GROUP 4 MOVIE RECOMMENDATION SYSTEM

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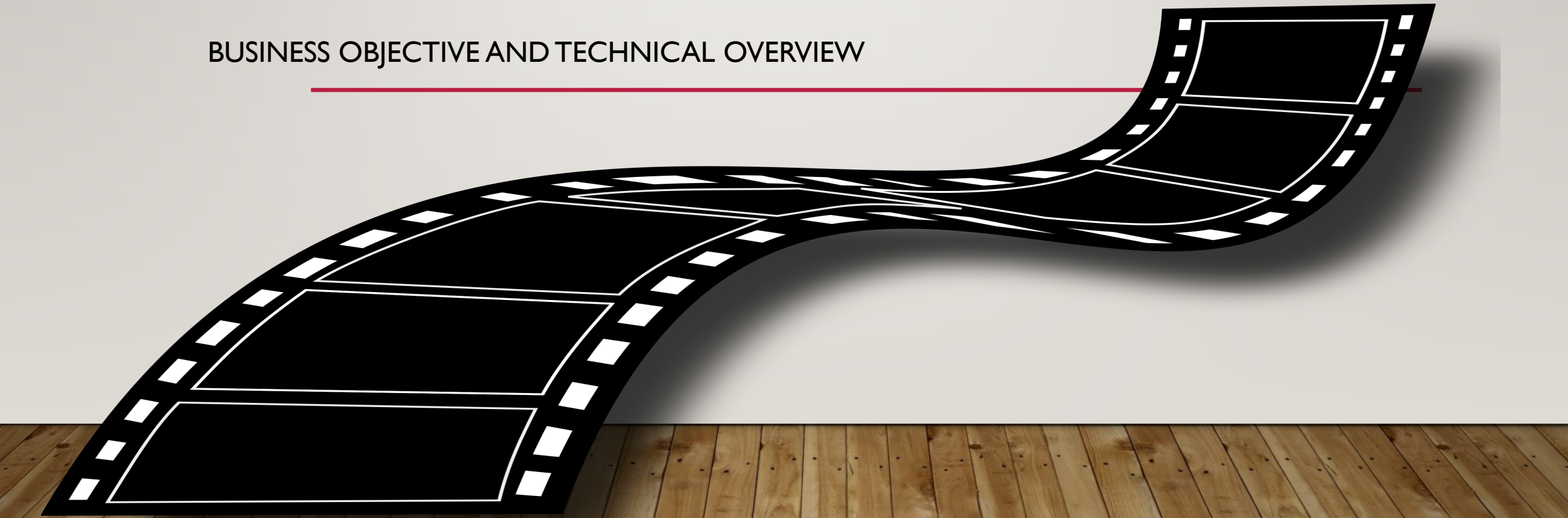
MOVIE RECOMMENDATION SYSTEM

BUSINESS OBJECTIVE AND TECHNICAL OVERVIEW



BUSINESS OBJECTIVE

- The movie recommendation system aims to enhance user engagement and satisfaction by providing personalized recommendations based on user ratings and preferences.

DATA SOURCES

- 1. Ratings Data: User ratings of movies (e.g., ratings.csv).
- 2. Movies Metadata: Information about movies (e.g., movies.csv).
- 3. Tags Data: User-generated tags describing movies (e.g., tags.csv).
- 4. Links Data: External movie IDs (e.g., links.csv).

- These were the datasets used to build the movie recommendation system

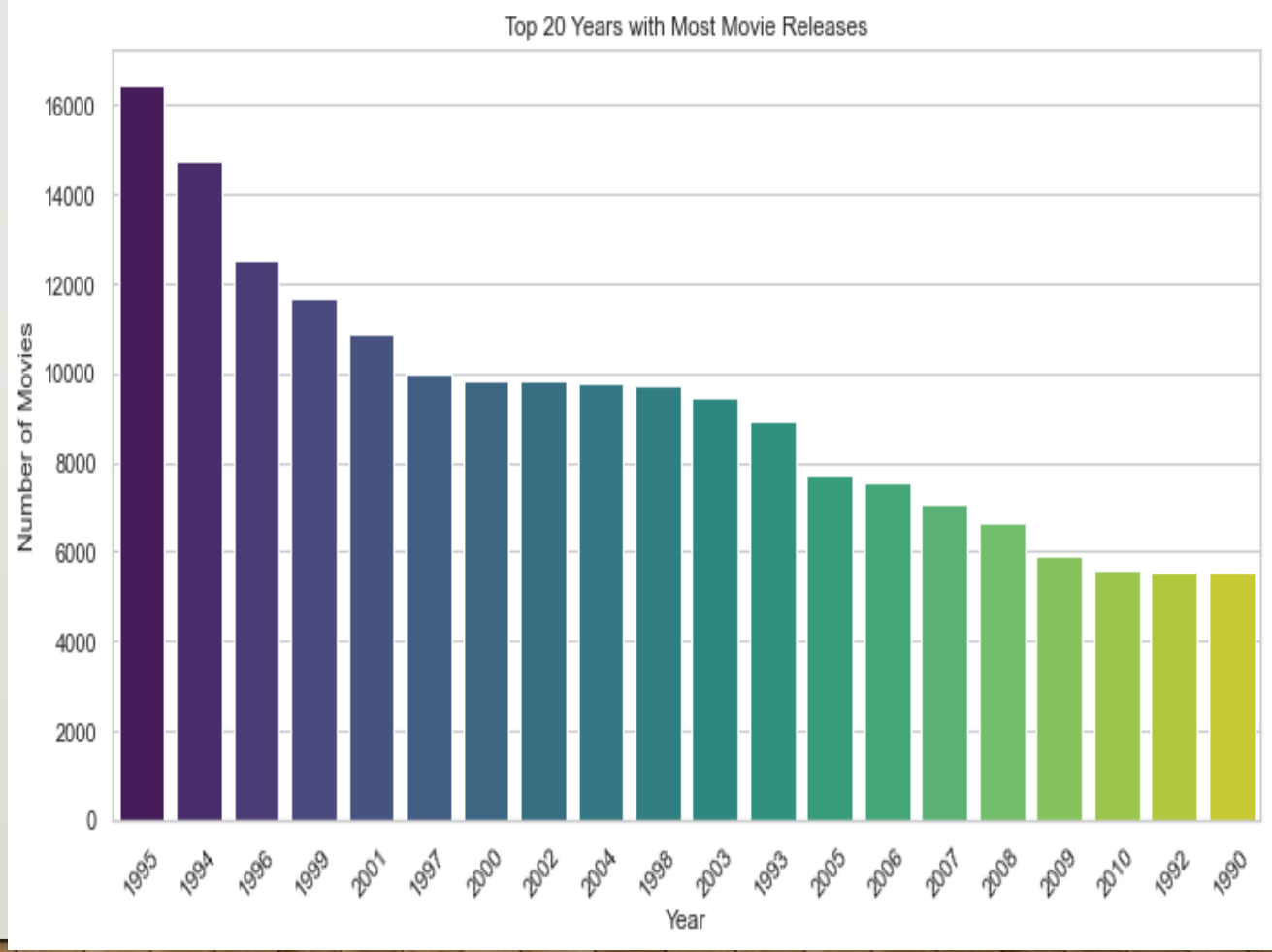
DATA INSIGHTS

ANNUAL MOVIE RELEASES

Across the years numerous movies were released.

Our data clearly captures the number of movies produced over the years.

The year 1995 being the year with the highest movies released



- The released movies are of different genres(Drama comedy,documentaries etc)
- The number of movies per genre also vary DRAMA being the movie genre with highest number
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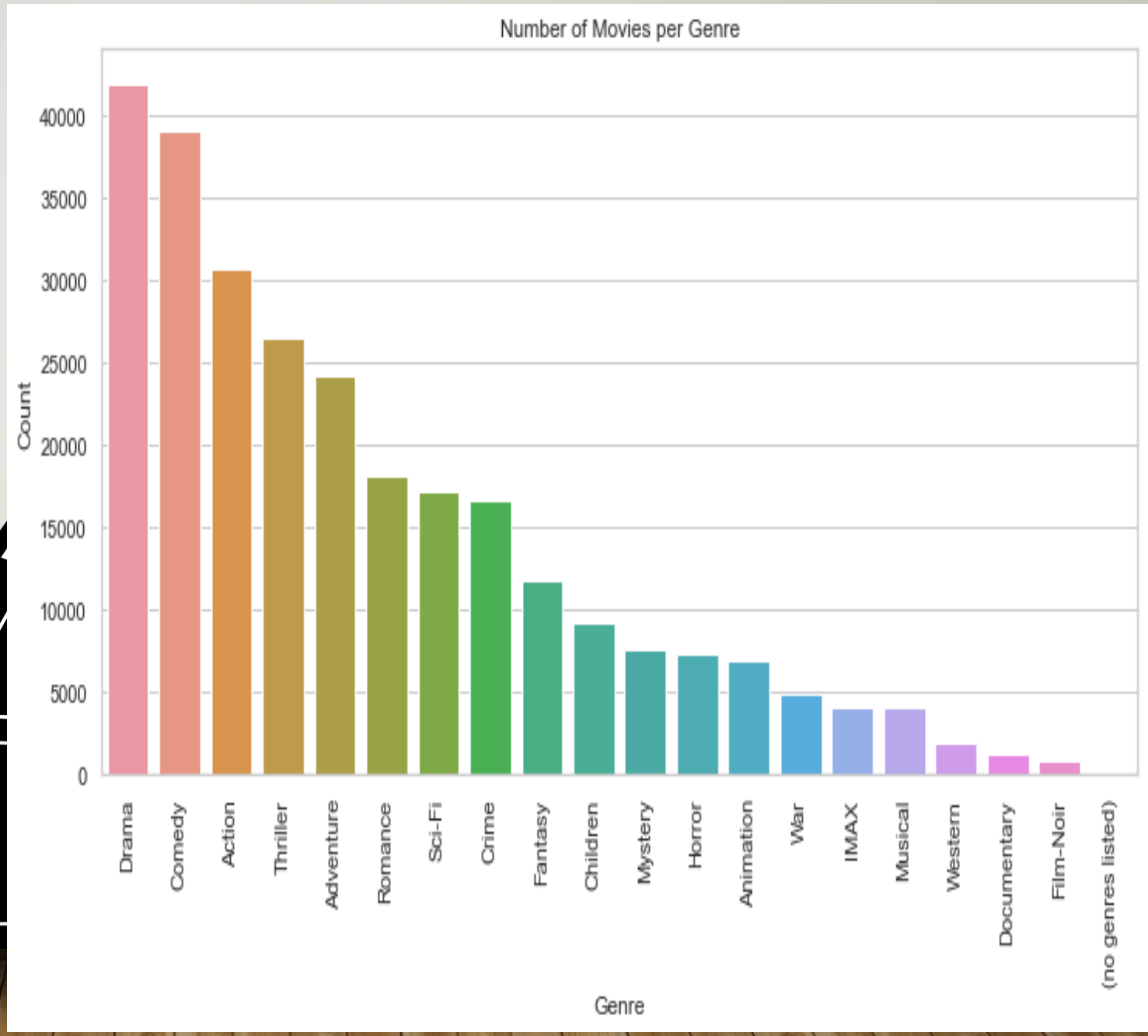

COLLABORATIVE FILTERING (KNN)

- - Uses K-Nearest Neighbors (KNN) to find users or movies that are similar.

  Based on cosine similarity to measure how alike two users/movies are. The

  model suggests items rated highly by similar users.

RECOMMENDATION TECHNIQUES

- 1. Collaborative Filtering: Predicts user preferences based on similar users.
- 2. Content-Based Filtering: Recommends movies similar to those the user has liked based on features.
- 3. Hybrid Methods: Combines both approaches to improve accuracy.

EVALUATION METRICS

- Root Mean Squared Error (RMSE): Measures how close predicted ratings are to actual ratings.
- Mean Absolute Error (MAE): Measures the average magnitude of errors.
- Precision and Recall: Evaluate the relevance of the recommendations.