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E-Learning Management System for Differently Abled Peoples and Aged Peoples

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ABSTRACT: Educational data mining is an arising discipline, concerned with developing styles for exploring the unique types of data that come from the educational environment. This work is a check of the specific operation of data mining in learning operation systems and a case study tutorial with the Moodle system. The use of online ore-learning systems has grown exponentially in the last many times, prodded by the fact that neither scholars nor preceptors are bound to a specific position. similare-learning systems are occasionally also known as a Course Management System (CMS), Learning Management System (LMS), Learning Content Management System (LCMS), Managed Learning Environment (MLE), Learning Support System(LSS) or Learning Platform. Our ideal is to introduce it both theoretically and virtually too all druggies interested in this new exploration area, and in particular to online preceptors ande-learning directors. We describe the full process for mininge-learning data step by step as well as how to apply the main data mining ways used, similar as statistics, visualization, bracket, clustering of Moodle data. So in this design apply Iterative Dichotomiser(ID3) algorithm to induce rules to prognosticate the student behavior

KEYWORDS: Learning Management System (LMS), Iterative Dichotomiser(ID3,) Learning Content Management System (LCMS), Learning Support System(LSS)

I. INTRODUCTION

DATA MINING:

Data mining(the analysis step of the " Knowledge Discovery in Databases" process, or KDD), a field at the crossroad of computer wisdom and statistics, is the process that attempts to discover patterns in large data sets. It utilizes styles at the crossroad of artificial intelligence, machine literacy, statistics, and database systems The overall thing of the data mining process is to prize information from a data set and transfigure it into an accessible structure for farther use Away from the raw analysis step, it involves database and data operation aspects, data preprocessing, model and conclusion considerations, interestingness criteria , complexity considerations,post-processing of discovered structures, visualization, and online updating. Generally, data mining(occasionally called data or knowledge discovery) is the process of assaying data from different perspectives and recapitulating it into useful information- information that can be used to increase profit, cuts costs, or both. Data mining software is one of a number of logical tools for assaying data. It allows druggies to dissect data from numerous different confines or angles, classify it, and epitomize the connections linked. Technically, data mining is the process of chancing correlations or patterns among dozens of fields in large relational databases.

Data

Data are any data, figures, or textbook that can be reused by a computer. moment, associations are accumulating vast and growing quantities of data in different formats and different databases.

Information

The patterns, associations, or connections among all this data can give information. For illustration, analysis of retail point of trade sale data can yield information on which products are dealing and when.

Knowledge

Information can be converted into knowledge about literal patterns and unborn trends. For illustration, summary information on retail supermarket deals can be anatomized in light of promotional sweats to give knowledge of



consumer buying behavior. therefore, a manufacturer or retailer could determine which particulars are most susceptible to promotional sweets.

Data storages

In computing, a data storehouse(DW or DWH) is a database used for reporting and data analysis. It's a central depository of data which is created by integrating data from multiple distant sources. Data storages store current as well as literal data and are generally used for creating trending reports for elderly operation reporting similar as periodic and daily comparisons. The data stored in the storehouse are uploaded from the functional systems(similar as marketing, dealsetc., shown in the figure to the right). The data may pass through an functional data store for fresh operations before they're used in the DW for reporting. The typical ETL- grounded data storehouse uses staging, integration, and access layers to house its crucial functions. The staging subcaste or staging database stores raw data uprooted from each of the distant source data systems. The integration subcaste integrates the distant data sets by transubstantiating the data from the staging subcaste frequently storing this converted data in an functional data store(ODS) database. The integrated data are also moved to yet another database, frequently called the data storehouse database, where the data is arranged into hierarchical groups frequently called confines and into data and aggregate data.

A data storehouse constructed from integrated data source systems doesn't bear ETL, carrying databases, or functional data store databases. The integrated data source systems may be considered to be a part of a distributed functional data store subcaste. Data confederation styles or data virtualization styles may be used to pierce the distributed integrated source data systems to consolidate and aggregate data directly into the data storehouse database tables. Unlike the ETL- grounded data storehouse, the integrated source data systems and the data storehouse are all integrated since there's no metamorphosis of dimensional or reference data. This integrated data storehouse armature supports the drill down from the aggregate data of the data storehouse to the transactional data of the integrated source data systems.

II. LITERATURE SURVEY

2.1 C. Romero., S. Ventura Examination plays a vital part in any student's life. The marks attained by the student in the examination decide his/ her future. thus it becomes essential to prognosticate whether the student will pass or fail in the examination. If the vaticination says that student tends to fail or attained less in the examination previous to the examination than redundant sweets can be taken to ameliorate his/ her performanc. It's important to both the student and the faculty to know about the student performance, student by knowing his/ her weak points and strengths work on them to ameliorate his/ her performance and preceptors by knowing student's performance know his/ her knowledge state and make changes in his/ her instructions. preceptors face a dilemma they're being asked to assess scholars more, but every nanosecond of class time spent in testing is a nanosecond of educational time that's lost. Online Learning Systems solves this dilemma, by letting scholars get individual feedback while their literacy progress is assessed. Online Learning Systems is a free online platform that allows preceptors to write and elect questions, scholars get immediate and useful training and preceptors admit feedback on the performance of each individual student and of the class as a whole and acclimate their educational conduct to impact student literacy. By examining the feedback data, preceptors can spot scholars who may need fresh help or stimulant to spend further time on the content and identify areas where the class as a total is floundering. An Online Learning System can be of any form like educational material which is readily available for distribution on the Web or intimately over an internal network. The use of computers in literacy and tutoring advanced a lot through last decades through different online literacy systems. The use of networked internet and intranet systems to circulate training and educational information to a group of druggies. Student's learn, explore content and by doing so they leave trail of log information. Online literacy systems have the capability to capture aqueducts of fine granulated learner actions and the tools and ways that can operate on the data to give a variety of stakeholders with feedback to ameliorate tutoring, literacy and educational decision timber.

2.2 A.Anitha, Dr.N.Krishnan The development of online literacy courses is a delicate task many times before in which the inventor has to choose the contents that will be shown, decide on the structure of the contents and also to determine the most applicable happy rudiments for each type of implicit stoner of the course. Due to these delicate tasks of taking these opinions, a one- shot design is hardly doable, indeed when it's precisely done. It's needed in utmost cases to estimate and conceivably modify the contents, structure and navigation of scholars ' operation information. To simplify these, we need data analysis styles and tools to observe scholars behavior and to help preceptors in detecting possible crimes, failings and possible advancements. Thee-learning data mining process consists of the same four way in the general data mining process as follows first is collection of data(In this paper we're going to use the scholars ' operation data of the Moodle system), alternate step is preprocessing of the data(In order to preprocess the Moodle data, we can use a database director tool or some specific preprocessing tool), third step is operation of data mining



fashion(In order to do so, we can use a general or a specific data mining tool) and the last step is interpretation and evaluation of the results. The results or model attained are interpreted and used by the schoolteacher for farther conduct. The schoolteacher can use the information discovered to make opinions about the scholars and the Moodle conditioning of the course in order to ameliorate the deep learning.

2.3 Cristóbal Romero &Sebastián Ventura Moodle is an open- source course operation literacy system to help preceptors produce effective online literacy communities. It's an volition to personal marketable online literacy results, and is distributed free under open source licensing. Moodle has been installed at universities and institutions each over the world. An association has complete access to the source law and can make changes if need be. Its modular design makes it easy to produce new courses, adding content that will engage learners and it's designed to support a style of learning called social constructionist pedagogy. This style of learning believes that scholars learn stylish when they interact with the literacy material, construct new material for others, and interact with other scholars about the material. Moodle doesn't bear the use of this style in the courses but this style is what it stylish supports, and it has a flexible array of module conditioning and coffers to produce five types of static course material(a textbook runner, a web runner, a link to anything on the Web, a view into one of the course's directories and a marker that displays any textbook or image), as well as six types of interactive course material(assignments, choice, journal, assignment, quiz and check) and five kinds of conditioning where scholars interact with each other(converse, forum, glossary, wiki and factory).

III. EXISTING SYSTEM

Type is one of the most constantly studied problems by DM and machine knowledge(ML) experimenters. It consists of prognosticating the value of a(categorical) particularity(the class) rested on the values of other attributes(the prognosticating attributes). There are different type styles, similar as- Statistical type is a procedure in which individual particulars are placed into groups rested on the quantitative information of characteristics essential in the particulars(appertained to as variables, characters,etc.) and rested on a training set of preliminarily labeled particulars. Some samples of statistical algorithms are direct discriminate analysis, least mean square quadratic, kernel and k nearest neighbors. The algorithms included in this paradigm can be considered as a heuristic state- space hunt. In rule induction, a state corresponds to a seeker rule and drivers correspond to generality and specialization operations that transfigure one seeker rule into another. samples of rule induction algorithms are CN2, AprioriC, XCS, Supervised Inductive Algorithm(SIA), a inheritable algorithm using real- valued genes(Corcoran) and a ABC- rested inheritable programming algorithm(GGP). -Fuzzy rule induction applies fuzzy sense in order to interpret the underpinning data linguistically. To describe a fuzzy system fully, a rule base(structure) and fuzzy partitions have to be determined(parameters) for all variables. Some fuzzy rule knowledge styles are LogitBoost, MaxLogitBoost, AdaBoost, Grammar rested inheritable Programming(GP), a crossbred ABC- rested inheritable Programming/ inheritable Algorithm system(GAP), a crossbred Simulated Annealing/ inheritable Programming algorithm(SAP) and an adaption of the WangMendel algorithm(Chi).

DISADVANTAGES

- Need large number of computational way
- Unsupervised approaches are executed
- Computational time is high with smallest delicacy rate.

IV. PROPOSED SYSTEM

With the fleetly growth of the Internet, the web- grounded educational system has been decreasingly used as an important tool to support learners and preceptors. There are numerous benefits for information sharing and collaboration between learners and preceptors in a course. Learners can take a web- grounded class to enhance their knowledge at any time and any place and preceptors can fluently produce their online classes and examiner student's performance as well. Moodle is a popular Learning Management System(LMS) that supports preceptors to produce the effective online courses. still, it didn't give the function to pierce and estimate learner's provocation behavior . Also Student's logs in a Moodle can show scholars ' relations like reading, writing, taking test, and doing colorful tasks. With a huge of accumulated information daily from-Learning course, it's veritably delicate to dissect this data manually. Although there are some tools that help to report useful information which in turn is veritably precious for assaying student's pattern behavior , they don't offer specific features schoolteacher need to track and estimate all the scholars ' conditioning in class. As advanced education diversifies its delivery modes, our capability to use the prophetic and logical power of educational data mining(EDM) to understand scholars ' learning gests is a critical step

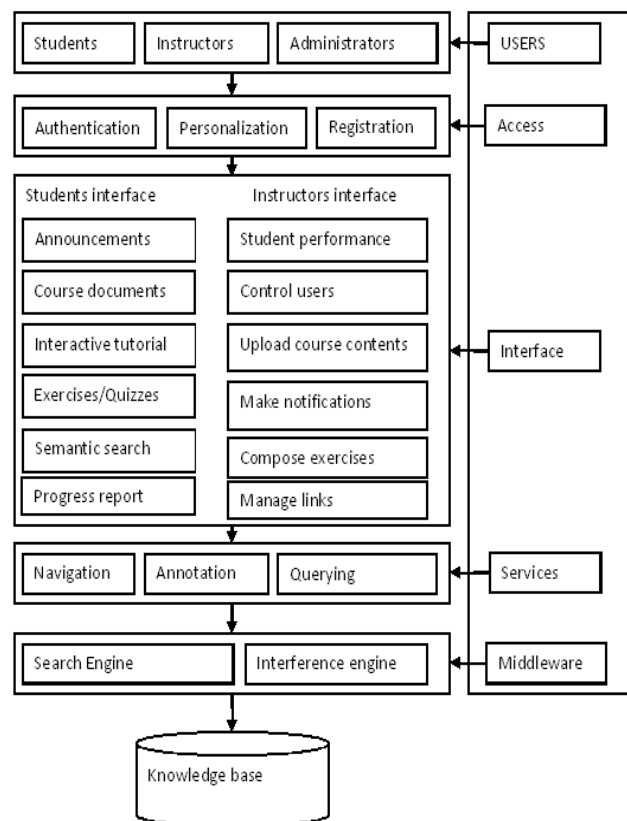


forward. The relinquishment of EDM by advanced education as an logical and decision making tool is offering new openings to exploit the untapped data generated by colorful student information systems(SIS) and literacy operation systems(LMS). Proposed E-learning has been stoner inflexibility. E-learning has huge database which carries lots of student records, course records, course accoutrements and so on. In this system stoner security handed by the admin, admin himself authorize to seeker to enter into the system. Now in days every existent recommends that literacy should at any- place and any- time, and this recommendation is resolved by E-Learning system.

ADVANTAGES

- Accessible vaticination rules are created from the training data.
- Builds the fastest tree.
- Whole dataset is searched to produce tree.

4.2 SYSTEM ARCHITECTURE



V. SYSTEM IMPLEMENTATION

5.1 MODULES:

- ▶ Interface creation
- ▶ Data collection
- ▶ Features extraction
- ▶ Clustering
- ▶ Classification

5.2 MODULES DESCRIPTION:

5.2.1 Interface creation:

In this module, we can produce the interface fore- literacy system. The interface contains student interface, admin interface and teacher interface. The student interface is used to predict the student conduct and teacher interface is used to upload the notes, pdf lines and so on. Admin interface is used to store all data about student exertion and staff exertion.



5.2.2 Data collection:

Moodle is an open- source knowledge course operation system to help instructors produce effective online knowledge communities. Moodle is an volition to particular marketable online knowledge results, and is distributed free under open source licensing. Moodle's modular design makes it easy to produce new courses, adding content that will engage learners. This style of learning believes that scholars learn swish when they interact with the knowledge material, construct new material for others, and interact with other scholars about the material. Moodle does not bear the use of this style in the courses but this style is what it swish supports. Moodle keeps detailed logs of all conditioning that scholars perform. Logging is record keeping that can keep track of what paraphernalia scholars have entered. Moodle logs every click that scholars make for navigational purposes and has a modest log viewing system erected into it.

5.2.3 Features extraction:

Feature extraction starts from an original set of measured data and builds derived values(features) intended to be educational andnon- redundant, easing the posterior knowledge and generality way, and in some cases leading to better mortal interpretations. point birth is related to dimensionality reduction. In this module, features are pulled from moodle data.

5.2.4 Clustering:

Clustering is a process of partitioning a set of data(or objects) into a set of meaningfulsub- classes, called cluster. Help stoners understand the natural grouping or structure in a data set. In this module, we can apply clustering algorithm to group the features. Clustering is done by ID3 algorithm. Inductive knowledge is the knowledge that is predicated on induction. In inductive knowledge Decision tree algorithms are truly notorious. For the applicable type of the objects with the given attributes inductive styles use these algorithms basically. These algorithms are truly important in the type of the objects. That is why multitudinous of these algorithms are used in the intelligent systems as well. In this paper the ID3 decision tree learning algorithm is executed with the help of an illustration which includes the training set of moodle data. The introductory calculations are used to calculate the type related to the training set used. The attendant of the work will be the classified decision tree and the decision rules. prognosticate patterns may in turn reflect a difference in learning characteristics, which may be used to give them, discerned guiding

5.2.5 Classification:

In machine knowledge and statistics, type is the problem of relating to which of a set of orders(sub-populations) a new observation belongs, on the base of a training set of data containing obediences(or cases) whose order class is known. In this module, apply type algorithm to classify the data by admin. Faculty ultimately give paraphernalia and download the pressmandocuments. This information pass to teacher for prognosticate advice. perfecting status details are transferring to student profile. Admin prognosticate the behavior of each student.

VI. CONCLUSION AND FUTURE ENHANCEMENT

In this work we've shown how useful the operation of data mining ways by course operation systems can be for admin. Although we've shown these ways independently, they can also be applied together in order to gain intriguing information in a more effective and faster way. First, preceptors can use visualization ways to gain a general view of the pupil's operation data. Or, if they find some analogous groups of scholars in graphs, also they can apply clustering ways in order to gain the exact groups scholars can be divided into. And these groups can also be used to produce a classifier in order to classify scholars. The classifier shows what the main characteristics of the scholars in each group are, and it allows new online scholars to be classified. Eventually, the admin can apply ID3 algorithm to discover if there's any relationship between these characteristics and other attributes. These cases can't only help to classify scholars, but also to descry the sources of any incongruous values attained by the scholars. In future we can extend our frame to ameliorate the delicacy rate of the design using colorful data mining algorithms and handle large datasets.

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