

A Survey on Exploring Student's Experiences through Analyzing Social Media Data

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Abstract: In today's world most of us depend on Social Media to communicate, express our feelings and share information with our friends. Social Media is the medium where now a day's people feel free to express their emotions. Information from such instrumented environments can present valuable data to report student problem. Examining data from such a social media can be challenging task. The problem of student's experiences reveal from social media sited need human analysis or Interaction Social Media collects the data in structured and unstructured, formal and informal data as users do not care about the spellings and accurate grammatical construction of a sentence while communicating with each other using different social networking websites (Face book, Twitter, LinkedIn and YouTube). Gathered data contains sentiments and opinion of users which will be processed using data mining techniques and analyzed for achieving the meaningful information from it. Using Social media data we can classify the type of users by analysis of their posted data on the social web sites. This paper, presents a workflow to integrate both qualitative analysis and large-scale data mining techniques. This study presents a tactic and outcome that demonstrate how casual social media data can present insight into student's learning experiences.

Keywords: Computers and education, social networking, web text analysis Social media sites and data, Naive Bayes, Support vector machine.

I. INTRODUCTION

Today's students will solve tomorrow's problems in a world that is advancing faster and they are facing critical challenges than ever before. Some students don't have a clear vision regarding their reason for being in college. Perhaps they may be here at their parent's insistence while not feeling that they are doing what they really want to do with their life. Academic problems of students come in various forms such as difficulty in lack of motivation, study habits, strict teachers and failed in major examinations. Identifying these problems along with their negative attitude towards the students program would provide better understanding of student's situation and behaviour inside the classroom. Social media sites such as Twitter and Face book provide great venues for students to share their experiences, uncage emotion and stress, and seek social support. On various social media sites, students discuss and share their everyday encounters in an informal and casual manner. This understanding can inform institutional decision-making on interventions for at-risk students, improvement of education quality, and thus enhance student recruitment, retention, and success.

Traditionally, educational researchers have been using methods such as surveys, interviews, focus groups, and classroom activities to collect data related to students' learning experiences [6]. These methods are usually very time-consuming, thus cannot be duplicated or repeated with high frequency.

The emerging fields of learning analytics and educational data mining (EDM) have focused on analyzing structured data obtained from course management systems (CMS), classroom technology usage, or controlled online learning environments to inform educational decision-making [2], [3], [4]. However, to the best of our knowledge, there is no research found to directly mine and analyze student-posted content from uncontrolled spaces on the social web with the clear goal of understanding students' learning experiences.

II. RELATED WORKS

1. Mining Social Media Data for Understanding Students' Learning Experiences:

In this paper They explained that students while being on social media share their experiences and opinions feelings about the learning process. Such type of data is useful for analyzing the student behaviour which may directly lead to enhance student learning. With the help of qualitative analysis and large scale data mining techniques student's problems can be encountered and analyzed from various tweets and posts. The algorithm can then be trained to detect student's problems. Through this methodology student's experiences can be analyzed. Their methodology basically provides learning analytics, education-al data mining, learning technologies. In their research social media data can be analyzed for educational purpose overcome-ing

manual qualitative analysis and large scale computational analysis. With these analysis college students experiences can be encountered which thereby can help increasing the quality of education.

2. Representation and Communication: Challenges in Interpreting Large Social Media Datasets: In this paper they explained that online services are capable of providing opportunities for understanding human behaviour with the help of large aggregate data sets that their operation collects. But the data sets collected by them are not able to model or mirror the world events unproblematically. They have considered the data from Foursquare for analyzing social media as a communicative and not as representational system. They have highlighted four features of four square’s use: firstly the relationship between attendance and check-ins, second event check-ins, third commercial incentives to check-in humorous check-ins. They proposed that social network data should be viewed and analyzed as communicative data. This means data that is produced as a side effect of communication between users, rather than as a representation of some underling activity.

3. Comparing Twitter and Traditional Media Using Topic Models: In this paper they explained that while being Twitter as a new form of social media and containing useful information, content analysis on Twitter has not yet been well premeditated. They compared the content of Twitter with traditional news medium i.e. New York Times by unsupervised topic modelling.

They used a Twitter-LDA model for discovering topics from a representative sample of the entire Twitter. They presented a study based on the relation between the magnitude of prejudiced tweets and re-tweets and also over topic categories and types. With the help of Twitter-LDA model analyzing short tweets showed its efficiency compared with existing models.

They proposed the concept of topic categories and topic types facilitating analysis of the contemporary differences between Twitter and they found that Twitter is a good source of entity oriented topics having low coverage in traditional news media. While Twitter users having low interests in world news, dynamically spread news of important world events.

III. SYSTEM ARCHITECTURE

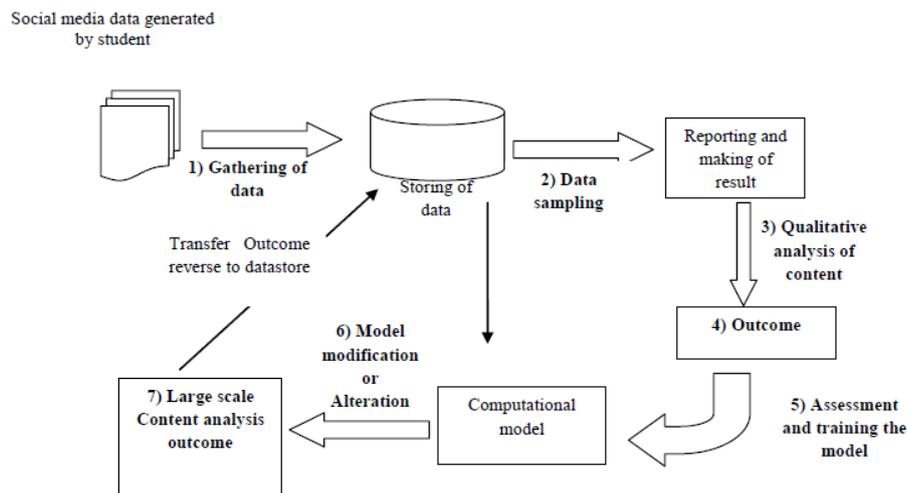


Fig System Architecture

S. No	Paper name	Author name	Description	Disadvantage
1	Mining Social Media Data for Understanding Students’ Learning Experiences	Xin Chen, Mihaela Vorvoreanu, and Krishna Madhavan.	This paper explores the previously instrumented space on Twitter in order to understand engineering students’ experiences, integrating both qualitative methods and Large-scale data mining techniques.	Workflow proposed requires human effort for data analysis and interpretation.
2	Representation and Communication: Challenges in Interpreting Large Social Media Datasets	M. Rost, L. Barkhuus, H. Cramer, and B. Brown	This paper suggests that social network data should be seen and analysed as Communicative data. That is: data that is produced as a side effect of communication between users, rather than as a representation of some underling activity.	Does not address the issue of deciding what these large datasets can be used for, but rather about exploring emerging genres of communication.
3	Comparing Twitter and Traditional Media Using Topic Models.	W. Zhao, J. Jiang, J. Weng, J. He, E.P. Lim, H. Yan, and X. Li	This paper empirically compares the content of Twitter with a typical Traditional news medium, New York Times, focusing on the differences between these two.	Cannot summarize and visualize Twitter content in a systematic way.

IV.CONCLUSION

Valuable information is hidden in large amounts in social media data, presenting wider opportunities to social media mining to discover actionable knowledge that is otherwise difficult to find. Social media data are vast, noisy, distributed, unstructured, and dynamic, which poses challenges for data mining. Mining social media data is beneficial for researcher in an education system to identify the student learning experience. This workflow for analyzing educational content in the social media helps to overcome the limitations of the large data mining and manual quality analysis of user generated textual content in social media as in depth qualitative mining is performed. This work helps the organization and education system to present student educational experience. Based on this organization and participation can easily take decision in the engineering studies.

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