



# SPECTRUM'S STREAMING AND PRODUCTION VENTURE

# AGENDA

1 Company's purpose

2 Data

3 Popularity Anlysis

4 Model Prediction

5 Business Suggestions

6 Next Steps

# COMPANY PURPOSE

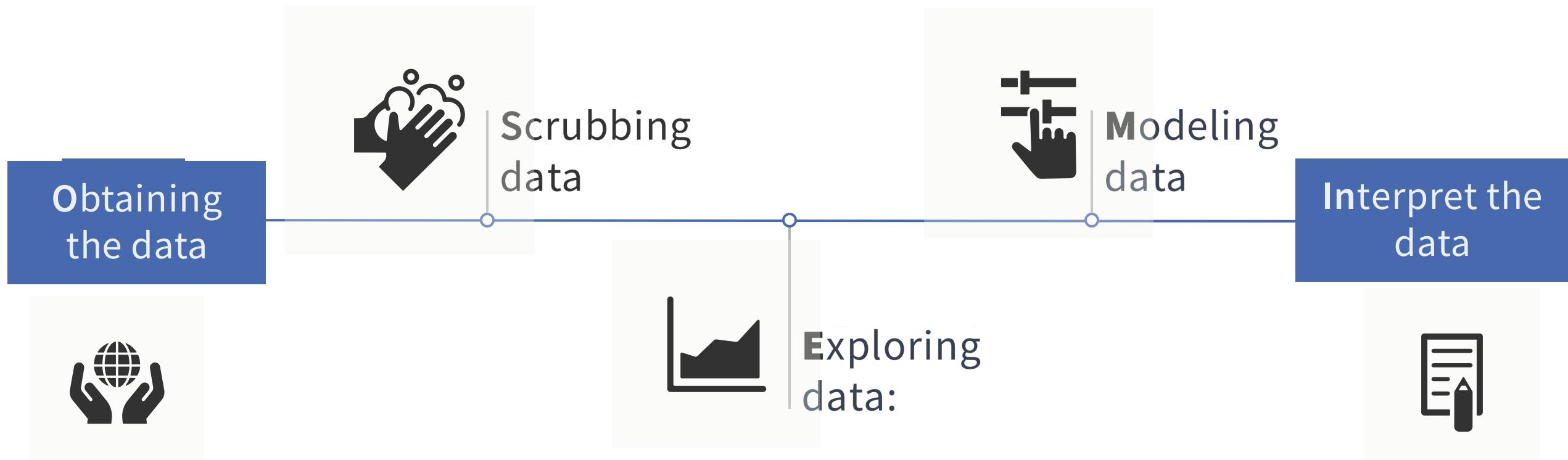
Spectrum venture into the streaming industry & build a production company.



We use machine learning to predict movie popularity and provide personalized recommendations for Spectrum.

# DATA ANALYSIS PROCESSES

OSEMİN



# DATA

— Kaggle —

— The Movie DB —

5,000 Movies

Years 1916 - 2017



Popularity	Title	Budget	Runtime (min.)	Cast	Release Date	Languages	Genres
112	The Dark Knight Rises	250 Million	165	Christian Bale	2012-07-16	English	Action
6.5	City Island	6 Million	104	Andy García	2010-03-19	English	Drama
26.2	The Break-Up	52 Million	106	Vince Vaughn	2006-06-02	English	Romance

# POPULARITY

The level of interest and engagement with movies based on the behavior of IMDB users. Ranges 1-1000.

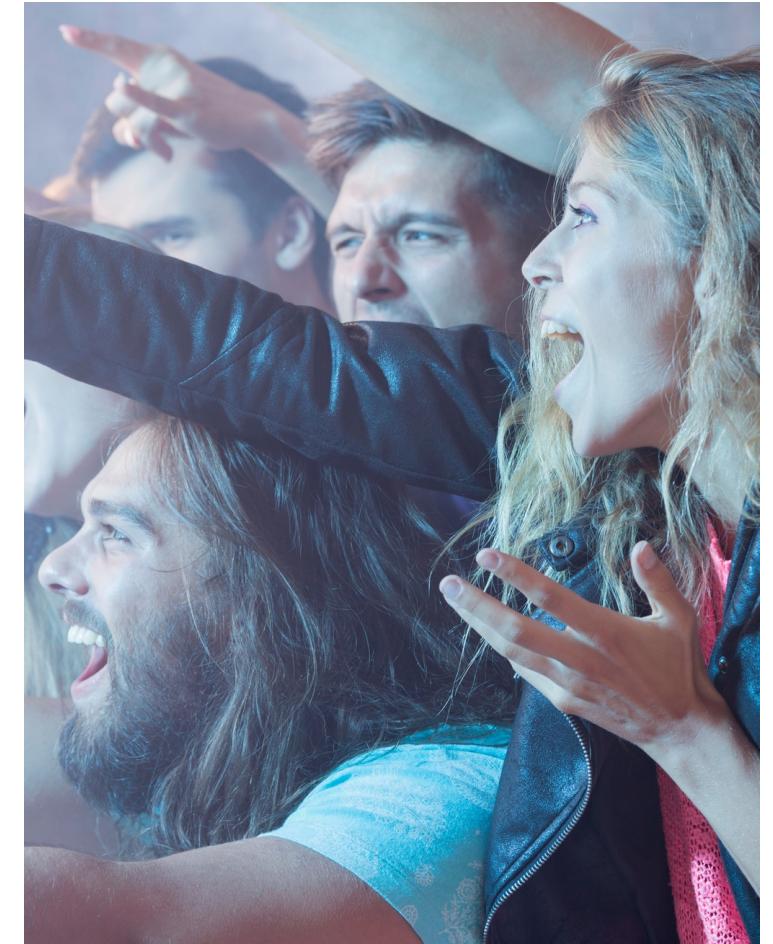
# POPULARITY DISTRIBUTION

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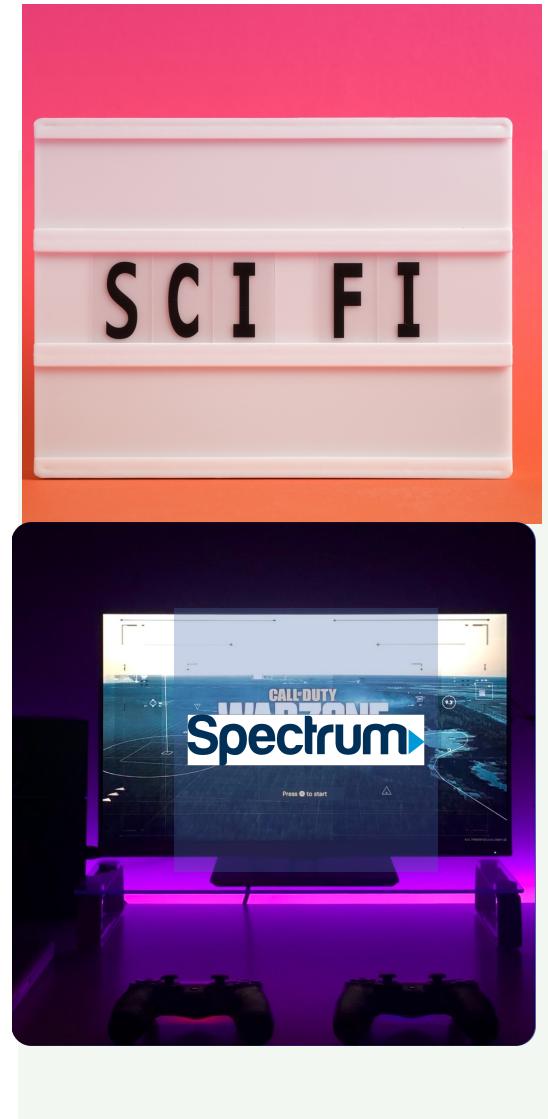
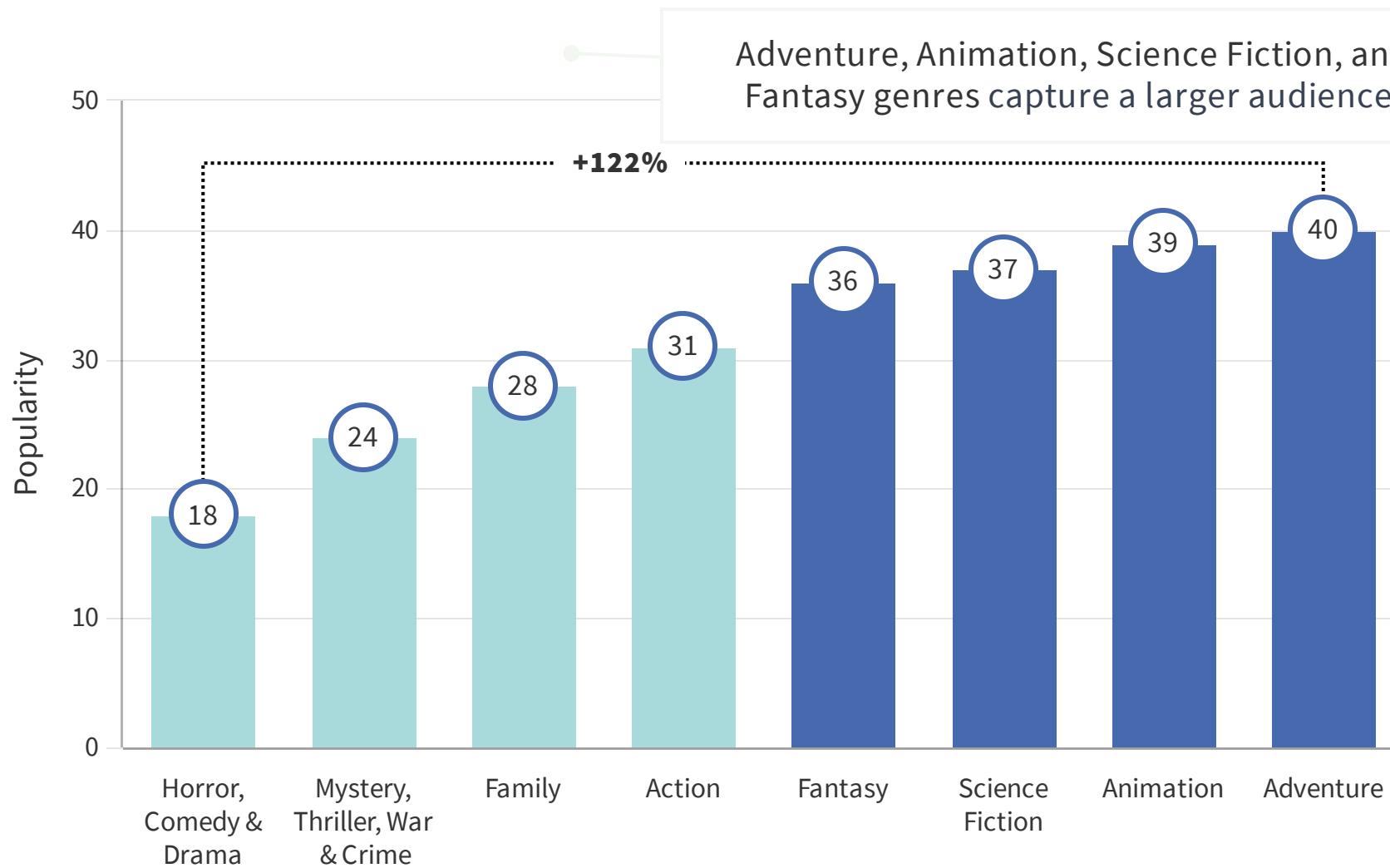
**2%** 🔥 🔥 🔥 🔥 🔥 🔥 🔥 🔥 🔥  
100 and higher

**8%** 🔥 🔥 🔥 🔥 🔥 🔥 🔥 🔥  
50 to 100

**90%** 🔥 🔥 🔥 🔥 🔥 🔥 🔥 🔥 🔥  
less than 50

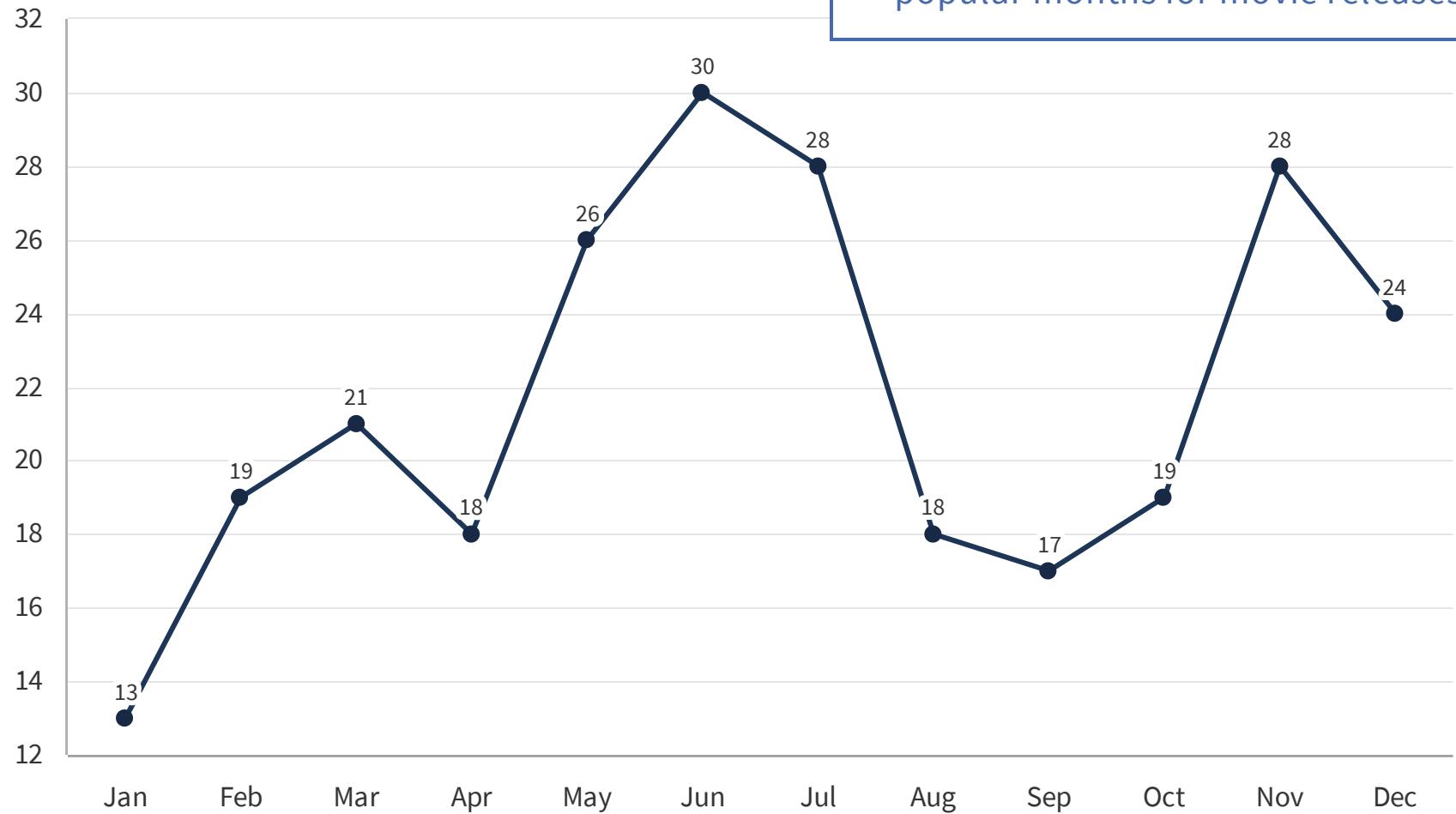


# POPULAR GENRES



# POPULARITY TRENDS BY RELEASE MONTH

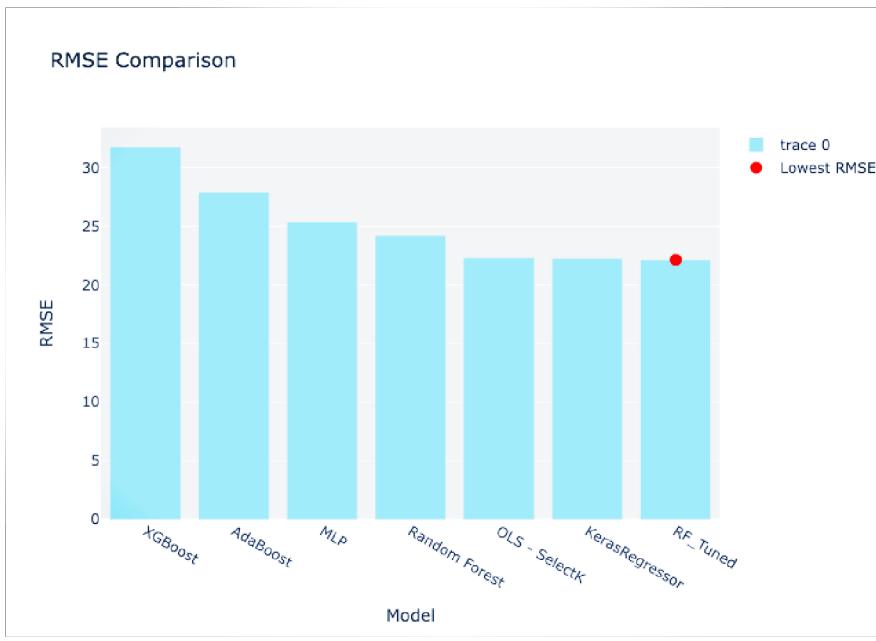
Jun, Jul, Nov, and Dec are the most popular months for movie releases.



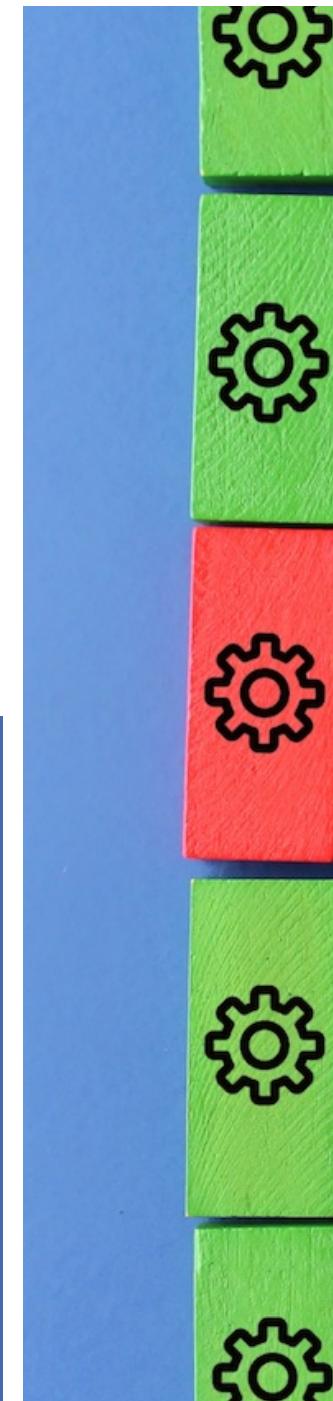
# TOP PRODUCTION COMPANIES: AVERAGE POPULARITY

Among the top production companies, there are promising opportunities for potential partnerships.





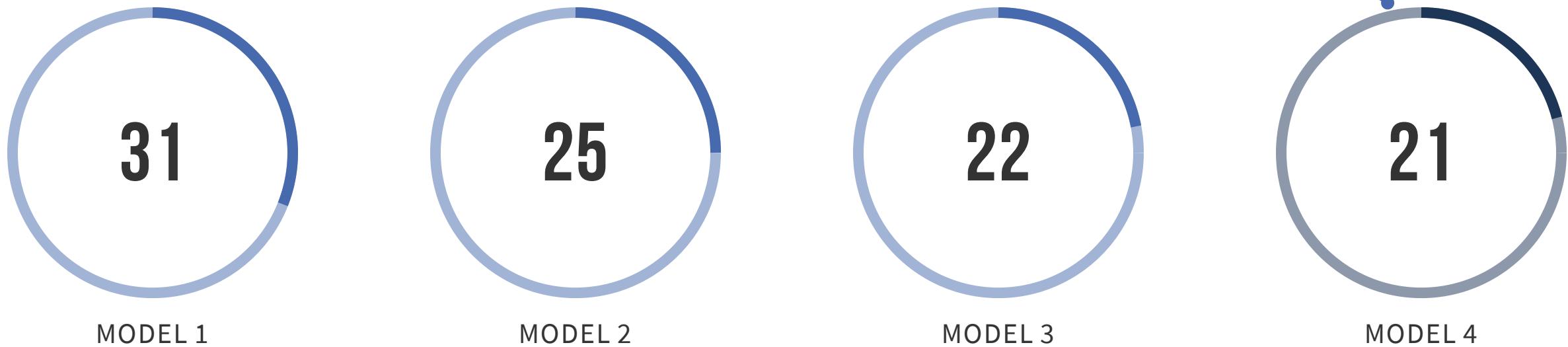
WE USE ROOT MEAN SQUARED ERROR ('RMSE') TO MEASURE THE AVERAGE PREDICTION ERROR OF A MODEL.



Lower RMSE signifies higher accuracy and better performance in predicting movie popularity.

# COMPARING PREDICTIVE MODELS

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A man with a beard and short hair, wearing a white hoodie, sits on a light-colored sofa, looking intently at something off-camera to his left. He is holding a clear bowl filled with popcorn. A large, light-colored blanket is draped over the back of the sofa. In the background, there's a bookshelf with various items. The overall atmosphere is casual and suggests someone watching a movie or TV show.

# RECOMMENDATION SYSTEM

# ENHANCING VIEWER EXPERIENCE

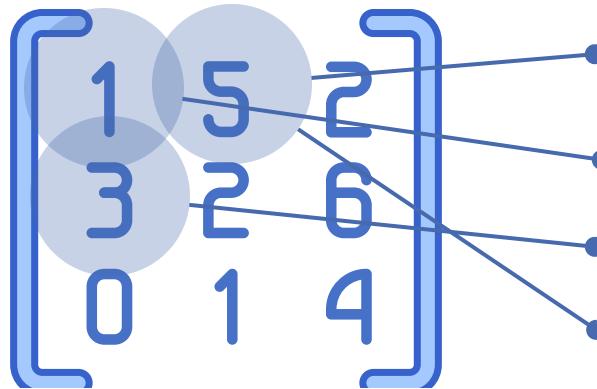
Type in what genre you want to watch:



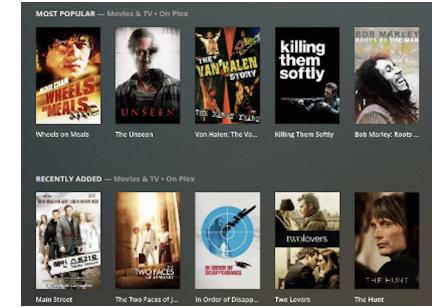
The system recommends movies matching the viewer's preferred genre.



System converts genre preference into a numerical representation.



Finding similar movies based on the cosine similarity scores.



$\text{Af cos}$



# RECOMMENDATION SYSTEM RESULTS

Text

drama

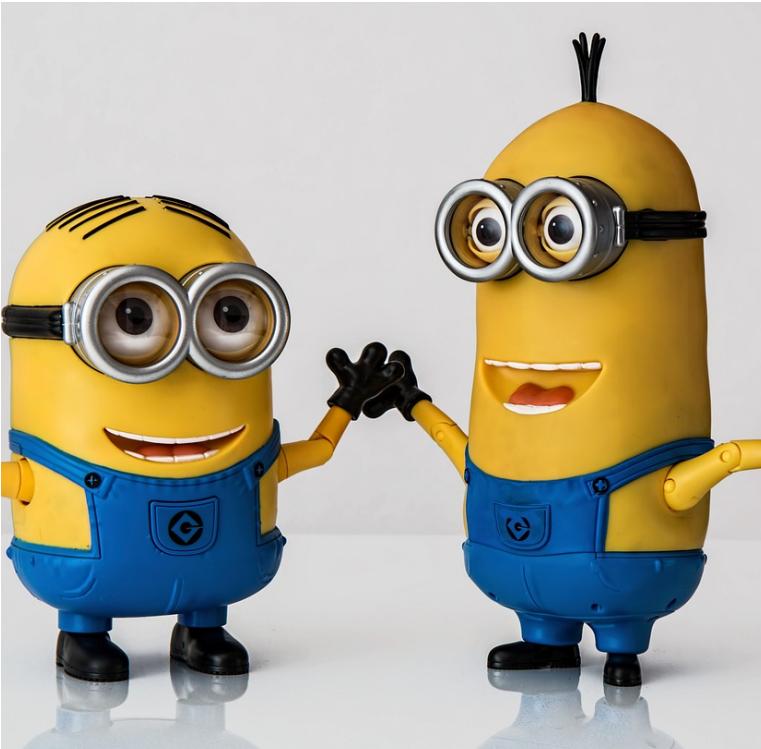
Clear      Submit

original\_title    similarity    genres

original_title	similarity	genres
Reality Show	0.5389901196883722	[]
Deadfall	0.5209880753439743	['Crime', 'Drama', 'Thriller']
Paris, je t'aime	0.520317328832654	['Drama', 'Romance']
A Most Violent Year	0.5053758591901814	['Crime', 'Drama', 'Thriller']
Swimming Pool	0.5044684070056547	['Thriller', 'Crime']
The Face of an Angel	0.5017418597449019	['Thriller', 'Drama']
The Helix... Loaded	0.5001806211330134	['Action', 'Comedy', 'Science Fiction']
Meet the Spartans	0.49902198936845904	['Comedy']
Nueve Reinas	0.49839103190427825	['Crime', 'Drama', 'Thriller']
Sliding Doors	0.4975934599139541	['Comedy', 'Drama', 'Fantasy', 'Romance']

Our recommendation system drives customer engagement and maximizes user satisfaction.

# BUSINESS RECOMMENDATIONS



Focus on Popular Genres



Collaborate with leading production companies



Maximize Success with July Releases

# NEXT STEPS

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Gather More Recent Data

Collaborate with  
Influencers & Test New  
Marketing Strategies

Compare Movie and TV  
Show Popularity



Thank you!



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