

Analyzing Social Media Data in Sector like education Using Data Mining

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Abstract: The upcoming method in studying analytics and institutional data mining is on analyzing structured data taken from program management systems, or controlled online studying environments to inform educational decision-making. However, there is no proper method found to mine and analyze student posted messages from uncontrolled spaces on the social web sites with the clear goal of understanding students learning experiences. Data Mining is defined as extracting the knowledge from the huge data. This information can be used for any of the applications such as Market Analysis, Fraud Detection, Customer Retention, etc. The research goals of this study are to demonstrate a workflow of social media data for decision making in educational sectors, integrating both qualitative analysis and large scale data mining techniques and to explore students' informal conversations on platform like Facebook, in order to understand issues and problems encountered.

Keywords: Facebook, Pattern, structured data, Integration, Media.

Introduction:

Social media sites such as Facebook provide a great venues for students to share their emotions, stress, and seek social support. On various social media sites, students discuss and share their everyday encounters in an informal and unstructured way. There is huge amount of data available on social media. This data is of no use until converted into useful statistical information. The extraction of information is not the only process we need to perform; it also involves other processes such as Data Cleaning, Data Integration, Data Transformation, Data Mining, Pattern Evaluation and Data representation. We chose to focus on engineering students posts on Facebook about problems in their educational experiences mainly because, Engineering schools and departments have long been struggling with student recruitment and retention issues Based on understanding of issues and problems in students' life, policymakers and educators can make more informed decisions on proper interventions and services that can help students overcome barriers in learning.

Literature survey:-

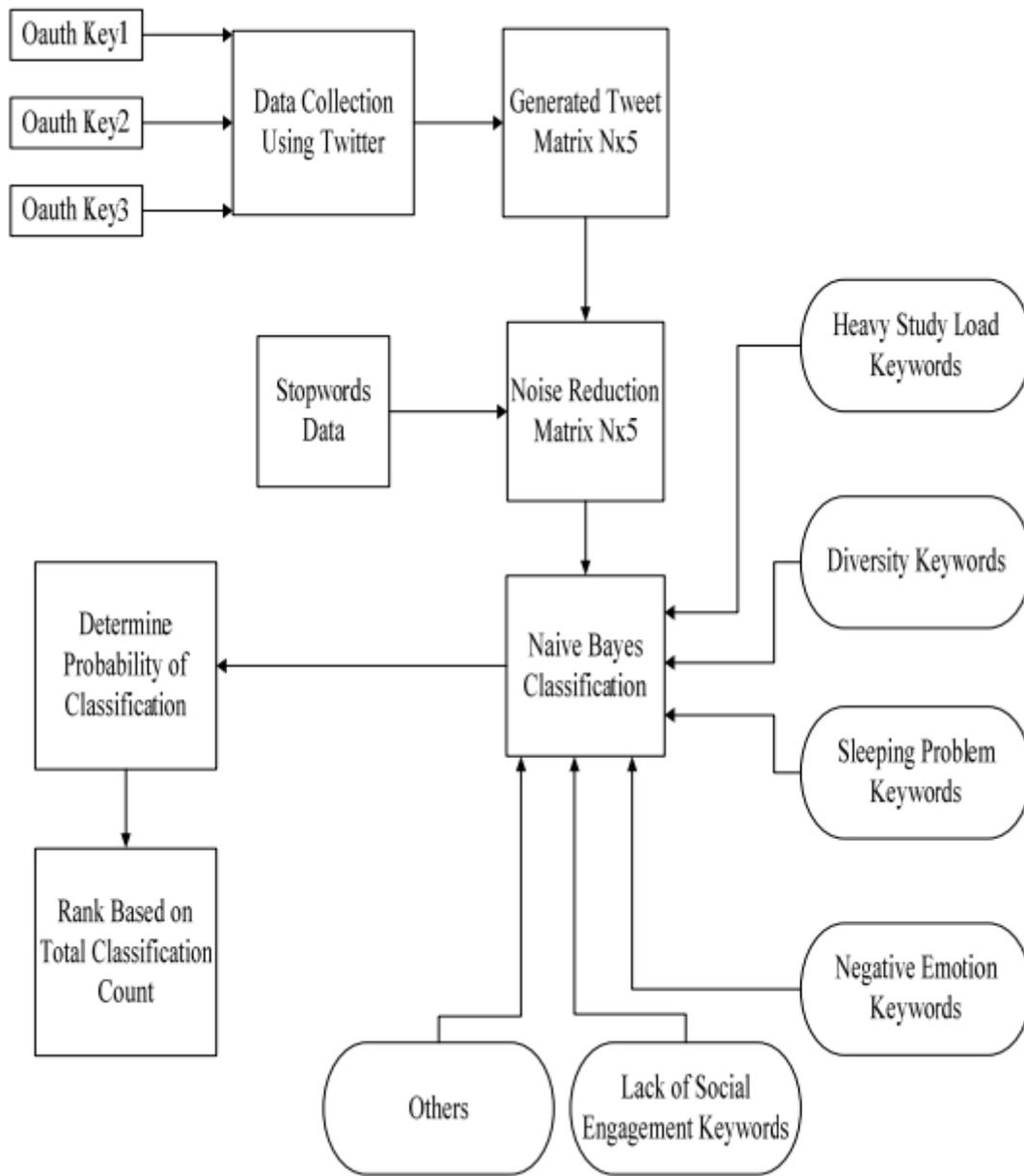
The Online Social Networks (OSNs)[20] have gained popularity among users from all over the world during the past few years. And E-learning has made learning process quite convenient for users by using the networks. However, combing OSNs with E-learning is a new idea. And the role of OSNs in students' E-learning experiences is focused on in this paper [1].

The online word-of-mouth has turned to be a very important resource for electronic businesses. How to analyze user generated reviews and to classify them into different sentiment classes is gradually becoming a question that people pay close attention to. In this field, special challenges are associated with the mining of traveler reviews [2].

That Social networks produce an enormous quantity of data. Facebook consists of over 400 million active users sharing over 5 billion pieces of information each month. Analyzing this vast quantity of unstructured data presents challenges for software and hardware. It presents Graph CT, a Graph Characterization [19] Toolkit for massive graphs representing social network data [3].

The possibility of using Web 2.0 technology, specifically social networking technology, to support a community of practice in a graduate-level classroom setting in order to enhance learning [4].

Combining with clinical psychology, use emotional vector rather than traditional orientation to perform sentiment analysis. The emotional vector could constantly absorb new Internet emotional words with our algorithm and has hierarchical structure so as to do multilevel analysis. Experimental evaluations show that there is a strong correlation between burst events and public moods, and sentiment analysis could implement effectively using the emotional vector [5].

Block Diagram:

This module further consists of several smaller tasks. Data collection, Noise reduction, Probability computation, Classification and Ranking of categories are the important modules. The following sections explain each module of the system architecture. The data is collected using three keys namely Key-1, Key-2, and Secret Key from social media 'Facebook'. The data is collected based on hash tags which take 'student' as prefix and post related to the student problems are considered. The data collected is stored in a database in the form of an $N \times 5$ matrix; the columns defined are Facebook Id, Facebook Description, User Id, Screen Name, and Language of the post. For every post there exists a Facebook Id to identify them uniquely, Facebook description which defines the Facebook data, User Id gives the details of user, there exists a screen name which is system-generated name to identify each user, and at last there is a language field which represents the language type of data.

Implementation:

Software is considered to be a deliverable once its design is transformed into executable codes on a selected platform subjected to specified requirements adhering to the best available coding standards and practices. The platform used to develop the student learning experience systems is Windows as this Operating System supports Eclipse Luna, Net Beans and also provides server configurations. The names of the variables, methods, class have been chosen carefully so as to reflect the purpose of the respective token's use. The system uses separate files for each of the classes developed with header files for every class file. The header file consists of all the major variables to be used in the class and defines the prototype of the methods that are implemented by the class. The header comments in the files enable any third-party user to understand the contents of the files and also seek help from the developer of the source file. The entire work makes use of classes for each and every operation. All the codes written reside in method definitions.

of the one or the other class. Placing all the methods in a base file and making them to accessible to all derived classes to be an efficient solution.

Conclusion:

Hence researchers in learning analytics, educational data mining and learning technologies. It provides a workflow for analyzing social media data for educational purposes that overcomes the major limitations of both manual qualitative analysis and large scale computational analysis of user generated textual content. And the study can inform educational administrators, practitioners and other relevant decision makers to gain further understanding of engineering student's college experiences. This also provides a hope to see a proliferation of work in this area in the near future. It also advocates that great attention needs to be paid to protect students privacy when trying to provide good education and services to them.

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