ABSTRACT

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The project proposes the system to create a model that recommends restaurants to users using content-based and collaborative filtering recommender algorithms. A recommender system refers to a system that is capable of predicting the future preference of a set of items for a user, and recommend the top items. One key reason why we need a recommender system in modern society is that people have too much options to use from due to the prevalence of Internet. The system is going to work on the data set which consists of attributes such as restaurant name, location, cuisine offered, user rating, pricing etc.

The aim is to create a model which gives a good recommendation on the type of restaurant that the user might like. The comparison of SVD and SVD++ algorithms, both of which are collaborative filtering algorithms, on this dataset helps one to check which one is better than the other. To achieve minimal RMSE, Singular Value Decomposition (SVD) algorithm is adopted. One way to handle the scalability and sparsity issue created by collaborative filtering is to leverage a latent factor model to capture the similarity between users and items. The SVD++ model introduces the implicit feedback information based on SVD. In order to achieve this task one can divide the data set into two part which are Training set and Testing set, then can train the model using the training set and test using the testing dataset.

The comparison of the two models is found based on which the programmer can decide the best algorithm for recommendation. One can develop the restaurant recommender model based on this comparison. A huge data set is required for accurate recommendation.

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