MOVIE RECOMMENDER SYSTEM

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https://towardsdatascience.com/how-to-build-from-scratch-a-content-based-movie-recommender-with-natural-language-processing-25ad400eb243
https://medium.com/data-science-101/movie-recommendation-system-content-filtering-7ba425ca0920

In today's digital world where there is an endless variety of content consumed such as books, videos, articles, Films, Etc., finding material of one's choice had become an infallible task.

01 INTRODUCTION

With digital content, providers want to engage more and more users in their service for maximum time. This is where the recommender system comes into the picture. Purpose of this project is to provide user with accurate movie recommendations based on the following factors; user preference known as content based filtering or preference of similar users known as collaborative filtering.

02 OBJECTIVE

This system provides a mechanism to help users categorize movies with similar interests. Recommendation systems are Artificial Intelligence based algorithms that skim through all possible options and create customized list of items that are interesting and relevant to an individual. These results are based on their profile; search/browsing history, what other people with similar traits/demographics are watching, and how liking are you to watch those movies. This is achieved by applying item-based collaborative filtering.

03 METHODOLOGY

- We have used Content-based filtering
- This compares and recommends other movies similar to the selected movie = f(movie) -> {movies}
- We have done preprocessing and stemming
- We have used CountVectorizer to convert textual data to numerical data
- This assisted in calculating the distances between different titles
- We use Cosine similarity as a similarity measure to quantify how similar the movies are based on their similarities of different properties. It shows the cosine of the angle of two vectors projected in a multidimensional space which in turn helps to find similar objects.

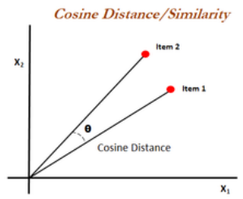
04 MODEL CREATED

Count Vectorizer

Breaking down a sentence or any text into words by performing preprocessing tasks like converting all words to lowercase, thus removing special characters

Cosine Similarity

Cosine similarity is a measure of similarity between two non-zero vectors of an inner product space that measures the cosine of the angle between them. nltk toolkit module is used in this program.




```
[55] recommend('Avatar')

     Aliens vs Predator: Requiem
     Aliens
     Falcon Rising
     Independence Day
     Titan A.E.
```

```
recommend('The Avengers')

Iron Man 3
Avengers: Age of Ultron
Captain America: Civil War
Captain America: The First Avenger
Iron Man
```

```
recommend("Pirates of the Caribbean: At World's End")

Pirates of the Caribbean: Dead Man's Chest
Pirates of the Caribbean: The Curse of the Black Pearl
Pirates of the Caribbean: On Stranger Tides
Life of Pi
20,000 Leagues Under the Sea
```

05 RESULTS

- We were able to transforms the data into a format that is more easily and effectively processed for our model to be applied without difficulty.
- Model used for the execution of our program was content based filtering which was selected to ensure that the results are closely related to the user input to give more accurate results.

We successfully recommended movies based on their respective titles.

06 CONCLUSION

Our Movie Recommender System is able to predict movies of similar types. It predicted only those movies that the user will most likely watch.
The interface created will be helpful in the process of assisting users in their recommendation with the help of the movie they enter.
This could be beneficial for e-commerce, retail, media, banking and telecom among others.