



## An Overview on Web mining and Social media mining in Education System

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**Abstract**—web 2.0 technology brought new concepts and new thinking in Education as in older days Students and Teaching people uses only books but now a days concepts are changes. Now through different websites students and faculties can get more and more information on finger tips. Social media also plays vital role it deals with interaction between individual. So in this paper deals with knowledge to understand how the web mining and social media mining deals with Education System

**Keywords**—web 2.0, Social media, Education, Web Mining , websites, Social media analysis, Education Data Mining

### I. INTRODUCTION

From last decade Internet increases very rapidly and as a result many websites and Social networking sites also increases rapidly. If we analyse properly from last decade many huge application in online domain which results in our Education systems, now we believe everything will get on finger tips with the help of Google. Some people says Google is God father of Today's Education System. So many believes now a day we will get everything on Google, Interms of Social media Facebook plays a vital role as many people uses this as Communicating media in Education System. Many Students create a Groups of Social media for Study purpose. As Web mining is the use of data mining techniques to automatically discover and extract information from web document and services. Social media process of representing , analysis and extracting actionable pattern from Social media.

### II. REVIEW FROM LITERATURE

Web mining in Education talks about the process which converts data coming from Different Education systems which includes traditional Class room teaching , ELearning and other tutorial materials which helps for researchers and educational experts as well to Students, which supports quality in Educational Process. So to improve the quality of Educational process data mining which includes Web and Social media mining are essentials concepts .For this we need following categories to work on .

- ✓ Data Analysis and Visualization
- ✓ Proper and Valid Feedback
- ✓ Students Response and Recommendation
- ✓ Social media analysis
- ✓ Students Grouping
- ✓ Checking of Students Performance
- ✓ Student modelling
- ✓ Developing Conceptual design
- ✓ Courseware Design
- ✓ Planning

As we discuss about above topic Data Analysis and Visualization talks in terms of Highlights useful information and support for Decision Support System for Educators to get proper statistical data. Proper and valid feedback: Valid feedback is essential for proper decision makers. Student Response and recommendation:-Personalized activity or task to be done at student's level. Social media analysis talk about how many students as well as faculty member utilizing the benefits of social media in terms of Study purpose and also study through relational perspective of Individuals. Student grouping: is talks about to analyse how many students are using social media mining or web mining by creating group activity through social media.

Education based data mining is emerging trends in Data mining arena as it deals with many subordinates which links with many data mining factors. Education data mining deals with many factors which includes Learning analysis AI , Information Technology , Database m, statistics .To make teaching learning process more effective above analysis plays vital role in field of Education.

Data Mining in terms of Education might be Person oriented which talks about direct participation of faculty as well as students in the education domain., When we talks about personal oriented few terms are equally important such as Student learning process , Performance evolution in both students as well as faculty point of view

Secondly Department wise Data Mining, which includes to check working style of each and every department and depends on this workingstyle checking of any effect on this to Students and faculty.

Main concern over here will be in departmental data mining is to redesign the new syllabus as need of Industry and update the syllabus as per regular interval, accordingly research oriented approach should also be enhances.

KDSS based system also to be used in the process so that data mining process in terms of Education domain will be fulfilled.

Administrative base data mining is also effective since to get proper channelized process of other stuff need to involvement of direct involvement of Higher authorities.to add Industrial academician connections.

Now we consider Education Data Mining components which involve data mining associate with Education, although in this paper we deals with Social media mining also key factor.

Component includes:-

- People Involvement
- Different environment to work with
- Data analysis
- Different Task
- Data Mining Methods

So we deals the components now in detail manner which talks about details

PeopleInvolvement:- talks about different kinds of people involve in education data mining , these people have certain criteria on the basis they will connect with Education data mining

- ✓ Direct involve Groups of People
- ✓ Indirect involve Groups of People
- ✓ Hybrid Groups of people

Primary Groups of People :- which involves directly in the system, teaching and learning process. Example Students and Faculties.

Secondary groups of People: Indirectly people involved in the system such as Parents and Alumni

Hybrid Group:-this group involved in decision makers and administrative staffs which deals with administrative work and DSS.

Different environment to work with :

1. Direct involvement of people work in direct linking environment which involves of student and faculties face to face communication
2. Indirect environment which deals with eLearning
3. Online Tutorials

Educationdata:is of two types Online as well as Offline data. Through online we can send and receive data in different Geographical area, web based education, Distance learning mode. Offline means traditional approach.

EducationalTask: is of two types task which involves in Decision making task and learner based task. Decision based task involve in administrative task , learner based in system basically implemented student faculty environment.

Many methods involve to make education system properly though Data mining in education arena .Now will discuss in terms of Social media mining is also very emerging concepts today as we deals with Social media mining.

Statistical analysis of data in Social media mining how many students or faculties using social media sites foe educational purpose.Ranking algorithms are one of the foundation stones for the social networks' structural analysis. Link prediction, spam detection and collaborative filtering are examples of techniques that rely on ranking algorithms. Ranking a graph is actually establishing a measure of similarity between the nodes. The PageRank algorithm developed by Larry Page and Sergey Brin in 1998 is known worldwide as atool for ranking web-pages in order of their importance. It is the same algorithm used by the Google internetsearch engine in order to prioritize their search results.

Social network mining is one of the newest research as we talking in terms Digital India , this type of miring categories on educational data mining that perhapsemerged by the influence of recent trends on online social networks, leading to educational paradigm shiftstowards more engaging and collaborative online learning communities (Ghosh, Rude-Parkins, &Kerrick,2012) creating Personalized Learning Networks (PLNs) (Shepard, 2012).

On Social media interaction can be of 3 ways one to one , one to many , many to many like groups , Social media not only act as tool for uploading images and sharing information rather it plays vital role when we talk about social media intercommunication , web mining deals with information which we get out of that information. Through Social media many students interact with each other , many students deals with one another to study purpose . they work as one team .Teamwork plays vital role in Education system now a days and Social media playing vital role.

Web mining is also can be categories under three subtopics

- ✓ Web Content mining
- ✓ Web usage mining
- ✓ Web Structure mining

Web content mining is extracting knowledge from content documents, web usage miming , Web usage mining is the application of data mining, web structure mining is getting knowledge about hyperlinks . In this three categories we deals

with mining task very particularly, as first one web content mining is the extracting the relevant data for education purpose, secondly we check about application about data mining and thirdly we deals with hyperlink to the data.

### **III. CONCLUSION**

In this paper we deals with Web mining and Social media mining techniques which deals with Education system ,as we seen many people directly indirectly involve in the system and hence how this web mining and Social media mining plays important role.As Social media mining is now becoming Trends and its capturing due to usage of web 2.0.In coming years social media mining plays vital role .

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