

An E-Learning Technique based on Machine Learning Technologies

SEMINAR REPORT

Submitted by

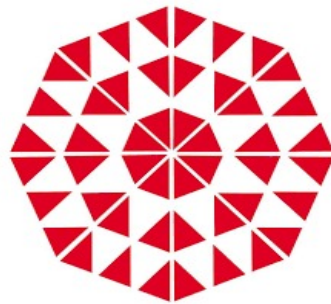
MIDHUN M.K.

to

the APJ Abdul Kalam Technological University in partial fulfillment of
the requirements for the award of the Degree

of

Master of Computer Applications



Department of Management Studies Computer Applications

KMCT College of Engineering

Kallanthode, NITC P.O, Kozhikode-673601

Chapter 1

SYNOPSIS

E-learning is a technique of delivering the courses online. The students that are working part time or full time can take advantage of E-learning. E-learning is flexible, cost effective & it delivers what it actually promise. It actually support for both the organizational goals and learners development. Learning in a classroom is more personal and interactive, but there is lot of benefits to enrolling in an online class & most in the terms of benefit comfort & affordability.

E-learning in Business Organization

- Speed up the employee training.
- Reduction of cost.
- Maximize the knowledge retention.
- Increase productivity.
- Better collaboration.
- Provides a rich learning experience.

E-learning in Learners Development

- Save budget on Teaching & Learning.
- Deliver new information faster.
- Track knowledge easily.
- An efficient way of delivering courses online.
- It will promote independent learning.
- The student who work can have lots of benefits.
- Chatbots is available to solve the problems.
- Video and audio can be a efficient way of learning.
- Resources are available at anytime at anywhere 24*7 access of content.
- Learn whenever you have free time.

There are certain existing platforms for E-Learning such as Udemy, Coursera, EdX, Techable etc.. The machine learning which is used in E-learning in-order to improve the accuracy. The machine learning is a sub division of artificial intelligence, it involves the algorithm that predicts the possible outcome based on user data. By using the machine learning in the E-Learning technique the algorithm predicts the outcomes, which allows you to provide the specific e learning content based on the past performance & individual goals. For eg. a particular online learners history reveals that they prefer more tactical learning activities, thus the system automatically design their E-Learning course map to include more E-Learning simulations that are kinesthetic by nature. The machine learning based methods can b implemented to improve the TELE(Technology Enhanced Learning Environments). There are certain steps in this process such as collecting data making it cleaned and preposed after that building a machine model for that data then training that data and then the data must be evaluated by its performance such as measuring by its accuracy, recall & precision and the last step is to predict the output. The machine learning used in E-Learning can be useful in predicting the sentiment analysis which can also called as emotion analysis where the emotion can positive or negative. Whether the student is satisfied or not by the MOOC course which can be predicted by certain supervised algorithms such as Random forest, Logistics Regression, SVM, Naive bayes, Decision tree. From all the above described algorithm the Random forest algorithm is the best to predict the Student's Satisfaction And the Logistic prediction technique is used to predict the student dropout in MOOC(Massive Open Online Course). And for self regulated learning for which more test, more quiz will be given to the student.

The main objective of E-Learning in Educational field is.

- Course Reengineering.
- Past Learners interaction.

The E-Learning works through a certain steps.

1. Create online quiz and courses.
2. Upload it into LMS(Learning Management System).
3. Assign the courses & quiz to the learners.
4. Now this step belongs to the learner by attempting the quiz & courses from any device & then submit.
5. Now the one who create the quiz can track the progress of the learner.

There are certain types of E-Learning

1. Synchronous

The Synchronous learning is attending class at a particular time with the trainer.

2. Asynchronous

Asynchronous learning is attending the class according to the learners time such as MOOC courses are the example of Asynchronous learning.

3. Blending Learning

Blending learning is the mixture of Synchronous learning and Asynchronous learning.

4. Micro Learning

Micro learning is a learning technique where the whole material is split into a short way which will be easy to digest.

5. Virtual Reality

Virtual reality learning allows the learners to develop skills walk in experience in risk free environment.