Students Performance Prediction System

Dr. Mrs Pradnya Mathurkar[1] Pratiksha Tambe[2] Vaishnavi Gudhade[3] Shwetha Bhadke[4]
[1]Project Guide
[1,2,3,4]Department of Electronics and Telecommunication Engineering
[1,2,3,4]Rajiv Gandhi College of Engineering and Research, India

Abstract— Predicting the student performance is an important task for the students in colleges the factors which affects the student overall performance are quizzes, lab exams, mid, and final exams. The student exam performance should be informed to their teachers in advance that will decrease the student's failure chances and increase the performance by focusing on such topics in this students are weak. In this paper machine learning multiple linear regression algorithms is implemented to predict the student's academic performance the performance of an algorithm has been evaluated based on confusion matrix, accuracy, precision, recall, and F1 score. The Student performance prediction is a crucial job because the large or big volume of data in educational databases. This work is being addressed by educational data mining. EDM developed methods for discovering data that is derived from educational environment. These methods are used for understand student and their learning environment and their interests also. The educational institutions are curious that how many students will be pass and fail for necessary arrangements.

Keywords: EDM Developed, Students Performance, Prediction System

I. INTRODUCTION

Predicting the student performance is an important task for the students in colleges the factors which affects the student overall performance are quizzes, lab exams, mid, and final exams. The student exam performance should be informed to their teachers in advance that will decrease the student's failure chances and increase the performance by focusing on such topics in this students are weak.

In this paper machine learning multiple linear regression algorithms is implemented to predict the student's academic performance the performance of an algorithm has been evaluated based on confusion matrix, accuracy, precision, recall, and F1 score.

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And learner better in teaching and learning. Student Performance Prediction system also improves communication between management, instructors and learner and helps to track the students action on multiple levels like seminars, internal exams class assignments, and final examinations.

II. METHODS:

The main aim of this project is to predicting the future performance of the students or the users using certain data of the student such as previous test marks, user activity control and student records, etc. After analyzing the student or user performance, a system will also be compare the result generated by two classification algorithms and there after it determine which of them are most accurate and efficient. The data to be provided as the input must have the scores of tests of the attributes classified into specific variables, for example, the student marks for the previous semester can be classified as good if test marks >= 70%, average if 70% > test marks >=55% and poor if test marks < 55 %. The inputs used in this predicting algorithm are: previous test marks, User activity, project marks, seminar attendance, unit test marks, extracurricular activities, assignments and practical evaluation and Intermediate Test marks .This data is then normalized and fed as an input to the system. Using this normalized data, the system runs the Multiple Linear Regression algorithm on it and classifies the data. This classified data is then used to predict the final Test or exam marks of the student.

III. MODULES:

Student Performance Prediction consist of Two Major Module, Which makes the SPP User Friendly and More efficient
These Modules are as follows:

A. Student Module:

This module provides the functionality of user or students to learn thing and check their Performance. It includes:

- Register
- Login/Logout
- Profile/Edit Profile
- Dashboard
- Courses
- Register Courses
- Notes
- Videos
- Exam Dashboard
- Examinations
- Exam Progress
- Prediction

B. Admin Module:

A database is that stores related information across multiple tables and allows you to query information in more than one table at the same time. In database you could set up multiple tables, one for Students and one for Exams. The student table consist the all the information about student like, buyed courses, Personal Information and the Exam table consist all

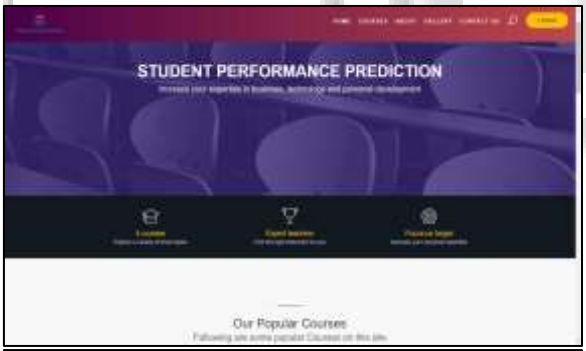
the related info about exam or assessment. The database table include following tables:

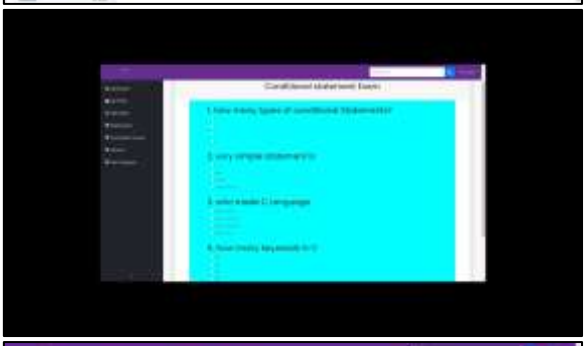
1) Authentication:
- Users
- Group

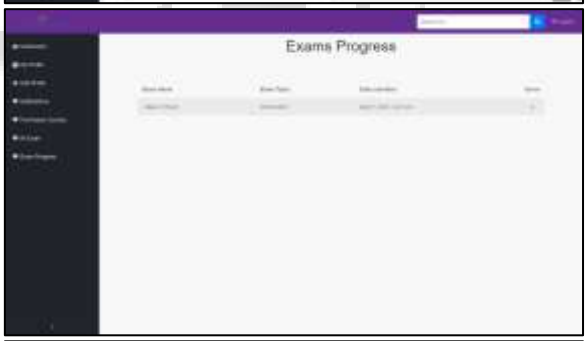
2) Student:
- Courses
- Courses Detail
- Buyed Courses
- Course Video
- Notes
- Student Profile
- Videos

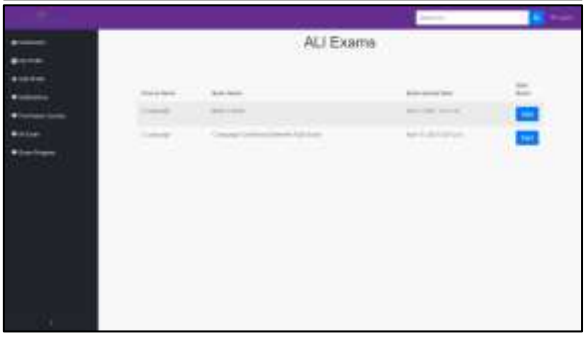
3) Online Exam:
- Users
- Courses
- Topic
- Subtopic
- Exam Registrations
- Exam Detail
- Exam level
- Question Bank
- Question Type
- Options
- Questions answer
- Exam Result

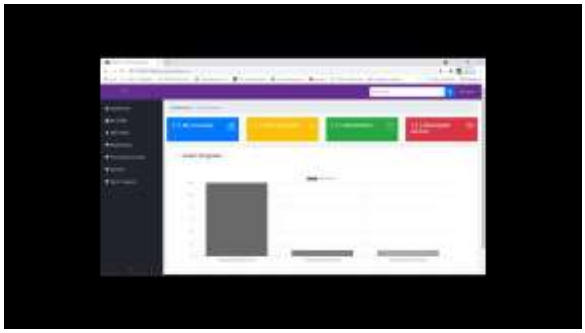
IV. RESULT: SCREENSHOTS











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