Group 6 | Jeffrey K. - 2702211525 | Nicholas A.H - 2702213695 | Tyrone Y. - 2702211512

# MOVIE RECOMMENDER SYSTEM:
# Blending Genres and User ratings

## Dataset Description

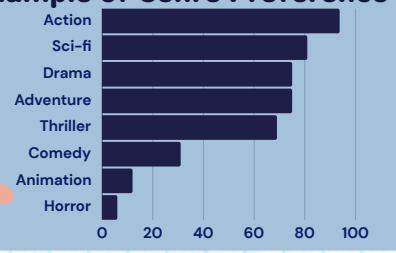
- Variables : User_Id, Movie_Name, Rating, and Genre.
- Movies have multiple genres combined in a single string with | as seperator.
- Ratings are numerical (e.g., 3.5, 5.0).

## Problems To Solve

In the era of streaming platforms, viewers are **overwhelmed with choices**. Finding a movie that matches personal preferences can be **time-consuming**.

And that's why recommendation system addresses this by **analyzing user ratings and genres** to suggest personalized options.

## Example of Genre Preference




## MODEL

**Singular Value Decomposition (SVD)**

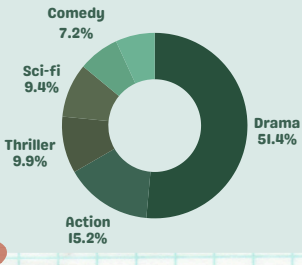
a widely used and efficient technique in collaborative filtering

## Objectives

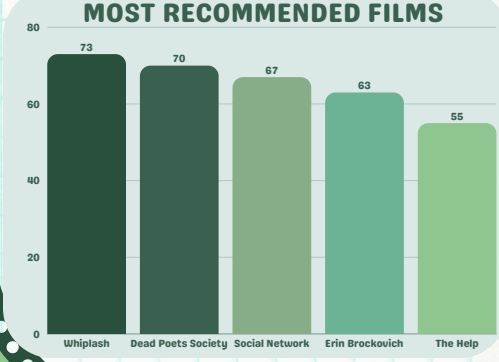
Develop a recommendation system using user ratings and genres.

Gaining analytical insight from recommended films

## Most Recommended Genres




## MOST RECOMMENDED FILMS




## EVALUATION

**Root Mean Square Error (RMSE)** evaluates a model's performance by quantifying how close the model's predictions are to the actual observed values in a dataset.

Baseline RMSE: **1.04159**
SVD RMSE: **0.88078**

A lower RMSE value for the SVD model indicates its superior performance, as it provides more accurate predictions compared to the global average approach.

## Conclusion

Our analysis shows that the model effectively identifies user preferences, emphasizing globally popular films and genres like **drama and action**, as seen with narrative-driven movies like **Whiplash**, while still offering diverse recommendations to cater to varied tastes.