various attributes relevant to movies. Some of the key attributes are:

- **Title**: The name of the movie.
- **Genres**: A list of genres associated with the movie.
- **IMDB Rating**: The rating of the movie on IMDb.
- **Metacritic Score**: A critic-based score for the movie.
- **Languages**: The languages in which the movie is available.
- **Countries**: The countries where the movie was produced.
- **Actors**: The cast members appearing in the movie.
- **Year**: The release year of the movie.
- **Runtime**: The duration of the movie in minutes.

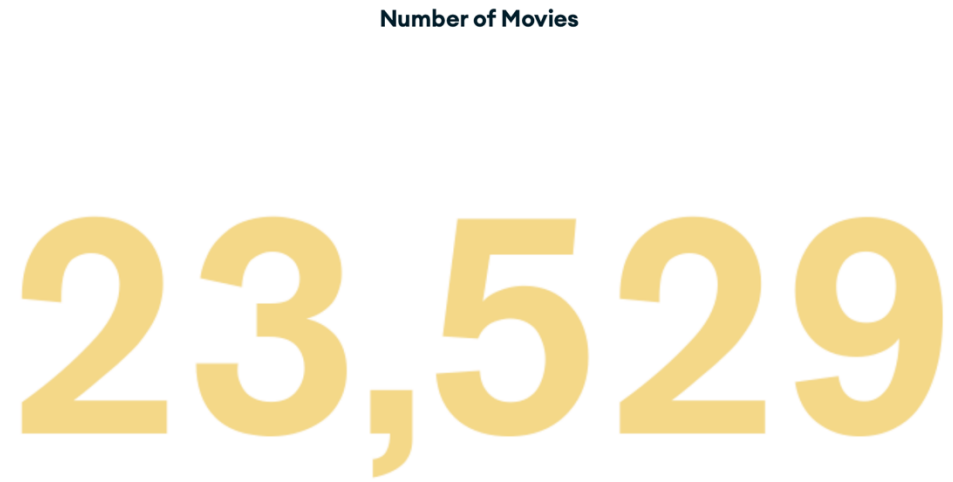
3. Project Objectives | Problem Statements

This project aims to:

- Develop an interactive **Movie Dashboard** using MongoDB and visualization tools.
- Analyze **movie trends** based on attributes like ratings, genres, languages, and actors.
- Identify patterns that can help decision-makers in the film industry.
- Provide **managerial insights** for content production and distribution strategies.

4. Analysis of Each Chart in the Dashboard

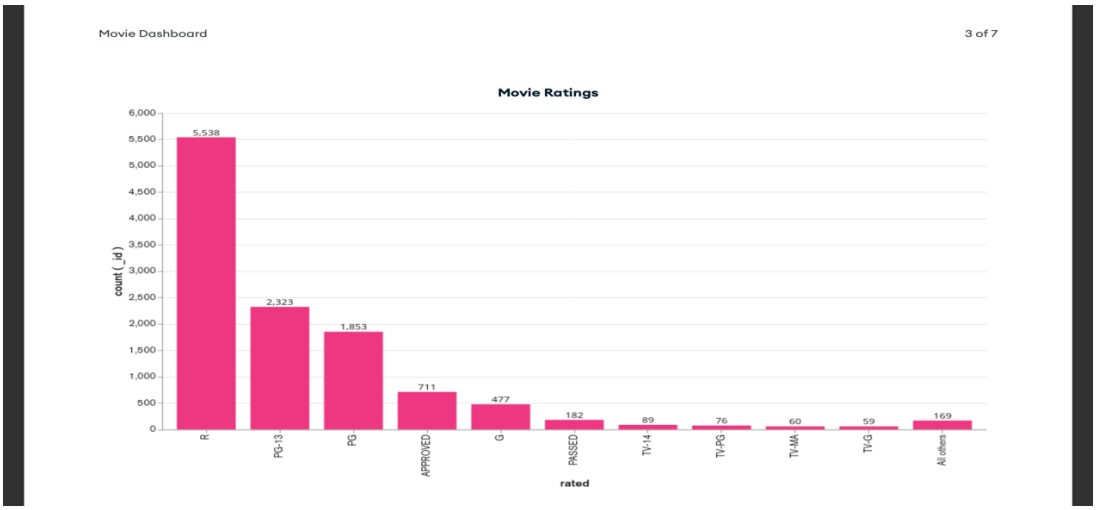
4.1 Number of Movies



Analysis: This chart displays the total count of movies present in the dataset. It helps in understanding the dataset scale and provides a foundation for further exploration.

Observation: The dataset contains a diverse range of movies, indicating a rich variety of information for analysis.

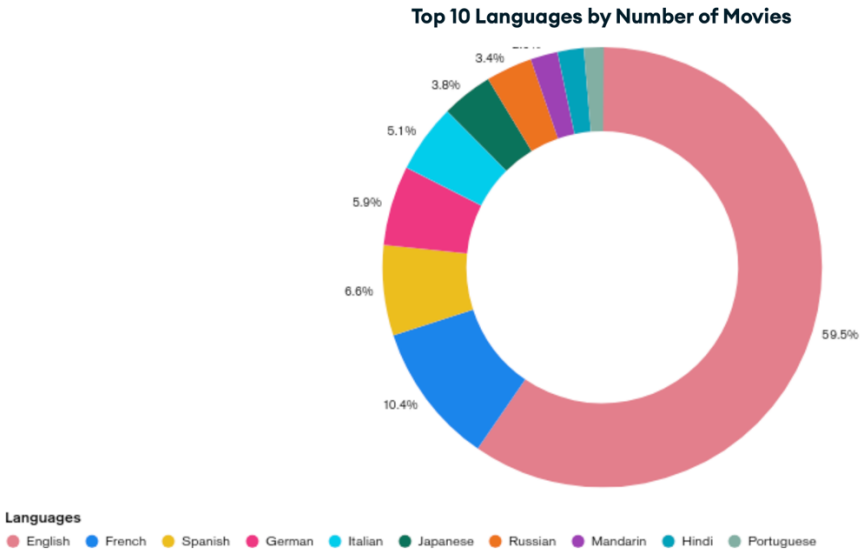
4.2 Movie Ratings



Analysis: A distribution of IMDb ratings for movies, showcasing how ratings are spread across different films.

Observation: A significant number of movies have IMDb ratings in the **6-8 range**, suggesting that most movies receive moderate to good reviews.

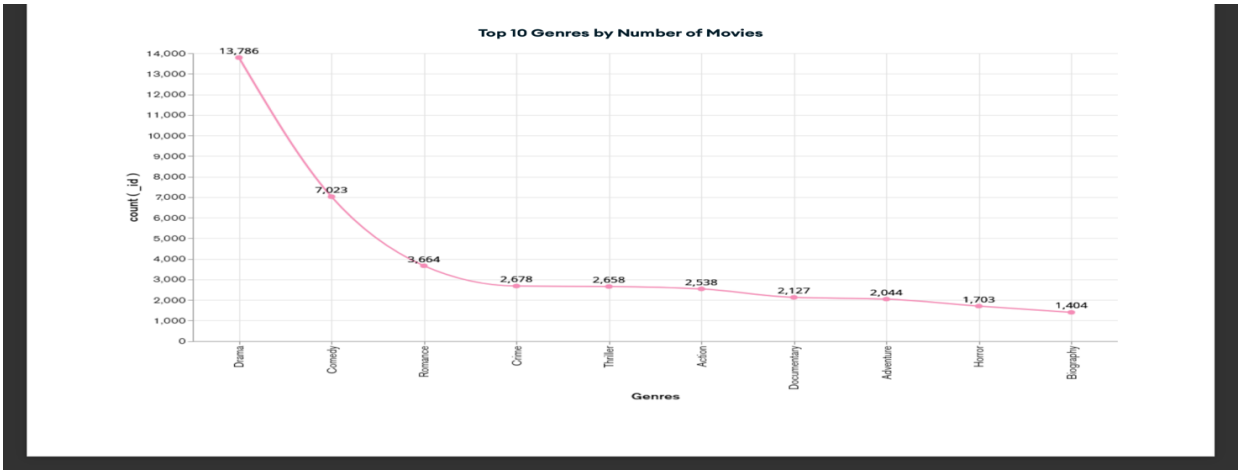
4.3 Top 10 Languages by Number of Movies



Analysis: This visualization highlights the most common languages used in movies.

Observation: English dominates the dataset, followed by languages like French, Spanish, and Hindi. This can indicate production trends and audience preferences.

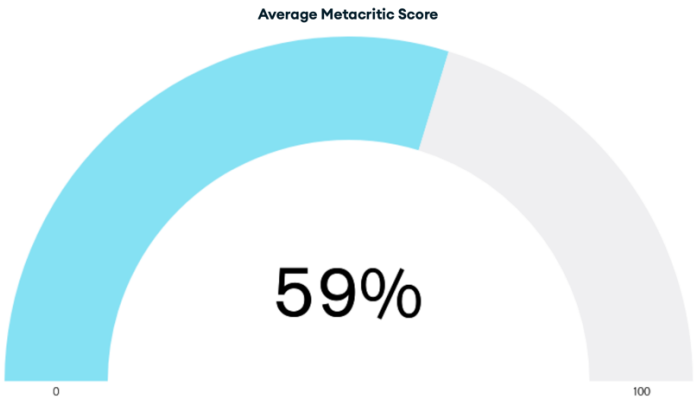
4.4 Top 10 Genres by Number of Movies



Analysis: The most popular movie genres based on count.

Observation: Genres such as **Drama, Comedy, and Action** are the most frequently occurring, suggesting audience preferences for storytelling styles.

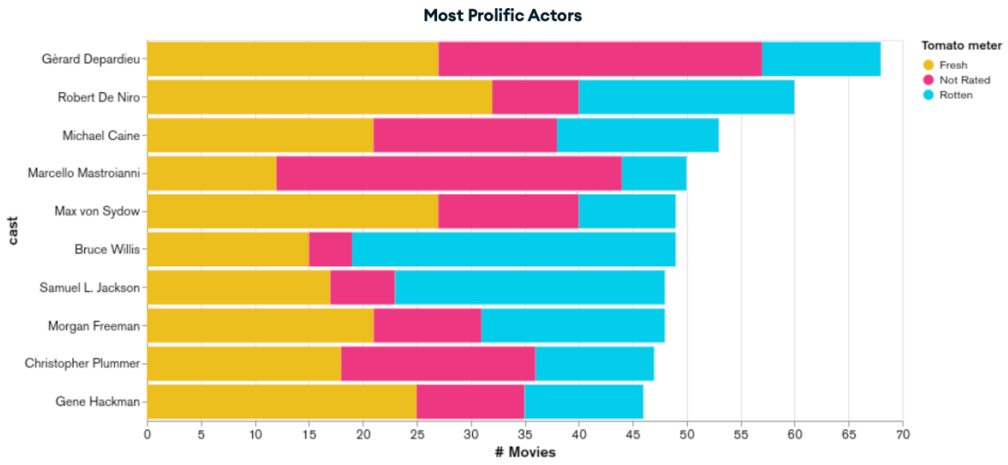
4.5 Average Metacritic Score



Analysis: This chart presents the average Metacritic scores for movies.

Observation: The average score is around **50-70**, indicating that most movies receive mixed to positive reviews from critics.

4.6 Most Prolific Actors



Analysis: A ranking of actors based on the number of movies they have appeared in.

Observation: Some actors have significantly more movies in their filmography, which can indicate a long career or involvement in multiple projects.

5. Observations | Findings

- **English movies dominate** the dataset, but other languages are also well-represented.
- **Drama and Comedy are the most popular genres**, indicating audience preference.
- **Most movies have average ratings (6-8 on IMDb)**, suggesting a concentration of moderately received films.
- **A few actors appear in a large number of movies**, showcasing the varying career spans of film actors.

6. Managerial Insights | Recommendations

- **Film studios** can focus on producing movies in the most popular genres (Drama, Comedy, Action) to maximize audience reach.
- **Streaming platforms** can prioritize licensing content in multiple languages to cater to global audiences.
- **Marketing strategies** can be adjusted based on ratings data, with better promotions for movies with high ratings.
- **Actor popularity** insights can help in casting decisions, ensuring bankable stars for better commercial success.

7. Conclusion and Future Prospects

This project successfully visualized and analyzed trends in the movie dataset. The insights derived can help in decision-making for movie production, distribution, and marketing. Future improvements include:

- **More advanced analytics** using AI/ML to predict movie success.
- **Deeper genre-specific analysis** for niche targeting.
- **Integration with live movie databases** for real-time trends.