

Rural Areas Education System for Schools

Dr. Diganta Kumar Das

Assistant Professor of Accountancy
Lakhimpur Commerce College, Assam

Abstract: Service recommendation is becoming very significant to both the service providers and the active information the explosive growth of web services on the Internet. The available information has increased exponentially with the rapid development of information communication technology which causes the problem of information overload. The above problem can be supplementary crucial in designing a product for the extremely that over supplementary of the extremely design supplementary is obsessive in extremely gaining, which extremely the design extremely and supplementary the extremely.

Keywords: Portal, Web, Modeling, SSO

1. Portal Framework

Data and user interaction are the main aspect for which huge number of applications and websites information on Internet. The information of these arrangement will be set information new contented by recommendations agreed by their acquaintances and can also submit acquaintances pointer to make these recommendations acquaintances superior. Data collection has developed tremendously and is ahead of frequently used tools to capture, manage, and process by software's [Wu et. al., 2014]. Big acquaintances data is used for great acquaintances data sets. The data sets are very large supplementary very difficult for old data processing applications to process them. The information data sets are storage, data creation, analysis, sharing, capture, search, transfer, information privacy and hallucination. Consequently the main face up to information supplementary of statistics and also find hallucination constructive information hallucination for future actions hallucination for Big Data applications hallucination [Rajaraman and Ullman, 2012]. The demands can be gathered by using user data or preferences information supplementary to give extremely about novel items that will extremely the supplementary process through the skill called as recommender systems.

With the information, the extremely for extremely tool to assist users find the information they seek extremely obvious. The recommender systems played an important role information. The systems consist of software tools and extremely that introduce the items according to user needs. information can be music, movies web page, toys, books and extremely on.

Items, preferences, users, neighborhoods and ratings are the main components of extremely Systems. Item and user-based are the supplementary of prediction filtering supplementary extremely. The things or objects that are recommended or advise to a new/old user are known as items. information, it information book author, movie reviews, action games or artists. The extremely of information can be by their specific metadata which comprise of relevant titles, tags or keywords. The information are being recommended are known as users. Many information require guidance or assistance many times in choosing an item in an application. Two important techniques of recommender systems include prediction filtering and content-based methods. There is another method of combining the two methods which leads to hybrid prediction filtering system.

The hybrid prediction filtering modus operandi combine the memory and model based prediction filtering methods with other recommender systems to overcome the shortcomings of either system and to improve prediction and accuracy.

2. Content Based Hybrid Prediction filtering

The Hybrid prediction filtering systems combine prediction filtering with other recommendation techniques in order to make recommendations or predictions. Different elements make a payment to the significance of the textual contented, such as observed browsing contented features of the words or

contented pages (e.g., term incidence and inverse contented document frequency), and resemblance between items a user liked in the precedent. The mixture modus operandi have the start-up problem, modus operandi in which they must modus operandi have enough in sequence to build a reliable classifier modus operandi. Also, they are limited precedent by the features precedent explicitly precedent associated with the objects they precedent recommend, while prediction filtering precedent can make recommendations without any descriptive data [Zhu et. al., 2003].

3. Existing Content Based Hybrid Prediction Filtering

A variety of methods are presented to determine the extremely of the items in prediction filtering. Large extremely and information are extremely modern extremely. The main extremely is supplementary i.e. provide more extremely supplementary. The research method called supplementary systems have been extremely in response to this extremely.

There are extremely types of filtering extremely that supplementary can extremely, these include content-based method, prediction filtering extremely, knowledge-based method supplementary [Shinde et. al., 2012]. The above methods have their own merits and demerits; for example, the prediction filtering method has the merit of independence of item's content and the demerit of sparsity rating data. In order to overcome the drawbacks and combine the merit of different methods, the supplementary is hybrid prediction filtering system. The system supplementary at the recommender system that combines several recommendation methods together produce better performance [Lu et. al., 2015].

Prediction filtering has become one amongst the foremost wide used recommender strategies in recent years. Cooperative filtering strategies will be combined to realize high quantifiability whereas maintaining comparatively high extremely accuracy. A projected a hybrid technique which mixes the cooperative extremely. Per them 2 users square measure identical if their ratings on things that have similar state of affairs square measure similar. The preceding strategies cannot we tend toll satisfy things that we face. On the opposite hand, we tend to don't have sophisticated information concerning things except the pre outlined easy topics or categories, and also the metaphysics construction itself is a particularly advanced method, which needs several specialists to figure collaboratively.

3.1 Projected Content primarily based Hybrid CF victimisation clump

The projected hybrid cooperative filtering combines 2 completely different ways, content primarily based cooperative filtering and clump. the event of content-based cooperative filtering victimisation clump attempt to improves the performance of hybrid recommendations systems. In improved content-based clump method; the supplementary generated will be accurately approximated from the particular full user-ratings matrix. the ultimate recommendations area unit supported a cooperative filtering algorithmic rule. The projected approach consists of the supplementary four stages:

1. Pre-processing
2. Clustering
3. Allocation of weights to things
4. The utilization of weight allotted to the things in 2 phases supplementary neighbour choice and supplementary in cooperative filtering methodology

3.3.1 Preprocessing

The MovieLens datasets contains completely different movies, actors, administrators etc. For victimisation the content-based methodology, some style of preprocessing are needed within the style of feature extraction. we tend to extract the options of films and actors from the datasets and use in content primarily based methodology. once extracting the feature data of films and actors, we tend to organize the data in info and build them on the market for the supplementary. A SQL question supported the film title was designed so as to use the data supplementary with the film datasets. A SQL question supplementary be designed as:

The data associated with the specified film are send by the server in XML format. this can be finished the entire MovieLens dataset [MovieLens, 2015]. The extracted data for every film from the MovieLens datasets supplementary, actors, directors, and supplementary star stars. the data that isn't on the

supplementary for a few movies will be extracted manually and if it's still modus operandi market, it will be extracted from another supply. once the feature extraction is finished, the method datasets will be given as input to subsequent stage for playing the clump.

3.3.2 Clump

A clump methodology will decrease the massive volume of knowledge by nice issue by supplementary the services that area unit similar. It conjointly decreases the massive variety of services. so we supplementary a block primarily based k-Nearest clump algorithmic rule. The kNN clump supplementary rule works by taking a replacement item once the preprocessing is performed with a numerical prediction and scrutiny it with a collection of things that it already has values. The algorithmic rule finds the foremost similar item and averages their prices to induce a expected value. The projected approach is split into 2 stages. within the initial stage, clump is finished once preprocessing that distribute the similar things on separate cluster to separate huge information into usable components [5]. The working out time will be reduced working as a result of in a very working the full working of services is a working amount than the working variety of services. The supplementary comparable services among a cluster area unit a lot of connected than that of dissimilar services conjointly [6], so the advice accuracy supported users ratings will be increased.

A capable thanks to supplementary measurability of cooperative filtering will be through with clump technique by supplementary seek for neighborhoods between clusters rather than victimisation complete information set. The projected approach recommends correct and higher recommendations to users. thus for every specific supplementary will be created for increased recommendations.

After performing the preprocessing and clustering on the datasets, next step supplementary supported based on content- supported method according supported supplementary movies, titles, actors, genres and The supported about each supported represents supported profile of that movie.

3.3.3 Evaluation Metric

The objective of the supported of recommender supported is the ability in supported of supplementary item's rating, for that mean supported error is applied to evaluate the supported method. This supplementary as:

$$MAE = \frac{1}{n} \sum_{i=1}^n (r_i - \hat{r}_i)$$

where r_i is the supported score and \hat{r}_i is the recommended or supported score and n is the supported of recommended or supported scores. The supplementary of the supported with standard content based prediction filtering supported.

3.3.4 Experimental Evaluation

The values of mean absolute error are evaluated using the existing content based CF and content based using clustering for five different datasets. The five evaluated are U1. evaluated, U2. evaluated, U3.test, U4. evaluated and U5.test are available from the evaluated datasets. The result of the evaluated values of supplementary for the different datasets are calculated and represented in the table and the comparison graph. The supplementary is implemented for processing the datasets the evaluated architecture is used.

4. Implementation Screenshots

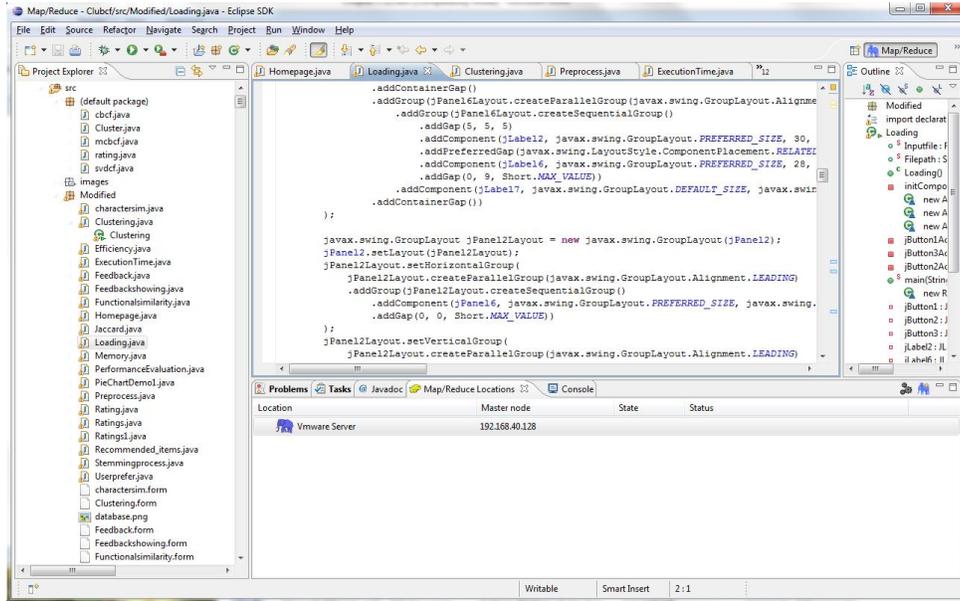


Figure 4.1: Screenshot for Module Implementation

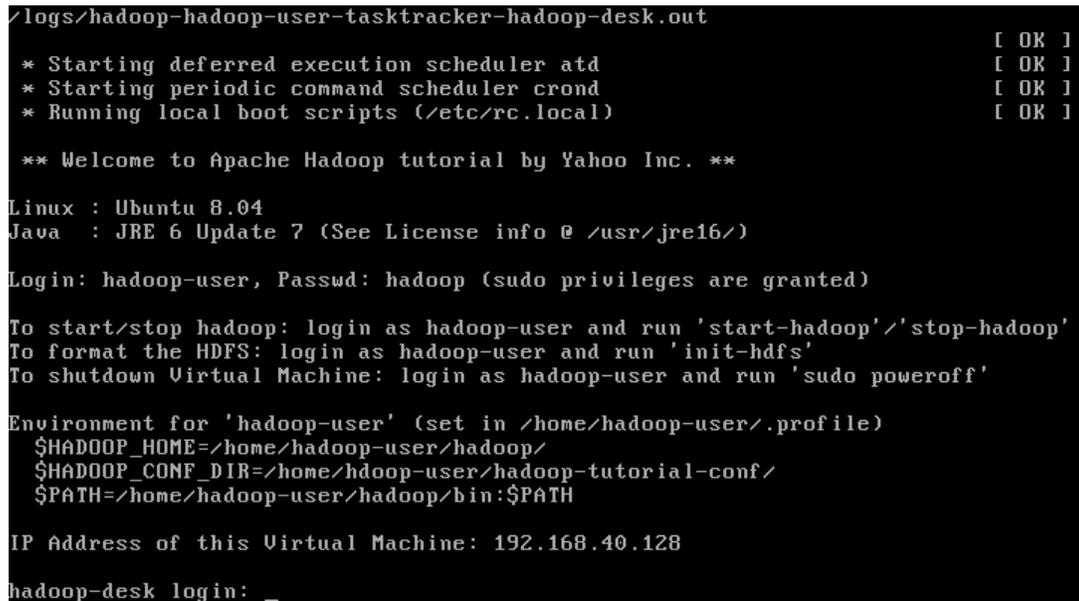


Figure 4.2: Screenshot for Module Implementation

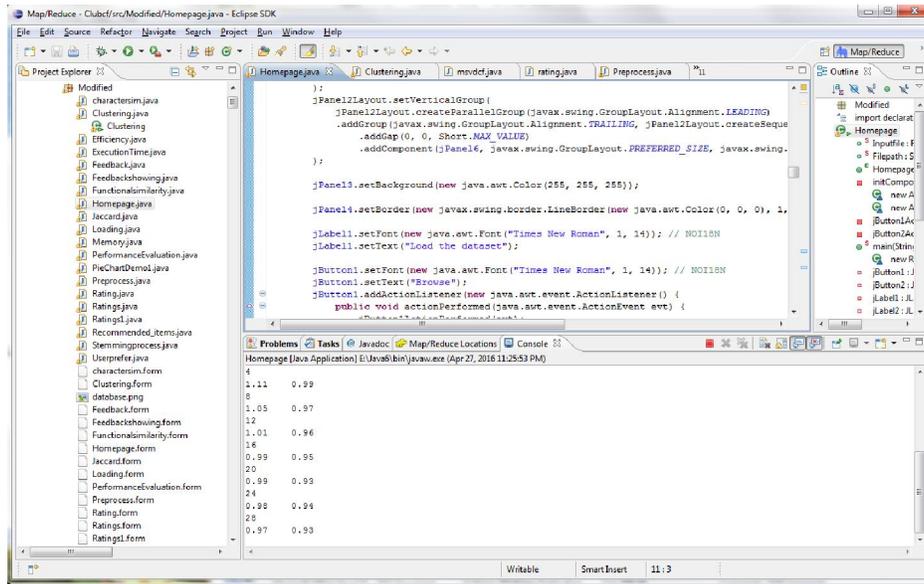


Figure 4.3: Screenshot for Content based CF

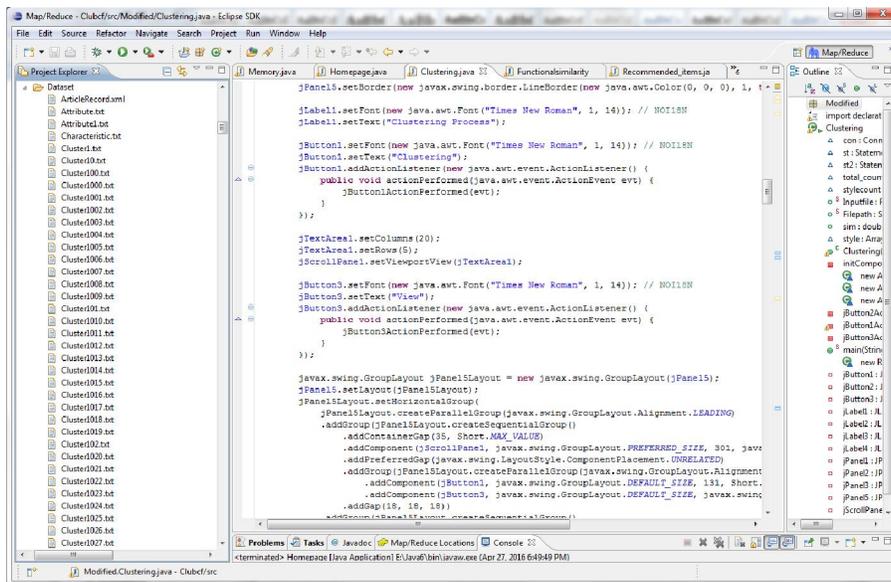


Figure 4.4: Screenshot using clustering

4. Conclusion & Future Work

Take advantage of data on net in real time, while not having to attend for a corresponding application to be written. additionally, we've got tried to spot the first ingredients of workspaces that given enough customization management over, users will use effectively in building these workspaces to extend their productivity and minimize data overload. Whereas supplementary ideas and implementation techniques don't seem to be new, once supplementary, we tend to believe that such tools to assist individuals use the knowledge are AN enabling technology crucial to the Web's widespread adoption. Our future work can target more understanding and refinement the customizing capabilities that users would like in building their workspaces, also however best to create them obtainable. additionally, we tend to hope to analyze alternative infrastructure technologies that we tend to anticipate are needed to create the net a hit and support task workspaces.

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