RECOMMENDATION SYSTEM FOR TEACHERS TO REFINE THEIR WAY OF TEACHING

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Abstract: *Online Feedback Analysis System is a web based application that provides platform for the colleges to conduct student's feedback online. This online system is the best place to find feedback report according to the requirement such as feedback given by the various kind of people and so on and it is the efficient place to get feedback analysis and maintain security. Students will fill online feedback using a standard form. In this project security is also maintain that is the result of feedback is only visible to authentic user. Online feedback is an integral feature of effective & efficient learning & teaching. It can be one of the powerful way to enhance & strengthen student learning. Students have different opinions about lecturers based on the way they teach. Using Recommendation system, they can give feedback about their way of teaching, positively or negatively. The student has to log into the system using their username and password, then select the individual lecturer and give comments for their way of teaching. Once the comments from the students are received the positive and negative comments are differentiated using analysis. This involves using algorithms such as Naïve Bayes classifier to separate words and group under the respective category. Once it is modified, the positive and negative reviews of each lecturers, given by independent students are classified and presented in the form of graph. The result of such analysis makes it easy for the teachers to find their areas of improvement. Thus, this system serves as an advocacy to the teachers to refine their way of educating*

Keywords-feedback analysis; Naïve Bayes; positive Reviews; negative reviews

I. INTRODUCTION

Data mining is an interdisciplinary subfield of computer science.[1][2][3] It is the computational process of discovering patterns in large data sets involving methods at the intersection of artificial intelligence, machine learning, statistics, and database systems.[1] The overall goal of the data mining process is to extract information from a data set and transform it into an understandable structure for further use.[1] Aside from the raw analysis step, it involves database and data management aspects, data pre-processing, model and inference considerations, interestingness metrics, complexity considerations, post-processing of discovered structures, visualization, and online updating. Data mining is the analysis step of the "knowledge discovery in databases" process, or KDD.

The term is a misnomer, because the goal is the extraction of patterns and knowledge from large amounts of data, not the extraction (mining) of data itself.[5] It also is a buzzword[6] and is frequently applied to any form of large-scale data or information processing (collection, extraction, warehousing, analysis, and statistics) as well as any application of computer decision support system, including artificial intelligence, machine learning, and business intelligence. The book Data mining: Practical machine learning tools and techniques with Java (which covers mostly machine learning material) was originally to be named just Practical machine learning, and the term data mining was only added for marketing reasons. Often the more general terms (large scale) data analysis and analytics – or, when referring to actual methods, artificial intelligence and machine learning – are more appropriate.

The actual data mining task is the automatic or semi-automatic analysis of large quantities of data to extract previously unknown, interesting patterns such as groups of data records (cluster analysis), unusual records (anomaly detection), and dependencies (association rule mining). This usually

involves using database techniques such as spatial indices. These patterns can then be seen as a kind of summary of the input data, and may be used in further analysis or, for example, in machine learning and predictive analytics. For example, the data mining step might identify multiple groups in the data, which can then be used to obtain more accurate prediction results by a decision support system. Neither the data collection, data preparation, nor result interpretation and reporting is part of the data mining step, but do belong to the overall KDD process as additional steps.

Crowdsourcing systems, in which numerous tasks are electronically distributed to numerous information piece-workers", have emerged as an selective paradigm for human-powered solving of large scale problems in domains such as image classification, data entry, optical character recognition, recommendation, and proofreading. Because these low-paid workers can be unreliable, nearly all such systems must devise schemes to increase confidence in their answers, typically by assigning each task multiple times and combining the answers in an appropriate manner, e.g. majority voting.

In this paper, we consider a general model of such crowdsourcing tasks and pose the problem of minimizing the total price (i.e., number of task assignments) that must be paid to achieve a target overall reliability. We give a new algorithm for deciding which tasks to assign to which workers and for inferring correct answers from the workers' answers. We show that our algorithm, inspired by belief propagation and low-rank matrix approximation, significantly outperforms majority voting and, in fact, is optimal through comparison to an oracle that knows the reliability of every worker. Further, we compare our approach with a more general class of algorithms which can dynamically assign tasks. By adaptively deciding which questions to ask to the next arriving worker, one might hope to reduce uncertainty more efficiently. We show that, perhaps surprisingly, the minimum price necessary to achieve a target reliability scales in the same manner under both adaptive and non-adaptive scenarios. Hence, our non-adaptive approach is order-optimal under both scenarios. Therefore, architecturally, our results suggest that building a reliable worker-reputation system is essential to fully harnessing the potential of adaptive designs.

About Opinion Mining**:** Opinion mining is a type of natural language processing for tracking the mood of the public about a particular product. Opinion mining, which is also called sentiment analysis, involves building a system to collect and categorize opinions about a product. Automated opinion mining often uses machine learning, a type of artificial intelligence (AI), to mine text for sentiment. Opinion mining can be useful in several ways. It can help marketers evaluate the success of an ad campaign or new product launch, determine which versions of a product or service are popular and identify which demographics like or dislike particular product features. For example, a review on a website might be broadly positive about a digital camera but be specifically negative about how heavy it is. Being able to identify this kind of information in a systematic way gives the vendor a much clearer picture of public opinion than surveys or focus groups do, because the data is created by the customer.

II. Literature Review

1.TITLE: Measuring Praise and Criticism: Inference of Semantic Orientation from Association
AUTHORS: PETER D. TURNEY, MICHAEL L. LITTMAN

The evaluative character of a word is called its semantic orientation. Positive semantic orientation indicates praise (e.g., “honest”, “intrepid”) and negative semantic orientation indicates criticism (e.g., “disturbing”, “superfluous”). Semantic orientation varies in both direction (positive or negative) and degree (mild to strong). An automated system for measuring semantic orientation would have application in text classification, text filtering, tracking opinions in online discussions, analysis of survey responses, and automated chat systems (chatbots). This paper introduces a method for inferring the semantic orientation of a word from its statistical association with a set of positive and negative paradigm words. Two instances of this approach are evaluated, based on two different statistical measures of word association: pointwise mutual information (PMI) and latent semantic analysis (LSA). The method is experimentally tested with 3,596 words (including adjectives, adverbs, nouns, and verbs) that have been manually labeled positive (1,614 words) and negative (1,982 words). The method attains an accuracy of 82.8% on the full test set, but the accuracy rises above 95 % when the algorithm is allowed to abstain from classifying mild words.

An important part of our information-gathering behavior has always been to find out what other people think. With the growing availability and popularity of opinion-rich resources such as online review sites and personal blogs, new opportunities and challenges arise as people now can, and do, actively use information technologies to seek out and

understand the opinions of others. The sudden eruption of activity in the area of opinion mining and sentiment analysis, which deals with the computational treatment of opinion, sentiment, and subjectivity in text, has thus occurred at least in part as a direct response to the surge of interest in new systems that deal directly with opinions as a first-class object.

This survey covers techniques and approaches that promise to directly enable opinion-oriented information seeking systems. Our focus is on methods that seek to address the new challenges raised by sentiment aware applications, as compared to those that are already present in more traditional fact-based analysis. We include material on summarization of evaluative text and on broader issues regarding privacy, manipulation,

and economic impact that the development of opinion-oriented information-access services gives rise to. To facilitate future work, a discussion of available resources, benchmark datasets, and evaluation campaigns is also provided.

Sentiment classification is a recent sub discipline of text classification which is concerned not with the topic a document is about, but with the opinion it expresses. It has a rich set of applications, ranging from tracking users' opinions about products or about political candidates as expressed in online forums, to customer relationship management. Functional to the extraction of opinions from text is the determination of the orientation of "subjective" terms contained in text, i.e. the determination of whether a term that carries opinionated content has a positive or a negative connotation. In this paper we present a new method for determining the orientation of subjective terms. The method is based on the quantitative analysis of the glosses of such terms, i.e. the definitions that these terms are given in on-line dictionaries, and on the use of the resulting term representations for semi-supervised term classification. The method we present outperforms all known methods when tested on the recognized standard benchmarks for this task.

In this paper we present an approach to extract sentiments associated with a phrase or sentence. Sentiment analysis has been attempted mostly for documents typically a review or a news item. Conjunctions have a substantial impact on the overall sentiment of a sentence, so here we present how atomic sentiments of individual phrases combine together in the presence of conjuncts to decide the overall sentiment of a sentence. We used word dependencies and dependency trees to analyze the sentence constructs and were able to get results close to 80%. We have also analyzed the effect of Word Net on the accuracy of the results over General Inquirer.As self-directed online anxiety treatment and e-mental health programs become more prevalent and begin to rapidly scale to a large number of users, the need to develop automated techniques for monitoring patient progress and detecting early warning signs is at an all time high. While current online therapy systems work based on explicit quantitative feedback from various survey measures, little attention has been paid thus far to the large amount of unstructured free text present in the monitoring logs and journals submitted by patients as part of the treatment process. In this paper, we automatically categorize patients' internal sentiment and emotions using machine learning classifiers based on n-grams, syntactic patterns, sentiment lexicon features, and distributed word embeddings. We report classification metrics on a novel mental health dataset.

III. ANALYSIS AND DESIGN OF THE APPLICATION

A.EXISTING WORK

Coming to the existing system the feedback is done by manual process. In the existing system students can give feedback about the lecturers by using paper and pen. By this process. Student can give feedback in online system without waste his time in writing. After giving feedback by every student. Papers are collected by the HOD's and calculate the overall grade for each subject and each lecturer. After that those all grade report is viewed by the principal which is given by the HOD's. Hence estimating the performance of lecturers and giving counseling to college staff.

B.PROPOSED WORK

Here we aimed to design online web application for issuing the feedback about the lecturers by students, this is named as student staff feedback system. Student Staff feedback System to provide feedback in a easy and quick manner to the college principal and HOD's. So we call it as Student Staff Feedback System which delivers via the student staff interface as online system which acting as a Service Provider.

By using this technology we can make fast feedback about the staff by students on time to head of departments as they referred in online system. The four kinds of users Student, Staff, HOD's, and Principal. The student can give feedback in online system provided by college staff. First of Admin can prepare questions and add, update these questions to the online system. After that it was viewed by the students and can give feedback about the lecturers.

These feedback reports were checked by the HOD's. He can view overall grades and view the grades obtained to the lecturers and give this report to the principal and he can give counseling to the college staff.
As compared to the manual system, online system is very simple to use and also understand.

B. Advantages:

- Saves your time.
- Manage the entire process in easy and quick way.
- Enhance the staff.
- Improve the issuing standards.

IV. SYSTEM IMPLEMENTATION

ADMIN MODULE

In this module, admin can give the authorization to the students, HOD's , Principals, and faculty members. And then admin can add, edit and delete the feedback questions which are ask to the students for feedback about staffs.

STUDENT MODULE

The student will have the authorities on viewing questions and giving feedback about the lecturers.

- View questions

In this module students can view all questions in the database to give feedback about the lecturers.

- Giving feedback about the lecturers

In this student can give feedback about the lecturer according to questions given in the database.

STAFF MODULE

The staff will have the authorities on viewing questions and viewing feedback.

- View questions

In this module staffs can view questions in the database to give feedback about the lecturers

- View report

After giving the feedback by the student about the particular lecturer. The lecturer can view their feedback results.

HOD MODULE

HOD's will have the authorities on Adding subject, assigning a subject in faculty wise and viewing feedback chart.

- Add Subject

In this module the HOD can add the subjects which are in their department. He can update and delete those subjects.

- Assign the Subject to faculties

In this module the HOD can assign the subject to each and every faculty.

- View Feedback Chart

In this module the head of the department can view the feedback in staffs wise, year wise and class wise in chart format.

PRINCIPAL MODULE

Principal will have the authorities on viewing feedback.

- View Feedback

In this module the principal can view the feedback details in chart view by giving the batch details, department and section.

The feedback report is been checked by the HOD'S and can view overall grades and view the grades obtained to the lecturers and give this report to the principal and he can give counseling to the college staff. Finally principal and HOD's can organize the meeting and give instructions to the staff to improve the performance, communication to teach in a easier way.

V. SYSTEM ARCHITECTURE

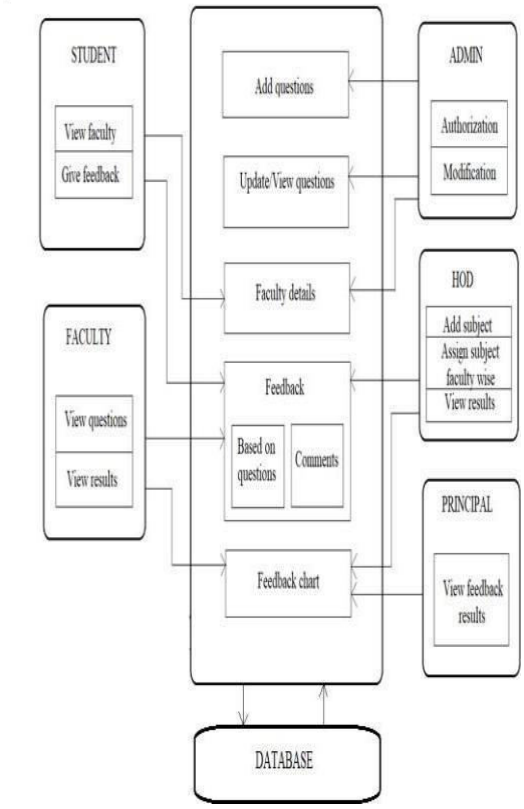

Figure 1 Architecture

DATA SET

SNO	TRAINING DATA SET		
	Table column subhead	*Subhead*	*Subhead*
1	GOOD	4	Positive
2	Excellent	5	Positive
3	Poor	0	Negative
4	Worst	-1	Negative
5	Bad	-2	Negative

a.

Table1: Training Data Set

VI. RESULTS

Figure 2 Home Page.

Figure 3 Admin Page.

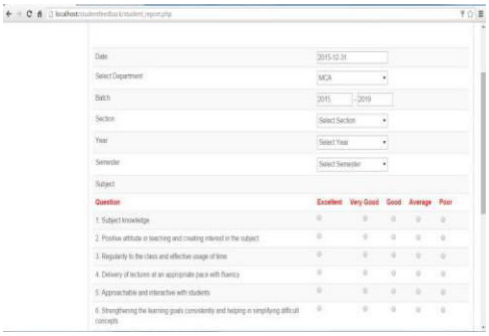

Figure 4 Feedback Form Page.

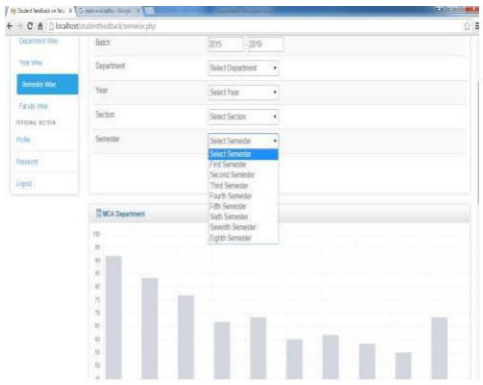

Figure 5 Semester Wise Report.

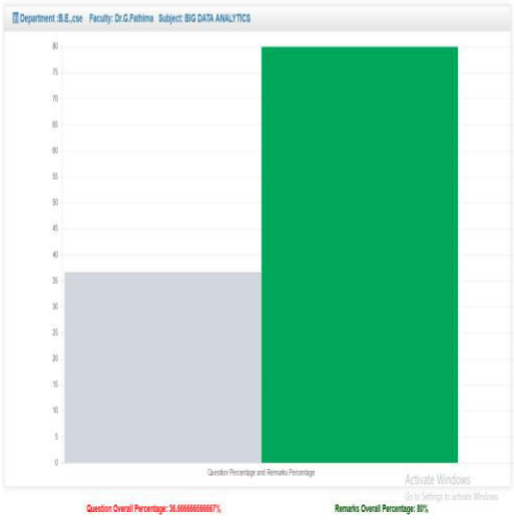

Figure 6 Overall Report of Faculty.

VII. CONCLUSION & FUTURE ENHANCEMENT

This project is design for the purpose to reduce the lecturer's time and to reduce the burden of maintaining huge amount of records of students. At the time of feedback generation it apply formulae for generate a feedback of particular subject. After that it will displayed the whole record sheet to the staff, when the staff will login in the system. As the comparison with manual feedback or existing feedback system the new system is easier way to manage whole things in a particular manner. As per the existing system it is very easy process to save each and every record of individual student by the use of database.

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