New Frontiers: A New Recommendation System

A Presentation by The Stat Pack

A Good System

Created by Skylar McOldDeveloper, our current movie recommender system has been quite successful. It takes the average of all of a user's ratings as well as all of the ratings of a particular movie, then combines them to deliver a recommendation to our customer of what they should watch next.

Can we do better?

(i.e., can we make the company more money?)

- With more sensitivity to our user's preferences, we can better cater to their tastes.
- General trends (what our current model does well) do not always satisfy individual tastes.
- Our current model moves a bit slowly, and in our fast-paced world we should always strive to be faster (while maintaining quality).

Question:

Whose opinion really matters when it comes to movie recommendation?

Just one! Your own.

(With a little help from us here at Movies-Legit)

Our new recommender system uses a matrix factorization algorithm.

What's that, you may ask? Not important!

What *is* important is that it delivers more sensitively tuned recommendations to our customers.

Meet Alberto.

He recently moved from Spain to a small town in Northern Ireland.

He couldn't make new friends due to the pandemic restrictions, so he felt isolated and lonely.

Having watched all of his old favorites, Alberto was ready for something new. But what to watch?

Then Alberto discovered Movies-Legit

He was browsing the internet when he found our movie recommender and decided to try it out.

How did we do?

Here's a side-by-side comparison.

Alberto's Fave Movies:
- The Quick and the Dead, (1995)
- The Specialist, (1994)
- Star Trek: Generations, (1994)
- Star Wars: Episode IV - A New Hope, (1977)

Alberto's Least-Fave Movies:
- Village of the Damned, (1995)
- The Shawshank Redemption, (1994)
- The Santa Clause, (1994)
- Roommates, (1995)

MeanofMeans

There Will Come a Day, (2013)
The Cement Garden, (1993)
Near Dark, (1987)
Rize, (2005)
Suburban Commando, (1991)
First Daughter, (2004)
13 Assassins, (2010)
Love and Other Disasters, (2006)
Into the Wild, (2007)
Mr. & Mrs. Smith, (2005)

Matrix Factoring

The Pompatus of Love, (1996)
Leave It to Beaver, (1997)
I Love Trouble, (1994)
Event Horizon, (1997)
Georgia, (1995)
Wings of Desire, (1987)
Selena, (1997)
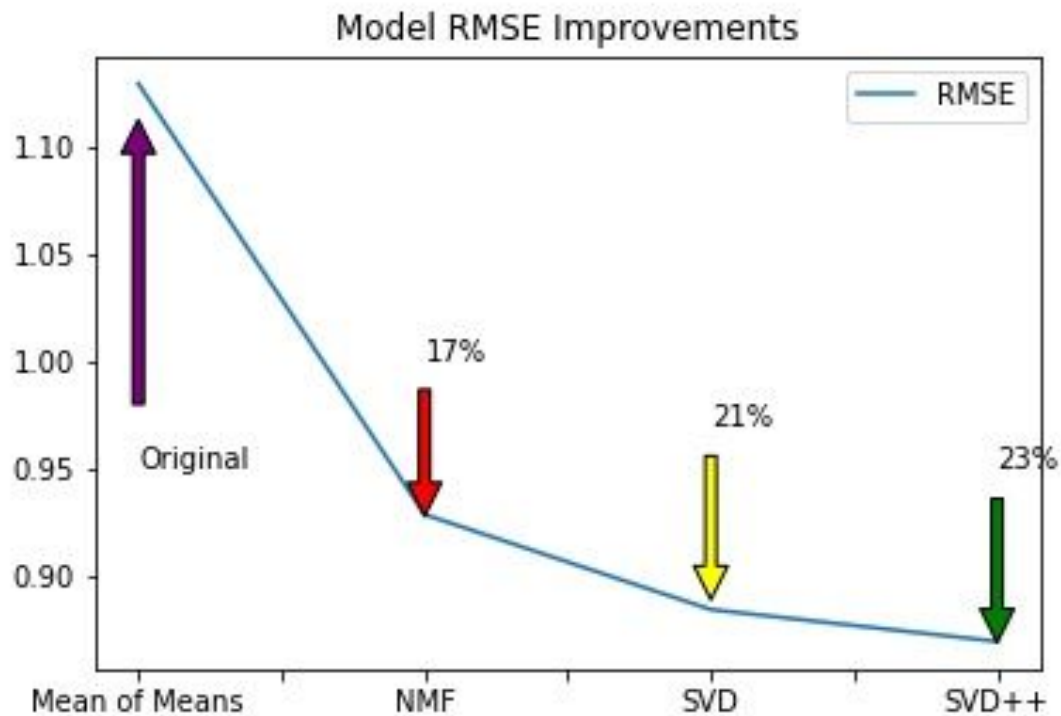Soul Food, (1997)
Withnail & I, (1987)
Amistad, (1997)

The Hard Numbers

Alberto's preferences, based on his ratings, align with the new recommender's predictions with a 23% increase in effectiveness.* The previous recommender was working well, but this is a marked improvement. He is now much happier that his library of favorite movies has expanded!

*The numbers are based on comparisons of the Root Mean Squared Error(RMSE) for each recommender system.

Visualization

What people are saying

(in our focus groups)

With this new recommender, I've fallen in love with movies all over again

Wendy Writer, CA

Movies-Legit has upped their game with the more specific recs

Ronny Reader, NYC

I wish I could work with data scientists as cool as the ones at Movies-Legit!

Abby Author, NYC

Quotes for illustration purposes only

Future Development

We also have a production ready Spark implementation of our model so that if we migrate when our database becomes too large, we are ready for the upgrade.

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A big thank you to team Stat Pack, and the wonderful support from our DSR's and Staff!

Kyle

Ian

Erin

Sae

Team Stat Pack