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ONLINE LEARNING PERFORMANCE ON E-LEARNING SYSTEM

Dr. P. S. S. Akilashri*[1] and E. S. Revathi[2]

[1]HOD, PG & Research Department of Computer Science, National College (Autonomous), Tamilnadu, India.

[2]M. Phil Scholar, PG & Research Department of Computer Science, National College (Autonomous), Tamilnadu, India.

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***Corresponding Author**
Dr. P. S. S. Akilashri
HOD, PG & Research Department of Computer Science, National College (Autonomous), Tamilnadu, India.

ABSTRACT

Education is typically perceived as the technique whereby we have students in a classroom delivery lessons from a Teacher but with the facilitating of information technology through the internet, learning can now be accomplished without essentially having a teacher right in front of a student. E-learning is one of the tools that appear from information technology and has been integrated in lots of universities education programs, variation from the traditional approach of education to electronic environment in which a student can admittance and make utilize of information everywhere and at any well-situated time. The intention of E-learning Management System is to make routine the existing manual scheme by the assist of computerized equipment's and full-fledged computer software, satisfying their requirements, so that their precious data/information can be stored from a long epoch with effortless accessing and manipulation of the same. The necessary software and hardware are effortlessly obtainable and simple to work with. E-learning Management System, as described higher than, can guide to error gratis, secure, consistent and fast management classification. It can support the user to deliberate on their other activities moderately to think on the verification keeping. Thus, it resolves help organization in enhanced utilization of resources. The organization can preserve computerized records without redundant entries. That means that one need not be distracted by information that is not pertinent, while being able to reach the information. It may help collecting perfect management in particulars. In an extremely short time, the assortment will

be noticeable, simple and reasonable. It will assist a person to know the management of passed year absolutely and brightly. It also helps in current every work relative to E-learning Management System. It will be also condensed the cost of accumulating the management & collection practice will go on smoothly.

KEYWORDS: Data Mining, Evolutionary Model, Architecture, Accessibility, Compatibility, Requirements, Naive Bayes.

INTRODUCTION

Learning is one of the extremely fundamental human activities that necessitate concentration blended with interactivity, obvious and distinct understanding of the facts been stated or discussed, high communication skills and techniques, good-looking learning qualities such as colourful pictorial presentations of information amongst others.[1] Nevertheless, all not learning process is considered to be successful. Effective could be assumed to had been achieved if about hundred percent (100%), of the population lectured assimilate the knowledge and/or ideas across; this is quite different when the population size is especially high and there is existences of certain un-conducive learning conditions such as noise, poor ventilation, and extreme temperatures.[2] For successful learning to take place, it is dependent on lots of factors. In the majority belongings, these factors happen from the teachers, the students, the teaching and learning medium or equipment, and the learning environment with its structures.[3] For illustration, if a teacher lacks communication skills and techniques, the students, will find it difficult to comprehend, if the necessary media or materials necessary for teaching and learning is not provided or if the stipulation is inadequate, the understanding of the subject topic or concern been discussed might be impaired.[4] In addition, the duration for teaching and learning, the velocity of understanding and individual learning style consequence the assimilation of knowledge by the students; and might have impact on the coverage to which the teacher envelops the teaching format.[5] These factors will, positively, hamper the effective teaching and learning by the teacher and by the students respectively.

One of the most important challenges that educational activity faces is to boost student dropout rate. Student dropout could be a difficult task in educational activity and it's reportable that regarding one fourth of scholars born faculty when their initial year. Student dropout has become a sign of educational performance and entry management.[6] Recent study results show that intervention programs will have important effects on dropout, particularly for the primary year. To effectively exploit the restricted support resources for

the interference programs, it's fascinating to spot ahead students World Health Organization tend to wish the support most. In this paper, we have a tendency to illustrate the experiments and also the results from an information mining technique for the scholars to help the code dropout program on field.[7] To use machine learning formula to research and extract info from existing student knowledge to determine prognostic model.

Problem Definition

It is very noticeable that it is required of the computer science students to be practically and theoretically sound so as to face the challenges to be encountered in the labour market. Disappointingly, most of the computer science students are not capable of as expected before lunching them into the labour market. Often time, the students are established to be the highest set of customers patronizing most of the side "computer training institute" and in turn, might not get the value of services they request.[8] This situation had been recognized to countless claims, in most occasions, had been made by both students and teachers on the pattern of teaching and learning respectively for instance, the students claim the greater percentage of the teachers have poor teaching communication skills, and similarly the teachers responsibility the inadequate teaching and learning facilities and/or infrastructure as the reason for ineffective learning.[9] Hence, the problem centres on effective teaching and learning process for the impacting and the progression of the students' speculative and practical knowledge.

Proposed System

This project uses the combination of multimedia features, little artificial intelligence features, and human–computer interaction principles for the progress of a web site for an online and implementation offline execution of e-learning. Mutually of the e-learning are considered for the learning of computer science courses at its introductory altitude.[10] These proposed e-learning avenues are deviations from the traditional teaching and learning system, and as an outcome have their major significance as follows:

1. Effective learning of the subject topic by the students the conventional classroom methods have high tendencies of respond to the numerous factors affecting implementation learning (see table 1 in the appendix for additional information). But with the adoption of e-learning, these factors might exist with modest or no impact on the learner.[11] Hence, this project is focused on rising e-learning request that will be striking through the stipulation of

dissimilar learning platforms and skillful use of multimedia which will lead to the enhancing of effective learning and decrease of teachers teaching work load.

2. Cost of learning materials-could be summary considerably when compared to the cost of conventional learning resources or the cost of conventional instructional organization. This is, however, talented in this project by providing free access with limited content price to the user. Reduction in the duration of teaching and learning, and strengthening of teacher's effort-according to some research, the training time could be abridged up to sixty percent (60%) as alongside the conventional classroom method using e-learning products.

3. These, in turn, augment the rate of knowledge assimilation and permit the teachers to direct additional effort on other areas where the students are lacking. This is basically achieved in this project the employ of convinced technological features such as the multimedia features.

METHODOLOGY

E-learning is learning using the Internet, network, or detached computer. E-learning is essentially the network- enabled express of skills and knowledge. E-learning refers to using electronic submission and process to learn. E-learning includes every form of electronically supported knowledge and teaching.[12] The information and communication systems, whether networked learning or not, serve as specific media to implement the learning progression. This frequently involves together out-of-classroom and in-classroom instructive experiences via technology, even as advances persist in observe to devices and curriculum. E-learning is the workstation and network-enabled relocate of skills and knowledge. E-learning applications and progression comprise Web-based learning, computer-based learning, virtual education opportunities and digital collaboration. Content is distributing via the Internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM.[13] That is to say E-learning systems include collectively Learning Management System and Course management system. It can be self-pace or instructor-led and includes media in the appearance of text, image, animation, streaming video and audio. It is frequently thought that innovative technologies can make a big dissimilarity in education.[14] In young ages especially, children can employ the huge interactivity of new media, and enlarge their skills, knowledge, and perception of the world, beneath their parents' monitor, of course.

Architecture

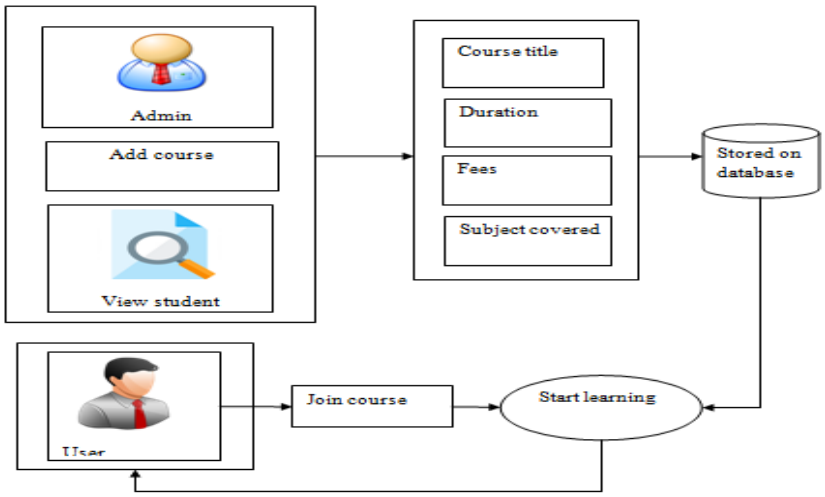


Figure Architecture.

Data Flow Diagram

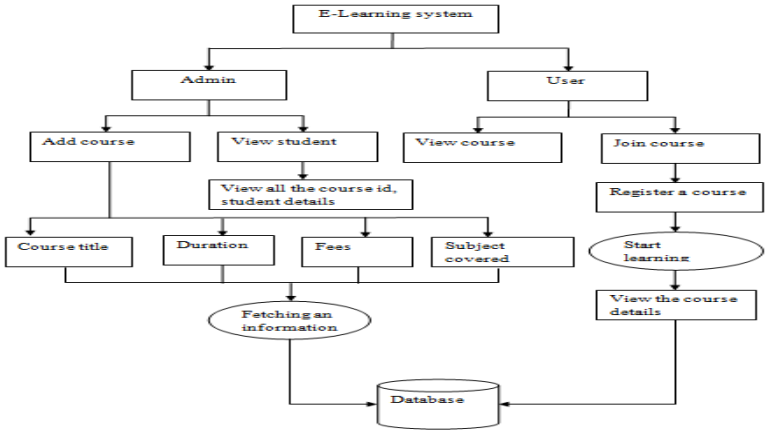


Figure Data Flow diagram.

Modules

- Login
- Course
- Feedback

Modules description

Login

Student needs to get logged in with valid username and password. They need to enrol the course which they wish to study.

Course

The online computer programming route was delivered in a succession of 10 modules. Students were required to absolute one module at the time, with modules finished in sequential order. As indicate in Table the first component restricted a preamble to the route, modules 2-5 introduced students to basic arithmetic operations, vectors, and matrix analysis. Modules 6-9 contained additional advanced programming, which integrated conditional if statements, loops, and user-defined functions. In module 10, students were asked to reflect on numerous ethical cases presented, and were required to post their reflections in a blog.

Feedback

Student can view their profile and can give their feedback about the material and timings. Those feedbacks will be passed to the expertise that created the vast e-content.

Naive Bayes

Naive Bayes uses the concept of Bayes' Theorem which assuming the independency between predictors. Actually, Naïve Bayes imagines that the presence of one characteristic does not affect the presence of any other characteristic. It is very easy to construct and modify large datasets by using Naive Bayes model.[15] Basically, Bayes theorem is used to compute the subsequent probabilities. The analysis and results of applying the algorithm reveals in an ROC area of 0.978 and mean squared error as 0.2369 depicted. In order to approximate omitted data and maintaining correctness when large amount of data is missing. The results obtained reveal an ROC area of 1.0 which is 2.2%, 6.3% greater than Naïve Bayes and C4.5 respectively and mean squared error is reduced by 58% approx., 50% approx. respectively.[16] After applying J48, Naïve Bayes and Random Forest algorithms.

Naive Bayes is a basic practice for construct classifiers: models that assign class labels to complicatedness instances represent as vectors of characteristic values, where the class labels are drained from various finite set.[17] There is not a single algorithm for guidance such classifiers, but relations of algorithms based on a common principle: the entire naive Bayes classifiers assume that the value of a particular feature is independent of the value of several other features, given the class variable. For example, a fruit might be measured to be an apple if it is red, round, and about 10 cm in diameter.[18] Naive Bayes classifiers believe apiece of these features to supply separately to the likelihood that this fruit is an apple, despite of whichever possible correlations involving the colour, roundness, and diameter features. For several types of probability models, naive Bayes classifiers can be trained extremely

efficiently in a supervised learning setting.[19] In masses of reasonable applications, parameter estimation for naive Bayes models utilizes the process of maximum likelihood; in other words, one can work with the naive Bayes model without accepting Bayesian probability or using numerous Bayesian methods.

Naive Bayes Classifier

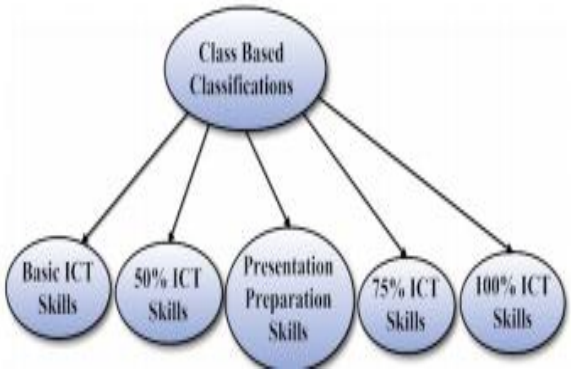
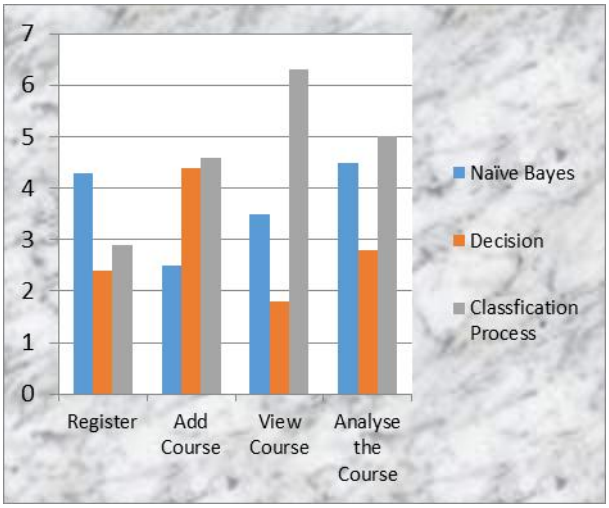


Figure Naive Bayes Classifier.

The Naive Bayes classification algorithm used to construct and implement the data to discover and summarize the information needed for prediction. The data mining algorithm is useful to generate and implement the method that finds out the information and pattern for the ICT skill test. The data mining based classifier is used to find the ICT competency over e-learning centre teachers in this work.[20] The results of the classifiers are used to find the teachers' skills with ICT and skill improvement. The professional QTS numeracy skills test and tutors' online test results are used for deciding the teachers' ICT skill percentage and ICT learning ability. The discovered information is beneficial for the teachers to improve their e-learning system and process. Figure. shows the class-based Naive Bayes Classifier.

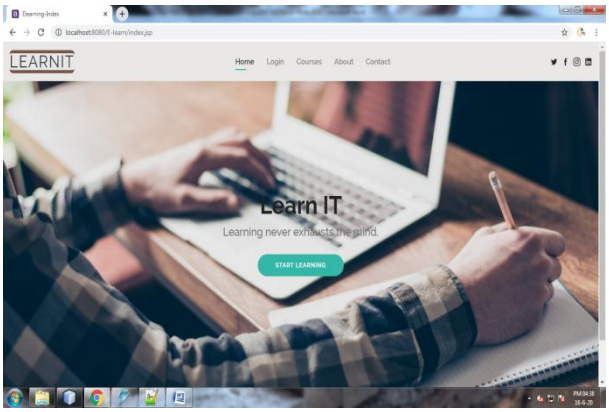
RESULT AND DISCUSSION

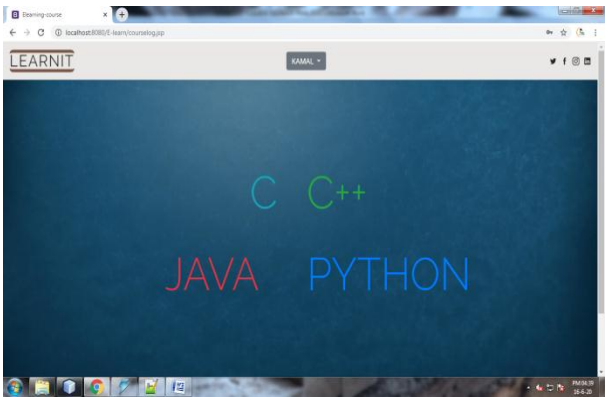
The Methodology of our research based on knowledge discovery process. Data Mining Techniques are used on large set of data to develop patterns which are helpful in prediction. These techniques are applied in order to excerpt meaningful knowledge from large Data set. The Methodology consists of many steps. Firstly, raw data is collected from different resources and second step is to select some data of your own interest from that raw data. Third step include pre-processing of data and then transformation of data is performed. At the end Data Mining techniques are applied on transformed data and then knowledge is extracting based on the results which are achieved.

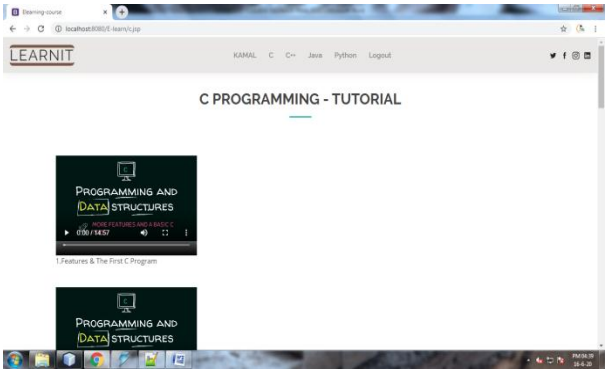


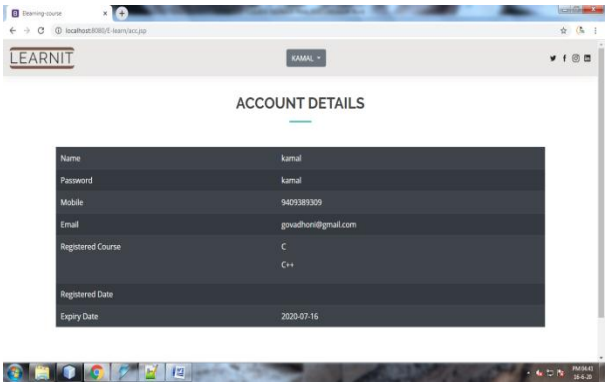
The various researches done in an application perspective. The examiner varies as the domain knowledge of a variety of institutes and the researchers transport out the research vary. Also the factors and the algorithms taken into consideration are heterogeneous. Decision Trees are widely used for failure and dropout prediction whereas other techniques have found a variety of other uses.

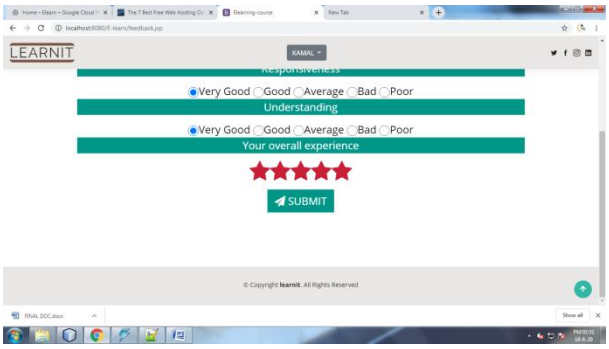
OUTPUT RESULT











CONCLUSION

Learning computer programming online can be a complicated task. Web-based learners are those devoted to the completion of the course, those that begin their work ahead of time, request help as needed, and don't wait to the last miniature to absolute the work. In an online course, students are accountable for their own learning. Better technology is needed to preserve student engagement in the course and to endorse the social environment normally experienced in the classroom. Quality organize is also essential to guarantee that the contented of the online course is similar to what is taught in the classroom. As can be seen from evaluation this manuscript, by using our learning management scheme facilities, the geographical barriers are eliminated, opening up broader administration and learning options. The system can facilitate personalized release of contents based on the entity learner's

knowledge and learning preferences. It will provide participants with an extensive list of summaries of related resources that they can decide to read, or archive for later use. We proposed a middleware for uniform access to every thesis resource that belong to different administration areas.

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