END REPORT

Content based Movie Recommendation System

Team Details :---

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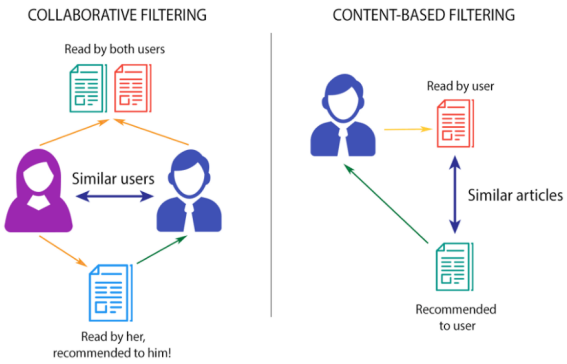

INTRODUCTION:

In today's hectic environment, recommendation systems are becoming a necessity. People are always running short of time for the tasks allotted to them with a deadline. This is why recommendation systems are vital since they assist users in making the best decisions possible without the need of accessing their cognitive resources or utilizing their time.

BACKGROUND:

The primary goal of the recommendation system is to find content that is relevant to a certain person's area of interest. Furthermore, it takes into account a variety of characteristics in order to build customised lists of fascinating information tailored to an individual. Recommendation systems are algorithms that scan all of the alternatives and generate a personalised list of items that are of interest to the consumer.

MOTIVATION:

Nowadays the craze for watching movies on online platforms like Netflix, amazon prime is increasing. Everyone has their own taste in watching movies, in such situations acknowledging the user's taste for movies is important. Learning from user's search history, recognizing their taste and suggesting them the movies according to their taste is the main motive of our project.

LITERATURE SURVEY:

We looked for research articles that were connected to sentimental analysis-based recommender systems. We used tables to demonstrate different methods to recommend systems based on emotional analysis to classify research done by writers in this subject. Our study provides data, information about trends in recommender structures research, and emotional analysis provides practitioners and academics with perception and outcomes on the recommender system. We hope that this study provides insight into the future for everyone who is interested in recommender systems research.

MATHEMATICAL MODEL:

Our program makes an array of data in the form of a matrix in which it uses movies as rows and keywords as columns.

Cosine Similarity: Cosine similarity is a metric used to measure how similar the documents are irrespective of their size. Mathematically, it measures the cosine of the angle between two vectors projected in a multi-dimensional space. The smaller the angle, higher the cosine similarity.

Singular Value decomposition: This method is based on an item description and a record of the user's preferences. It uses a series of discrete, pre-tagged attributes of an item to suggest other items with comparable features. Singular Value decomposition:

Principal Component Analysis : We will be using Principal Component Analysis to reduce the dimensionality of the dataset containing many variables correlated with each other retaining the originality of the dataset.

Matrix Factorization: We will be factorizing the dataset/matrix into smaller matrices for ease in adding, removing and updating any type of data. We will use factorization to detect similarities and forecast based on both item and user entities, latent features, the association between people and movie matrices are determined.

NUMERICAL RESULTS :-

We got an array with rows as names of the movies and keywords as columns of the array of the following dimensions.

```
cv.fit_transform(my_df['tags']).toarray().shape
```

```
(4806, 5000)
```

CONTRIBUTIONS:

- **KINAL KAGATHARA**-Research on the topic, Background, Problem Statement, Reproduced Work, Designing of PPT, Coding of the Program
- **OMKAR PANDYA**- Literature Survey, Reproduced Work, Plan of Action, Designing of PPT, Coding of the Program
- **DHRUVI SHAH**- Motivation, Plan of Action, Designing of PPT
- **FENIL VITHLANI**- Project Domain, Problem Statement,Research on the Topic

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