



PrimeTimeTM

An Amazon Prime Video - Content Based -
Recommendation System

Introduction



Jawwad A Siddiqui
Data Scientist
Creator of PrimeTime

Today's Agenda



Business
Understanding

Data
Understanding

Methodology

Conclusions

Next Steps

prime video



Business Understanding

- Collaborative filtering approach fell short
- Tried neural networks and other machine learning
- Sought out help for best approach
- Prime Video ranked 3rd

Data Understanding

- Found on Kaggle.com
- Put together May of 2022
- 9,000 movie and show titles
- 124,000 credits of actors and directors

kaggle



Methodology

Leverage content based filtering
approach

Cosine Similarity

cos_movie_recommend()							
executed in 7.08s, finished 17:33:55 2022-06-01							
Title: The General How many recommendations? 5 Would you like MOVIE or SHOW recommendations? MOVIE							
	Movie Title	Type	Release Year	Runtime (minutes)	Genres	IMDB Score	Cast Name
0	All Hat	MOVIE	2007	89	[action, comedy, drama, western, european]	5.1	Rachael Leigh Cook,Luke Kirby,Keith Carradine,...
1	Vendetta	MOVIE	1971	92	[western, comedy, drama, action, european]	4.6	Telly Savalas,Clint Walker,José María Prada,Án...
3	A Fistful of Dynamite	MOVIE	1971	157	[western, european, drama, war]	7.6	Rod Steiger,James Coburn,Romolo Valli,Maria Mo...
4	Let the Bullets Fly	MOVIE	2010	132	[comedy, drama, western, action]	7.2	Chow Yun-Fat,Ge You,Jiang Wen,Carina Lau,Chen ...
5	Kabullywood	MOVIE	2017	84	[drama, comedy, war, european]	7.2	Mohd Qais Shaghasy,Farid Joya,Roya Heydari,Ghu...

K-Nearest Neighbors

knn_movie_recommend()							
executed in 5.75s, finished 17:51:44 2022-06-01							
Title: The General How many recommendations? 5 Would you like MOVIE or SHOW recommendations? SHOW							
	Movie Title	Type	Release Year	Runtime (mins)	Genres	IMDB Score	Cast Name
2	Bluestone 42	SHOW	2013	28	[war, comedy, drama, european]	7.9	Laura Alkman,Tony Gardner,Keeno Lee Hector,Mat...
10	Dominion Creek	SHOW	2015	52	[action, drama, western, european]	6.2	Bríd Ní Neachtain,Chloe Ewart,Seán T. Ó Mealla...
18	The Westerner	SHOW	1960	30	[western, action, drama]	8.2	Brian Keith,John Dehner
19	Moone Boy	SHOW	2012	22	[comedy, drama, european]	8.1	Chris O'Dowd,David Rawle,Deirdre O'Kane,Clare ...
20	Getting On	SHOW	2009	29	[drama, comedy, european]	8.1	Jo Brand,Vicki Pepperdine,Joanna Scanlan,Ricky...



Limitations

- Data relies on JustWatch Movie ID
- Small number of titles
- Proprietary data

Next Steps

- Expand data
- Potentially webscrape
- Deploying to mobile/web app





Git In Touch

[GitHub](#)

[LinkedIn](#)

[Email](#)

Questions?

