

COLLEGE RECOMMENDATION SYSTEM FOR ADMISSION

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Abstract-- Now a day's students are interested in taking admission in college which having excellent educational history, good campus, placement, better facilities, university grant etc. But due to lack of proper information about each college present in particular university they deprive from choosing desired college. There are many students who has score best marks but due to improper information about any college or branch they do not get admission in desired college or branch. So we propose the recommendation system for the university that recommendation system designed on the basis of college NAAC grade, NBA grade, campus placement and review from alumni student. So student and parent get helpful to choose a desired college using this recommendation system. We are going to add Semantic analysis algorithm which will capture positive and negative sentiments. We are also going to combine Navie Bayes and Adaboost algorithm which will used to rank the branches as well as colleges.

Index Terms:- System Flow, Admin Login Module, Alumni Login Module, User Module.

1. Introduction:-

Now a day's on the internet there are lot of information are available , so user get confuse which information he has choose or which information is proper. Due to improper information about any college, university student and parent get confuse about admission. Due to improper knowledge student do not get desired branch or college. With the rapid growth of various application on the internet recommendation systems become fundamental for helping users alleviate the problem of information overload.

In this paper it propose the same recommendation system for the college, due to this recommendation system student get more clear about which branch or college is proper for admission. In this system, the system take the input from alumni students about that particular stream of that college. Student will login in this system using PRN no. and password which is shared by admin, and give rating to various parameters such as teaching, campus, placement etc... The alumni student also give positive and negative comments[1]. Then the system aggregate these rating as final rating to that stream. In the same way the system capture the rating from all the students, then aggregate all this rating and all stream rating are final rating for that college.

In this system, it use the bottom up approach for rating. In this system it use different algorithms, in that we are going to add Semantic analysis algorithm which will capture the positive and negative comments[1]. For rating the system having various data mining algorithm, but the system get combine Naive bayes and Adaboost algorithm which will add result information the database according to rating parameter to stream, college. This recommendation system develop for engineering colleges.

In recommendation system, it has three different modules – First is Admin login module, Second is Alumni login module and Third is User module. These module has different functions. The admin module is handle the all administrative functions. Admin module also handle both alumni module and the user module. In Alumni module it includes the rating, review and ranking part. And third module use for to give recommendation for an user.

1.1 System flow

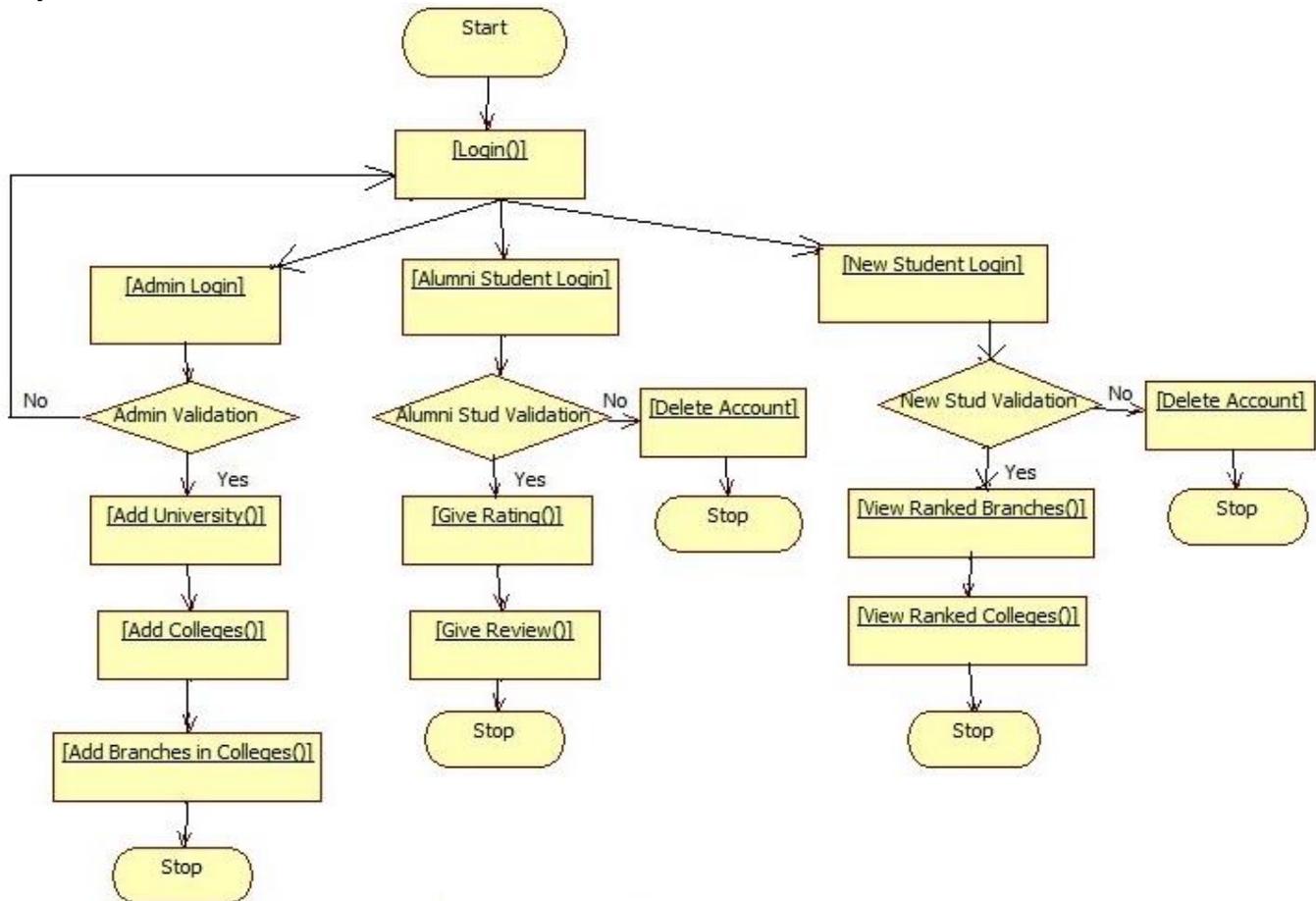


Fig: 1.1 System Flow

Above figure 1.1 shows the overview or the flow of the system. It shows the working of admin module, alumni module and user module of the system from start to end.

2. Literature Survey

A. Semantic compositionality through recursive matrix-vector spaces

In the linear connections from hidden vectors over child unit in the any application Long Short-Term Memory (LSTM) networks could prevent the model from capturing complex semantic representations of co-occurrence of textual sentence. Although the improved versions aforementioned have been developed under the recurrent neural network architecture, it is difficult to capture compositional semantic representations of natural language texts .

B. Matrix factorization techniques for recommender system

The recommender system is based on one of two strategies. The external information is required for the system, so it is need to collect external information. The collection of external information is not easy. The content-based strategies require gathering external information that might not be available.

C. Temporal collaborative filtering with Bayesian probabilistic tensor factorization

The collaborative filtering plays a vital role in various automatic recommendation systems and has been used in many online applications. Successful as they are, one limitation of most existing collaborative filtering algorithms is that they are static models in which relations are assumed to be fixed at different time. Learning from relational data has always been a central topic in the fields of data mining and machine learning.

3. System Modules

3.1 Admin Module

Initially admin login into the system using username and password. Admin handle the all administrative functions of this system. Firstly admin upload the student data, college data and the branch data in the system. And also send the login details to alumni students.

3.2 Alumni Module

In this system when admin send login details to alumni then alumni login into system by using login details. After login into the system they gives rating and review to particular branch. This rating is given on the basis of providing parameters. They gives review, alumni can give review in positive and negative comments for their branch.

But those alumna's will give review and rating who has correct or visible username and the password.

2.3 User Module

In this recommendation system, firstly user fill up the registration form. After successful registration user login system using userid and password. After successful login user see alumni's review and rating. Also user can see the first ranked college and branch on the basis of alumna's rating and review and in recommendation part user can see recommended college on the basis of providing information by the user. In college recommendation system, colleges are recommended on the basis of location, fee structure, gender wise college, establish year, etc... User also see colleges as per the his cast wise fee[2][4].

4. System Architecture

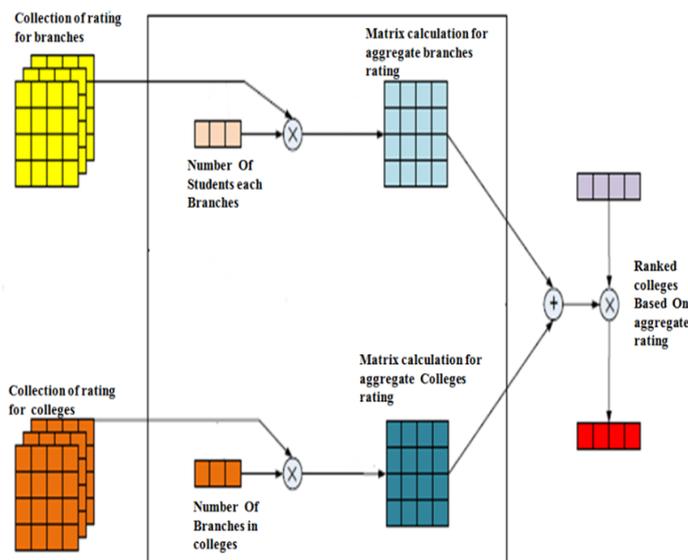


Fig:3.1 Architecture of college recommendation system

Above figure 4.1 shows the architecture of the college recommendation system. The number of alumni students give rating and review for their branch. Then the system do a matrix calculation for the aggregate branch rating. After that collect the branch rating for that college, then aggregate number of branch rating for college as a final rating, and rank the branches and colleges based on the alumna's review and rating.

5. Algorithm

Let,

Rtp → Rating for placement

Rtm → Rating for campus

Rttc → Rating for teaching

Rtb → Rating for the branch

Rvb → Review for that branch

ORtb → Overall rating for branch

ORvb → Overall review for branch

ORu → Overall user given rating to that branch

PRb → Positive review for that branch

NRb → Negative review for that branch

ARb → Average rating for that branch

ORa → Overall rating for that college

ARa → Average rating for that college

Na → Number of colleges in university

Nb → Number of branches in that college

Nc → Number of alumni students in that branch

1. Start
2. For i=1 to Na
3. Get_alumni_details(Nai);
4. i++;
5. End for.
6. For i=1 to Na*Nb*Nc. //for each alumni student
7. Send_login_details(Nabci);
8. i++;
9. End for.
10. Login
11. Flag=Check_if_Eligible(Nai,Nbi,Nci);
12. If(flag==true)
13. Rtb=Rtm+Rttc+Rtp/3 //Give_Rating(Rtb)
14. Give_Review(Rvb)
15. ORb=(ORb*ORu)+Rtb/ORu+1; //Overall Rating
16. ORvb=PRb-NRb/ORu; //Overall Review
17. ARb=ORb+ORu; //Overall Rating review
18. Let ORa=0;
19. For i=1 to Nb
20. ORa=ORa+ARbi;
21. i++;
22. End for
23. ARa=ORa/Nb;
24. Rank_colleges_based_on_rating(ARa)
25. Save_this rating_for college as a historical record.
26. End.

Using above algorithm, the recommendation system rank the colleges and the branches.

This data is store as historical record. That is recommendation system save the updated information. In step 15, 16 and 17 of the above algorithm they calculate the overall review and rating for the branch, and step 23 shows the calculation for ranking of colleges.

6. Advantages:

- Colleges are ranked on the basis of alumna's review and rating.
- User get easy to choose desired college.
- User gets details of the college.

7. Conclusion:

Using this college recommendation system user can get easy to choose desired college and branch. User can choose college as per his requirements, such as he can choose college on the basis of his priority, near to user location, fees, etc...

8. References

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