

Student Feedback Mining using Naive Bayes Algorithm

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ABSTRACT

We have implemented and automated student feedback system that works on traditional functions, seminar conducted in colleges. So when function end then college doesn't know how to going this functions so student gives feedback on those events. The data for student feedback has been collected through web based form. The form consists of both structured question and free form text box where student can express their overall opinion in words, because student may feel free to express their opinion. The result obtained from opinion mining is largely accurate and also matches with the result of traditional database queries. The main purpose of this project is to focus on the various classifications of opinion mining techniques that convey user's opinion i.e. positive or negative at different level.

Keyword: Data mining, text mining, UGC (User Generated Content), OM (Opinion Mining)

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I. INTRODUCTION

Students' informal conversations on social media (e.g Twitter, Facebook) shed light into their educational experiences-opinions, feelings, and concerns about the learning process. Data from such un-instrumented environments can provide valuable knowledge to inform student learning. Analyzing such data, however can be challenging. The complexity of students' experiences reflected from social media content requires human interpretation. However, the growing scale of data demands automatic data analysis techniques. Twitter posts of engineering students' is focused to understand issues and problems in their educational experiences. Engineering students encounter problems such as heavy study load, lack of social engagement and sleep deprivation are considered. A multi-label classification algorithms to classify tweets reflecting students' problems is implemented.

Nowadays, there are numerous social media sites like twitter, facebook, photo bucket etc. These sites provide people a way to express their thoughts and feelings in front of huge amount mass. Social media enables us to be connected and interact with each other anywhere and anytime – allowing us to observe human behaviour in an unprecedented scale. This provides golden opportunities to understand individuals at scale and to mine human behavioural patterns

otherwise impossible. Social media sites also provide a way to advertise and share with people hence they are now used in various fields like politics and educational systems. Social media having endless advantages also comes with few disadvantages like overuse of these sites by people, posting objectionable things or using it for harming others.

Social media comes in various categories like some sites are for sharing of data in purely text format while some are for sharing pictures and videos.

More people are becoming interested in and relying on the social media for information, breaking news and other diverse subject matters. They find out what other people's views are about certain product/service, film, school etc.

Organizations are now conscious of the significance of the opinion of consumers which they post on social sites to the development of their products or services. Moreover, personalities make efforts to protect their image and are being conscious of how they are perceived on these sites.

With the rise of social media, the web has become very vibrant and lively. Hence more and more people are actively participating in these sites. Social media has become an ever increasing field in today's world.

II. EXISTING BASE SYSTEM

Social media mining is the process of representing, analyzing, and extracting meaningful patterns from data in social media, resulting from social interactions of people. It is a field which encompasses techniques from computer science, data mining, social network analysis, network science, sociology and mathematics. Mining is also called as "Knowledge Discovery" i.e to discover or gain knowledge from raw data. In social media mining we mine the knowledge from various posts generated by people. These are then analysed and used for producing the results.

In this process information is collected, analysed, classified according to need and then final results are produced. Hence the mining helps in understanding individuals better, which can be used to design better computing systems tailored to individuals' needs that will serve them and society better.

Supervised learning methodology:

Existing Base paper focuses on using Opinion Mining technique for classifying the students' feedback obtained during module evaluation survey that is conducted every semester to know the feedback of students with respect to various features of teaching and learning such as module, teaching, assessments, etc. The extracted and preprocessed datasets were subjected to various supervised opinion mining algorithm such as Support Vector Machine, Naïve Bayes, K Nearest Neighbor and Neural Networks implemented using Rapid miner, the open source tool available for opinion. The comparative efficiency of the algorithms in the chosen application context is evaluated using precision, recall and accuracy measures.

III. PROPOSED SYSTEM

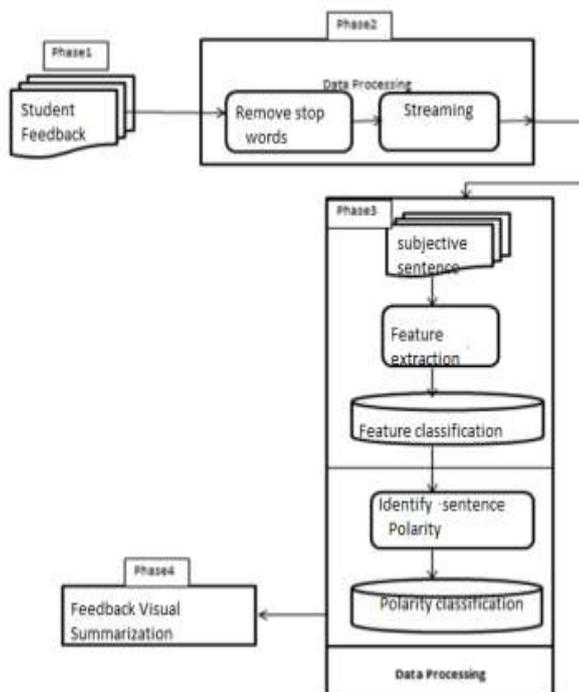


Fig 1. System architecture

First a sample is taken from student and then it conduct qualitative analysis on that sample which is associated to

engineering students educational life. It found engineering students encounter problems such as heavy learning load, lack of social meeting. Stand on these outcomes, authors apply a Naive Bayes classification algorithm to categorize tweets presenting student's problems. Then decision tree algorithm is applied to make more accurate result it will perform filtering after that used the algorithm to prepare a detector of student problems. This study presents a tactic and outcome that demonstrate how casual social media data can present insight into student's incident. In this study it implemented a multi-label classification model where we permitted one tweet to go down into many categories at the same time. Our categorization is compared with other generic classifications. Our work expands the range of data-driven approaches in teaching such as learning analytics and educational data mining. It base our data-mining algorithm on qualitative insight resulting from human understanding, so that it can gain deeper understanding of the data. The paper provides deep insights into engineering student's educational experiences as reacted in informal, uncontrolled environments. Many issues and problems such as study-life balance, lack of sleep, lack of social engagement, and lack of diversity clearly emerge. These could bring awareness to educational researcher, policy-maker.

Cluster

Clustering and classification are both the fundamentals of data mining. Classifications are also known as the supervised machine learning and clustering also known as the unsupervised machine learning technique.

Clustering is the method of finding the similar data set and collect int the same group which is more similar to each other. The main base of clustering is to grouping the data based on the given data description.

Algorithm Steps:

- Step 1: Start
- Step 2: User login
- Step 3: User can submit feedback using facing problem.
- Step 4: User comments can analysis using Naïve Bayes algorithm
- Step 5: Remove all unnecessary symbols.
- Step 6: Check all keywords and classify one class
- Step 7: Clustering all comments and identify facing problem
- Step 8: Final output can analysis by admin panel actually what type of problem student can face.
- Step 9: Stop.

IV. RESULT



Fig 2. Event list with feedback box



Fig 3. Feedback details

Student Feedback

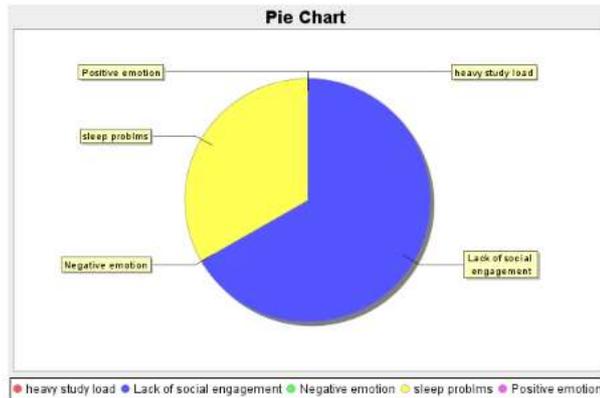


Fig 4. Analysis result

V. ACKNOWLEDGEMENT

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VI. CONCLUSION

In this paper, we have presented a survey of all the opinion mining techniques that has been used to extract the opinions from the web sites to identify the opinion of the educational activity feedback i.e. positive or negative.

The conclusion is based on mining social media data which helps in recognizing the student's problems. Mining social media data is helpful to researchers in learning analytics, educational data removal, and learning skill.

REFERENCES

[1] Khan, Khairullah, "Mining opinion components from unstructured reviews: A review," Journal of King Saud University – Computer and Information Sciences, Vol. 26, 2014.

[2] Dirk T. Tempelaar, "In search for the most informative data for feedback generation: Learning analytics

in a data-rich context", :Journal of Computers in Human Behavior, Vol 47, pp: 157–167, 2015.

[3] Beth Dietz-Uhler and Janet E. Hurn, "Using Learning Analytics to Predict (and Improve) Student Success: A Faculty Perspective", Journal of Interactive Online Learning, Volume12, Number 1, 2013.

[4] Wala Medhat, Ahmed Hassan, Hoda Korashy, "Sentiment analysis algorithms and applications: A survey", Ain Shams Engineering Journal, Vol. 5, 1093–1113, 2014.

[5] Kumar Ravi, Vadlamani Ravi, "A survey on opinion mining and sentiment analysis: Tasks, approaches and applications", Published in Knowledge-Based Systems Vol. 89, 14–46, 2015.