

Design and Development of Ranking System using Sentimental Analysis

Deekshitha B¹, Keerthi Lakshmi R Rao²

^{1,2}UG Student, Department of Information science, National Institute of Engineering, Mysore-570008, India

Abstract - This paper presents RANKBOX, an adaptive ranking system for mining complex relationships inputted by users on the college or school data. Our aim is to impart an efficient ranking methodology for complex relationship mining, which can 1) automatically personalize ranking results according to user preferences, 2) be continuously improved to more accurately apprehend user priorities, and 3) hide as many technical details from end users as possible. We noticed that a user's views on search aftermath carry salient information concerning his interests and search objective. Based on this observation, our system supports each user to give simple feedback about the current system in colleges or schools, and employs a machine-learning concept to learn the user's preferences from his feedback. A personalized ranking function is then generated and used to sort results of the user's subsequent queries or feedbacks. Our system is implemented and deployed on a web server that can be easily accessed through web browsers

Key Words: Sentimental Analysis, Rank Box.

1. INTRODUCTION

College ranking is one of the main criteria to decide the level of the college. College ranking should not only depend on the academic results but it should also consider the college facilities such as coaching, lab facilities, hostel facilities, sports, canteen, placement activities etc... based on these facilities we can decide the rank for a college. Now a days, parents check completely regarding the college or school before the admission of a student. Obviously parents want their children to be admitted to a good college or schools. Good college means college which provides good facilities such as teaching, lab facility, hostel facility, canteen facility, etc. parents check all these things because once student joins to a particular college or school, obviously it is difficult to change the college, as we have paid fees, spent time and as a result there may be chances of loss of one year. So it is better to think and decide. Usually parents will come to know regarding college facilities by approaching senior students of the college or schools and manually collect the details based on their opinions they will decide to admit or not to admit.

2. EXISTING SYSTEM

Suppose information regarding college is required, then information should be extracted manually and should

collect the information from senior students. Obviously it is time consuming and can't visit all the colleges to collect the feedbacks as it is more expensive. So a system is needed that gives the college status based on the user opinions as inputted by the senior student. The limitations of existing system are time consuming, lack of user satisfaction, less efficient, less reliable and expensive.

2. BACKGROUND ON SENTIMENTAL ANALYSIS

To solve the problem, we use sentimental analysis which uses data mining processes and techniques to extract and capture data for analysis in order to discern the subjective opinion of a document or collection of documents, like blog posts, feedback. It uses NLP or machine learning methodologies to recognize or otherwise group the sentiment information of a text unit. Several research has been conducted on how sentiments are expressed like online feedback and articles, how sentiments are expressed given the informal language and message-length constraints of microblogging has been much studied. Simply reading a post will let you identify whether the author had a positive stance or a negative stance on the topic. However, a computer has no concept of naturally spoken language – so, need to break down this problem into mathematics (the language of a computer). It cannot simply deduce whether something contains joy, frustration, anger, or otherwise – without any context of what those words mean.

3. LITERATURE REVIEW AND RELATED WORK

We present in this section various solutions that attempt to find ranking. We then highlight the added value of our proposed system compared to the others.

- E Junqué de Fortuny, T De Smedt, D Martens 2010 proposed a method to perform sentimental analysis and to extract relevant text from internet. Exclusively for this procedure a web crawler was developed. To perform sentimental analysis a pattern mining model written in python was used.
- Sentiment Analysis of top college using Twitter. They have used Twitter data for sentimental analysis. Code was written using machine learning algorithms namely KNN method and Naive Bayes and results were generated in R languages.

4. PROPOSED SYSTEM

In this section we introduce our proposed ranking system that aims at solving the existing barriers.

Proposed system is automation where senior students of a particular college can post their feedbacks (opinions and rating) regarding college facilities such as coaching, lab facilities, hostel facilities, sports, canteen, placement activities etc. It also allows the college people to upload the academic results based on year wise. Visitor or parent can search the college or schools based on city and can view the feedbacks posted by the senior students of the college of schools.

Scope and Objectives:

- It is a web enabled application which uses ASP.NET as front end technology.
- Allows the visitor or parent to know the college status or facilities based on the user feedbacks.
- Displays the search results in an ascending order (based on rating given by the senior students and academic results).
- Makes use of SQL Server for storage of data.
- Is an innovative way of knowing about the college or schools facilities.

SOFTWARE REQUIREMENTS:

Framework : .NET

IDE : Visual Studio 2010

Front end : Asp.net 4.0

Back end : SQL Server 2008

Ado.Net is used to provide database connectivity code which process the required logic for the database connectivity and C#.Net Modules are used to extend request/response-oriented pages and also which includes business logic.

5. SYSTEM DESIGN

To validate the proposed system, we developed the solution using various technologies. The web application allows the Administrator to Authenticate students feedback in the further process. The administrator adds the colleges list courses and then uses ASP.net concept to establish user interface part. Administrator gives unique ID and allows colleges to create their own password. Corresponding Information will be stored in database. The goal of this Web application is to be available as an Application Programming Interface allowing administrator to add the colleges list and allow the selected courses (by authentication through database).ADO.net concept is used to form a connection between database and web application. Implemented

using 3 tier architecture.

Application mainly consists of 4 actors;

- Administrator: Person who maintains the entire application; Admin is the owner of the application.
- College Staff: Person who uploads the facility descriptions and results.
- Senior Student: Person who sets the rating and the one who gives the feedbacks related to the college facilities.
- Parent/Visitor: Person who receives the services from the application.

Administrator has five modules namely login, manage cities, colleges, courses, facilities. Admin can add/removes cities. It authenticates colleges in order for them to access the web page. It adds/removes courses and facilities. It has the capability to view and manage everything in the corresponding web page.

College has 6 modules namely Login Module, Manage College Facilities, Manage Students, Manage Results, View Ratings set by students, Manage Feedbacks. It creates students. It gives information about facilities and courses. It will give unique ID and password to each and every student so that only students of that particular college can write their opinion.

Student has following functionalities: Login Module, Set Ratings, Give Opinions, View Ratings set by other students. each student has their own unique ID and password. Student can express the opinions (positive/negative) on the web page.

Visitor has following functionalities: View Basic Information, View Feedback based on College, View Ratings set by students, View Opinions set by students, View Top Colleges.



Fig -1: Home page of the web application

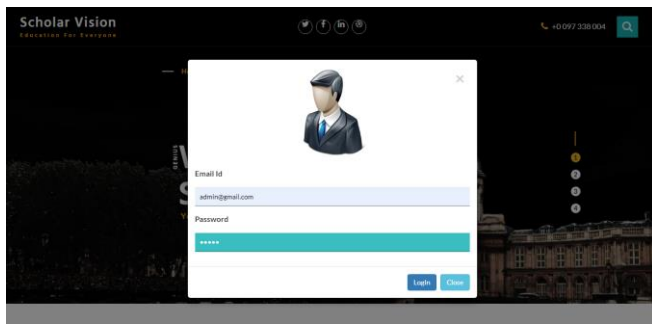


Fig -2: Administrator login page

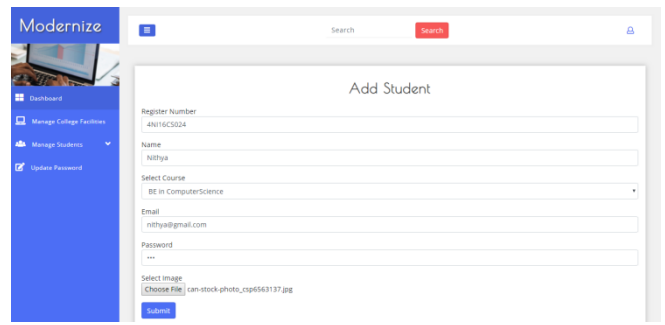


Fig -6: Colleges adding students

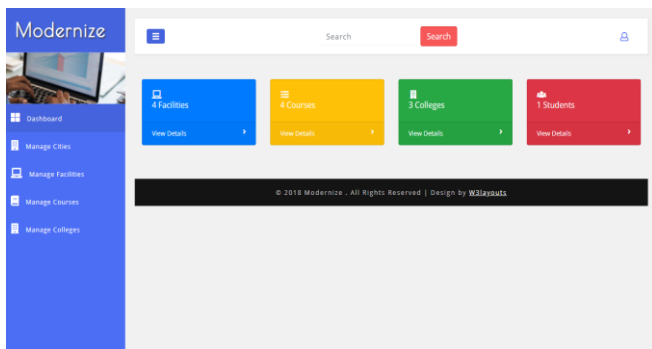


Fig -3: Administrator home page

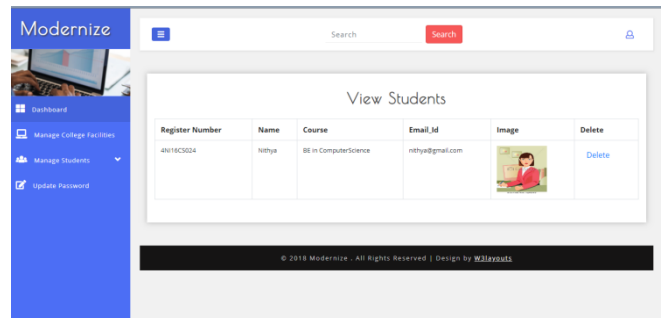


Fig -7: Colleges viewing students

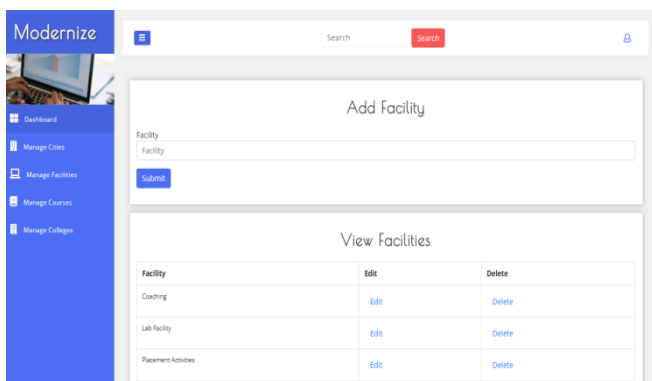


Fig -4: Administrator adding the facilities

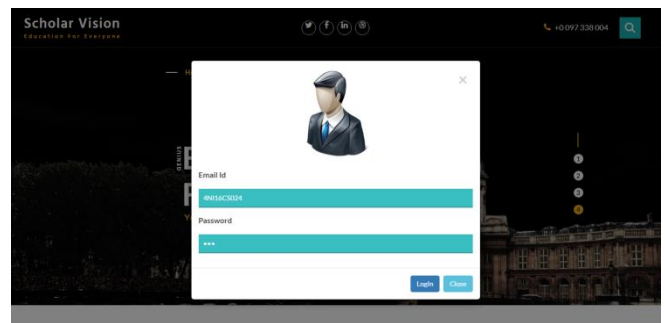


Fig -8: Student login page

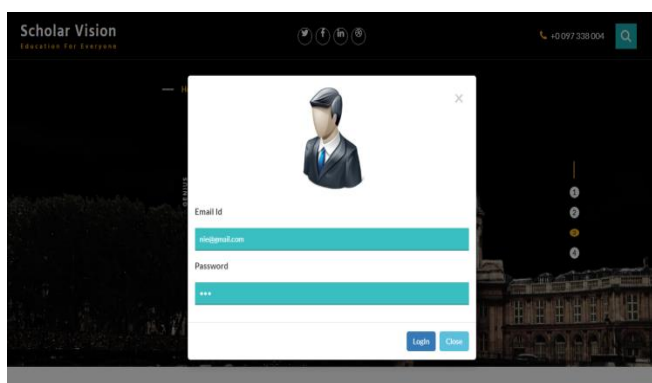


Fig -5: College login page

6. CONCLUSION

In this paper we have proposed a Ranking System based on sentimental analysis. This idea of using students opinion is to make parents easier to choose which is better college in particular city based on facilities like placements, security, expensive, cultural activities, academics, lab facilities, food, hostel, campus, etc. Sentiment analysis is an effective way of classifying the opinions formulated by people regarding any topic, service or product.

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