Movie Recommender

Nick and Dan

NEXTFLIK
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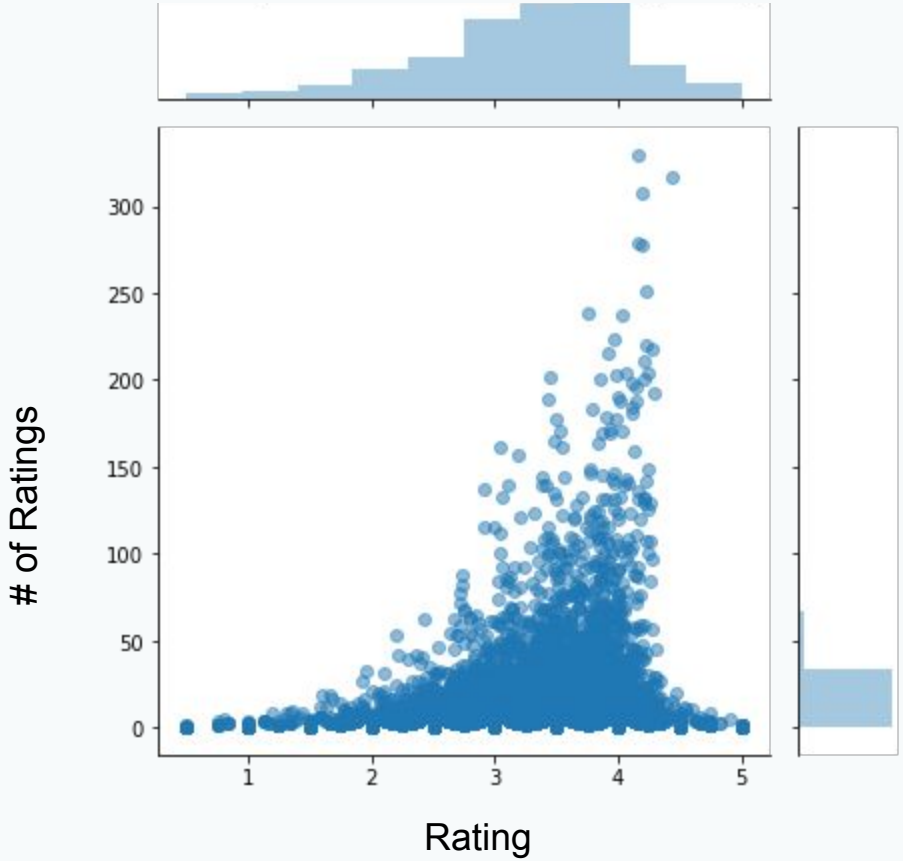
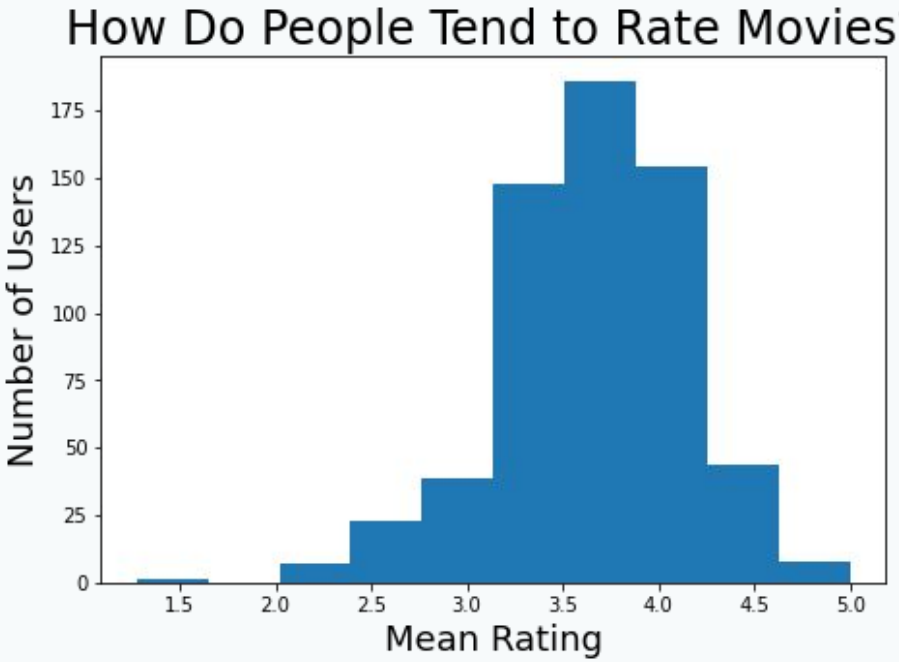
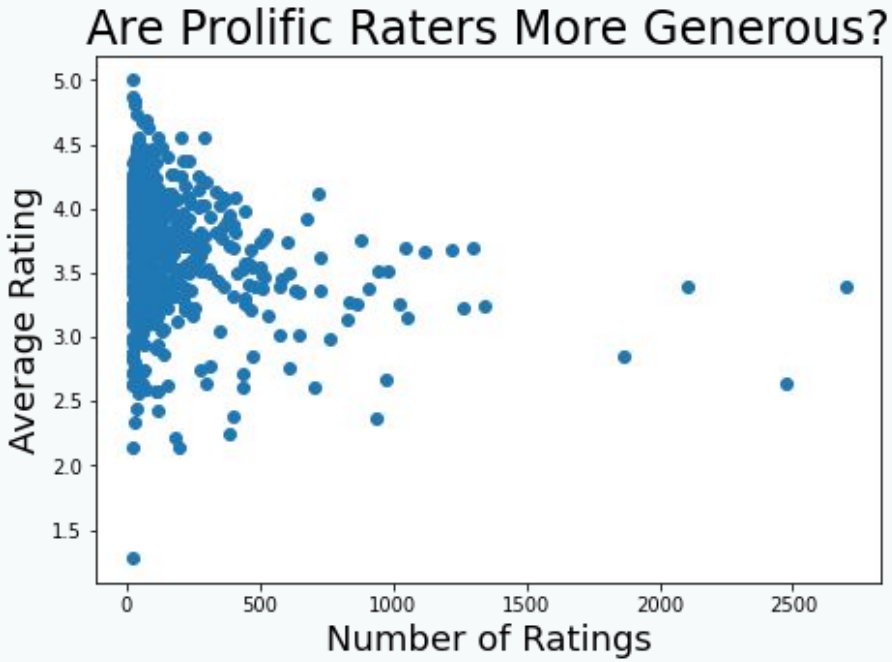
Business Problem

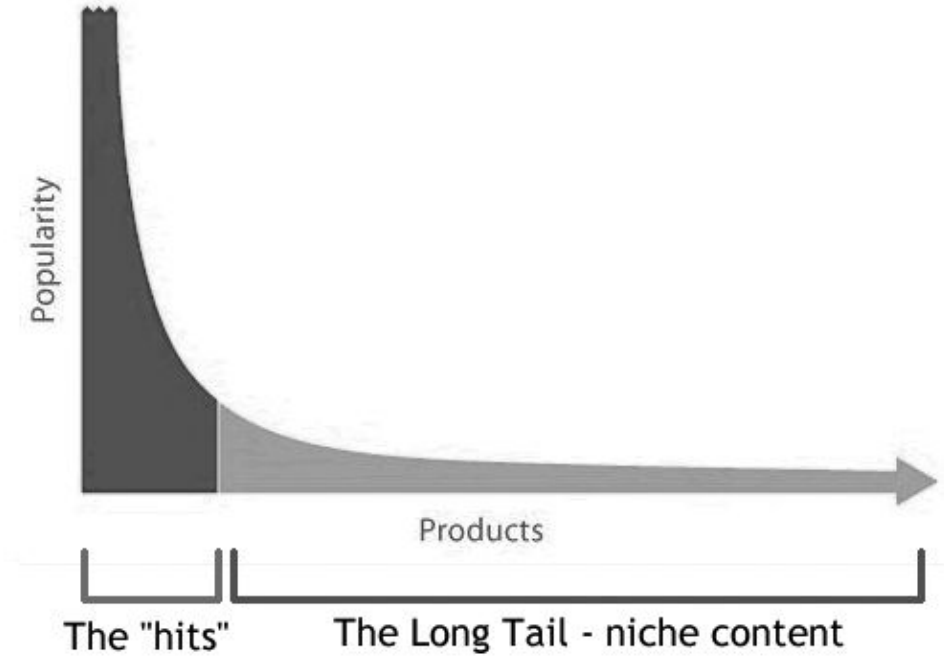
- 9724 movies
- 610 users
- 19 genres
- Need a way to connect users with movies they haven’t seen yet.

Do Popular Movies Have Higher Average Ratings?




How Do People Tend to Rate Movies?
Number of Users
Mean Rating
0
25
50
75
100
125
150
175
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

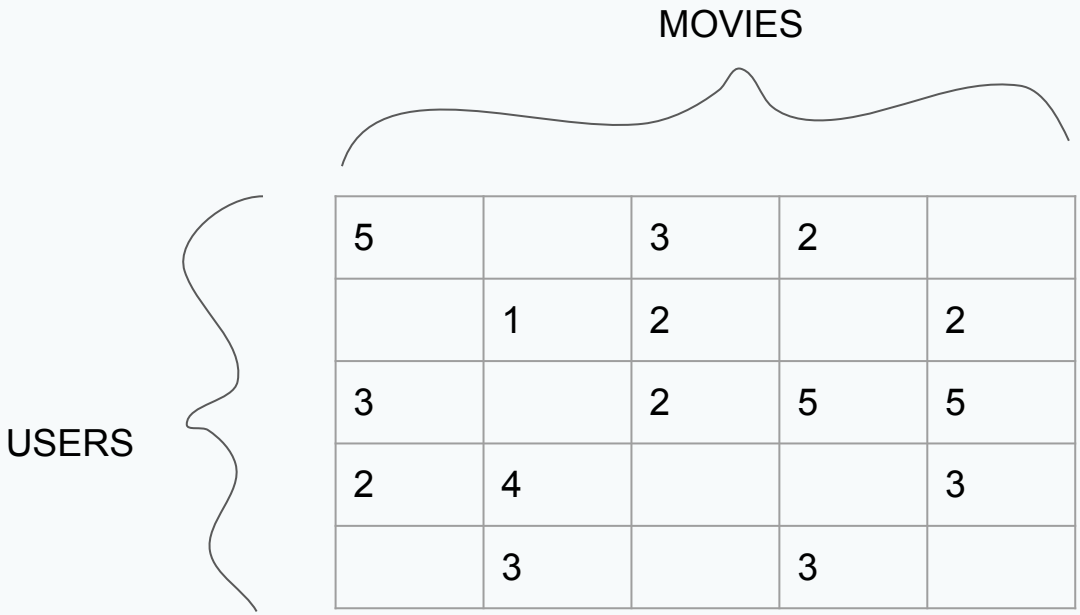

Are Prolific Raters More Generous?
Average Rating
Number of Ratings
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
0
500
1000
1500
2000
2500

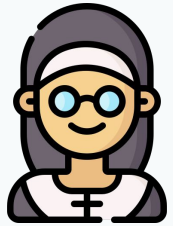

Popularity
Products
The "hits"
The Long Tail - niche content

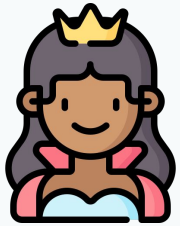
Manual Feature Creation

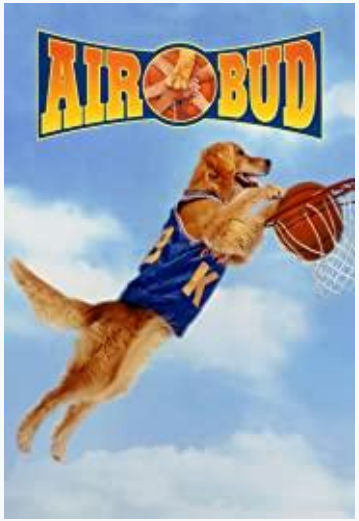
- By the ocean
- Beautiful cinematography
- Oprah liked It
- Features Birds
- Starring that up-and-coming actress you've been hearing about
- Screenplay written by a four-time Academy Award nominee
- Lovely pastel hues
- Rated PG-13
- Between 90 and 110 minutes long

Creating Features with Machine Learning



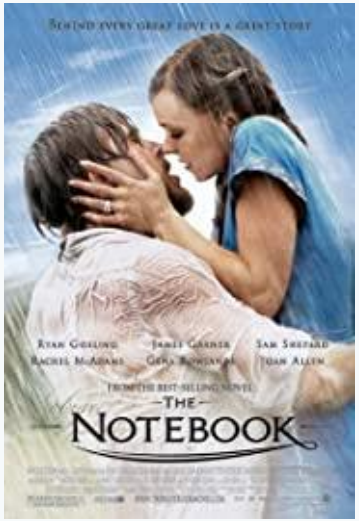





AIR BUD

THE PRINCESS FROG

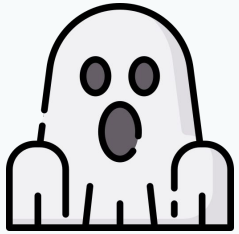
JACK NICHOLSON
GLENN CLOSE
ANNETTE BENING
PIERCE BROSNAN
DANNY DeVITO
MARS ATTACKS!


THE NOTEBOOK

twilight

WHOOPI
SISTER ACT

Latent Features



Scary

Talking Animals

Water Wells

Mythical Creatures

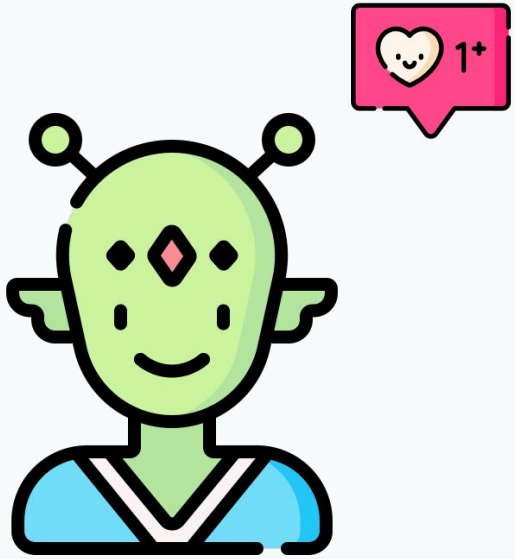
Rating

Romance

Tear Jerker

Food

Niche Sports



Glithgob

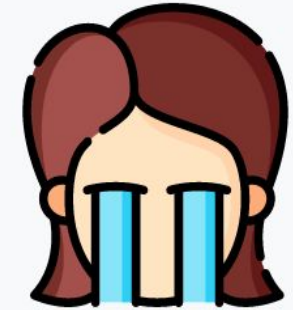
Talking Animals

Tear Jerker

Food

A Movie’s Features

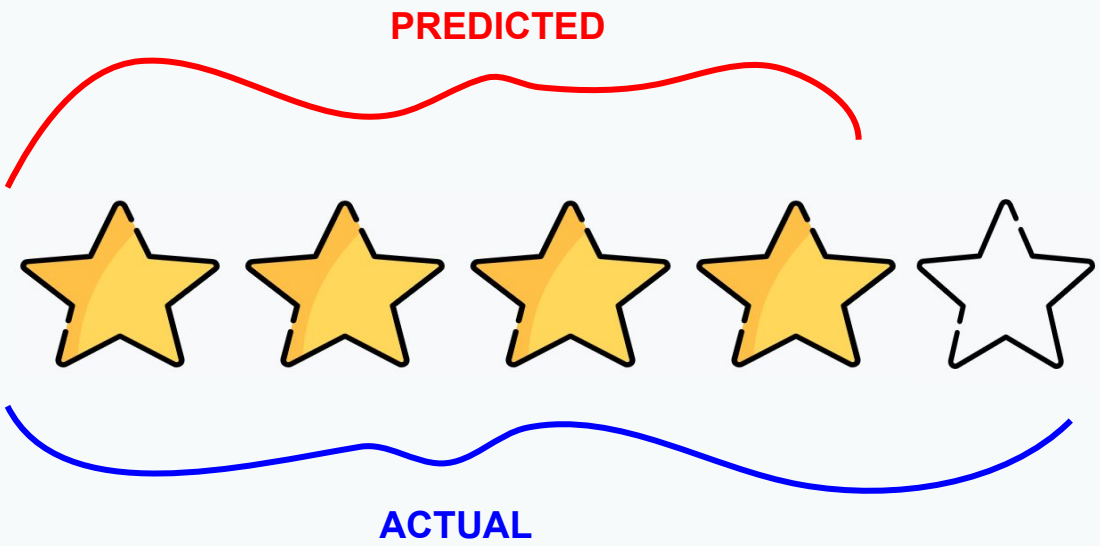
Glithgob’s
Ratings



Glithgob’s
Movie
Recommendation

Results

On average, our predictions were within one star of the user's true ratings.



	title	rating	prediction
0	Toy Story 3 (2010)	4.5	3.534358
1	Toy Story (1995)	5.0	3.401723
2	The Imitation Game (2014)	3.0	3.604021
3	Inception (2010)	4.0	3.588652
4	Pirates of the Caribbean: The Curse of the Bla...	3.5	3.138060
5	Monsters, Inc. (2001)	4.0	3.380135

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Next Steps

- More Users = More Data
- More Ratings = More Accuracy
- Implicit Data Collection
- User keywords can create new features

Contact Us

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