

Effectiveness of online teaching & learning during Covid 19 Pandemic – A case study of Engineering Education in Karnataka

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Abstract

Due to the rise of pandemic situation education system has disrupted. This disruption will affect the students education. Considering this situation educational institutions are asked to follow a new kind of teaching practice: Online Teaching and Learning. Online teaching and learning was completely new to many of the students, where some students found interesting and for some it was not. A survey is done to collect the information regarding the interestingness of students and to analyse the factors influencing the effectiveness of online teaching and learning. Under Educational Data Mining we try to explore the factors influencing the online teaching and learning process with a framework of education. Survey question were framed to mine the information regarding infrastructure, pedagogy and interestingness of students with respect to data acquaintance through which we can discover the interestingness of the students. The findings from the survey is been discussed.

Keywords: EDM, Online teaching, Engineering Education

I. Introduction

Data mining is the process to extract new aspects and patterns from a large data set using the methods at the crossing of machine learning, statistics, and database systems. It is also a field of knowledge discovery in databases (KDD), which is the area of discovering the distinct and potentially beneficial information from large amounts of data set. Educational Data mining is an integrated approach of data mining, Machine Learning and data analytics in order to fetch the various patterns prevailing in education field. For this purpose we need to create datasets which will really lead us to get fruitful results. It has become a crucial issue to collect data in education sector. In certain situations where the intention of the research is to explore/recommend/evaluate the state of the art practices and the human behaviour in education system, we encounter lot of qualitative data. In this paper we restrict our discussion on collecting such qualitative data to measure the effectiveness of Online Teaching and Learning, which was a major step taken by all educational institutions during this pandemic situation of Covid 19.

With the outbreak of this Covid 19 Pandemic, educational institutes have made themselves to rethink on the way they used to run earlier. As whole country was under lockdown, every sector of the society was in stand still mode. More focus was given on survival than the livelihood of the individual. As the situation prolonged for more than six months, maintaining the mental health of every one was of major concern. The

A quantitative approach for attainment of CO & PO through laboratory for affiliated Institutes

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Abstract:

With the growing need for quality education engineering institution are adopting Outcome Based Education (OBE). The quality of teaching and learning has to increase in a way, where students are able to achieve greater extent of Knowledge, Skills and Attitude (KSA Factor) in their professional career. This is measured by the attainment of the outcomes set for a particular course that a student is learning. By data analytics techniques one can analyse the patterns of students' learning through laboratory also. Both, theory as well as practical/Laboratory sessions will assist a faculty to measure the learning outcomes. In this paper, a quantitative approach to measure Course Outcome and Program Outcome attainment through Laboratory is proposed. The process involves two steps. The first step is to get the attainment through Continuous evaluation Sheets and the second is getting attainment through Lab Internal Assessment Tests.

Key words: Outcome Based Education (OBE), National Board of Accreditation (NBA), Course outcomes (CO), Program Outcomes (PO), Continuous Evaluation Sheet.

1.0 Introduction:

The Engineering Educators are toiling towards Outcome Based Education for various reasons, but ultimately it should support to develop the society. An agency governing the process of accreditation is NBA, which sets some standards to be met by engineering educators. There is a lot of work being done in planning and conduction of the various elements related to OBE. But many are not clear about assessment phase of the OBE. NBA has given guidelines for the same such as; every course should have some learning outcomes which are supposed to be learnt and exhibited by an individual learner in solving real world applications. These Outcomes have to be measured and the success of that course depends on

A study on need and application of Data Mining and Analytical Techniques in Music Therapy

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Abstract

Music plays a vital role in peoples' life at large. From dates of civilization (from time immemorial) man has been using music in different occasions namely rituals, ceremonies, social gatherings to name a few. Listening music will bear an impact on mood of an individual. With music, one can sense almost all emotions that one encounters in life. There are innumerable types of music varying based on the culture and social context. Types of music are classical, folk, hip-hop, jazz, metal, rap, rock etc. The Indian classical music itself comprises Hindustani and Carnatic music with innumerable ragas. All these types of music and ragas have different impact on human emotions thereby on human mind and body. Music Therapy has become clinically proven method as a complementary medicine from last century. But it has not been able to determine appropriate methods and techniques for documenting results of music therapy with classification and selection of right therapeutic music from large, complex database of music therapy. Data Mining and Analytics make it possible to extract required patterns from large data set, which can improve the efficiency of musical treatment. By integrating "Music" - an art, "Therapy"- a clinical science and "Data Mining and Analysis"- a combination of technologies, music therapy can be more efficiently used and documented in more statistical terms to strengthen healing for mankind. This paper deals with the state of the art survey of the recent work carried out in this regard.

Keywords: Music Therapy, Data Mining and Analytics, Hindustani Music, Carnatic Music.

PLANT LEAF DISEASE DETECTION USING CNN MODEL IN MACHINE LEARNING

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Abstract: Plant sickness is a continuous test for smallholder ranchers, which undermines pay and food security. The new upheaval in cell phone entrance and PC vision models has set out a freedom for picture characterization in horticulture. Convolutional Neural Networks (CNNs) are viewed as cutting edge in picture acknowledgment and offer the capacity to give a brief and clear analysis. In this paper, the exhibition of a pre-prepared ResNet34 model in identifying crop illness is examined. The created model is sent as a web application and is equipped for perceiving 7 plant infections out of solid leaf tissue. A dataset containing 8,685 leaf pictures; caught in a controlled climate, is set up for preparing and approving the model. Approval results show that the proposed technique can accomplish a precision of 97.2% and a F1 score of more noteworthy than 96.5%. This shows the specialized practicality of CNNs in arranging plant infections and presents a way towards AI answers for little holder ranchers.

Keywords: machine learning , cnn

1. INTRODUCTION

A developing populace has prompted an undeniably intricate test particularly with regards to arrangement of food. This is made more troublesome by the need to guarantee fair and maintainable turn of events. Logical and mechanical advancement is producing the information and devices to make this conceivable [1]. The worldwide per capita food supply has risen thus has the spending on agrarian innovative work and the expectation is that the expansion ought to occur in agricultural nations. Data and correspondence innovations (ICTs) progresses has opened new roads in information the executives that could assume a significant part in gathering the predominant difficulties identified with sharing, trading and dispersing rural information.

Detecting Employee Attrition Using ML with Web Interface

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Abstract: These days, turnover is a big problem in the industry. It is the most serious issue that all organisations face. The progressive decrease in the number of workers due to retirement, resignation, or death is referred to as attrition. It's also known as "employee defection." When a well-trained and well-adapted employee leaves the company, a void is created. As a result, the company loses important expertise, information, and business relationships. Modern managers and personnel administrators are keenly involved in reducing attrition in the workplace such that it contributes to the organization's optimal productivity, development, and advancement.

Keywords: Attrition, machine learning, random forest, decision tree, support vector machine, Naïve bayes algorithm.

1. INTRODUCTION

Employees are the most valuable human capital asset, since their performance reflects the organization's success. Globalization has resulted in the mobilization of workers from one company to another, from one nation to another, and even from one country to another.

As a result, dealing with the turnover of professional employees has been the most difficult task for HR managers. With regard to industry and reasons, the terms Employee Turnover and Attrition are synonymous in HR practice. Employee turnover refers to the loss of staff due to retirement, resignation, or death. Employee attrition is a significant problem that involves the voluntary or forcible firing of talented and professional employees, which has an effect on the organization's goodwill and efficiency. Employee attrition occurs when employees leave due to a work-related or personal issue. Work-related problems have been reported as a significant cause of higher employee turnover rates in most studies. Strong turnover results in a reduction in the company's recruiting and training costs. Employee turnover has a long-term negative effect on an organization's goodwill. In simple terms, employee turnover occurs when an employee's perception or expectation of the employer is not met, or when an employer's commitment to employee satisfaction is not met.

Employees are an organization's most valuable asset. They add value to the company in terms of both quantity and consistency. As a result, maintaining a stable and promising workforce is critical. It has become a difficult challenge for managers over time, resulting in increased turnover in organisations. In any form of enterprise, some employee attrition is desirable for the influx of new ideas. It assists businesses in maintaining their agility in a rapidly evolving world.

2. LITERATURE SURVEY

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