



# STUDENT PERFORMANCE ANALYSIS SYSTEM BY USING ARTIFICIAL INTELLIGENCE

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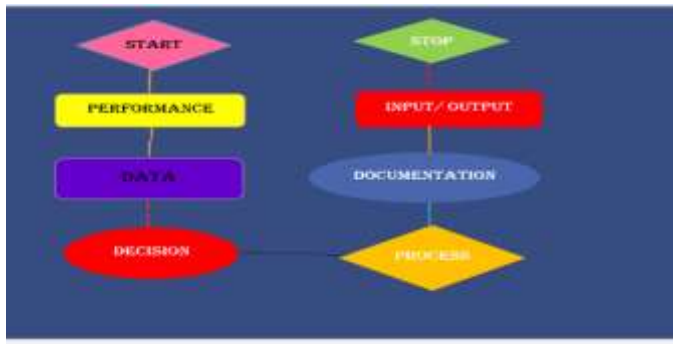
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**ABSTRACT:** In today's world technology has reached to extent that it can be used to do various task in day-to-day life easily with less effort and time. Today's world has realized importance of education in one's life which has led to development in field of education. In today's life Universities, colleges, schools have load of tasks in given period of time. In today's scenario colleges needs to analyse student performance manually which takes a lot of time and effort by faculties working on it. Hence to reduce this difficulties or simplify this task a web-based system is introduced which can perform student performance analysis system. Student Performance Analysis System provides a communication/interaction between parents and schools. It will give the proper feedback of the student to the parents than can be used for attention to students in study.

**Key Words:** Analysis, HTML, CSS, PHP, JavaScript, graph, Machine learning, Student performance analysis system.

## I. INTRODUCTION:

Work Reporting System is a web-based application developed using Java, HTML, and MySQL Database. That types of application can provide an easy way to student in searching the details of projects and details of their academic attendance and marks percentage details in the form of graphs. Students can search the projects with project title or with guide name or with the year. All the details of the projects and student's attendance and marks percentages are added by admin. Students can search the projects with project title or using guide name or with the academic year. All the details of projects and student, attendance and marks are added by the Teachers and HODs in given spreadsheet. It has 3 Modules namely Student, Teacher and HOD. Student are asked to register and then login, fill the academic details, view project, view attendance marks graph based in format, events and notice. Teachers can login, approve students, add students' marks, upload attendance, add Project details, view assigned events and notice in web side . HOD can login, manage teachers report, events, they can view Attendance and academic details and manage notice.



**DATA FLOW DIAGRAM**

**1.1 PURPOSE:-** — THE SOFTWARE IS FOR STUDENTS, FACULTY, HOD AND PRINCIPAL.

It provides following facilities to:-

**1. USER (Students):-**

- 1: Can retrieve details related to particular course in which he/she is enrolled.
- 2: Can compare his performance with other students in same course.
- 3: Can predict his marks in future test based on his previous scores.

**2. ADMIN (DBA):-**

- 1: Can add, delete, view, and update Faculty and course details.
- 2: Can compare performance of students in all courses.
- 3: Can check the percentage of student in different courses in graphically.

**3. USER (Faculty):-**

- 1: Can add, delete, view and update student details of respective course of which they are assigned as .The faculty
- 2 :Can compare performance of students in particular courses.
- 3:Can save statistics related to students performance.

**2. PROBLEM STATEMENT** \_Implement the bootstrap, HTML, CSS, JavaScript for the formation of an application which issued by students & teachers to represent &analyse their performance monthly, yearly basis in the tabular form & graph. The goals of online student performance analysis system is to develop software to produce high quality and efficiency. For any school or institute's students are an important asset in order to of great quality who excel in academics, practical knowledge, self-development innovative thinking. To achievement of this, is become required for every school, college or any other educational institute to analyse the student's performance. Academic performance (AP) can be measured by conducting various examinations, competitions, games as well as technothon. Managing the grades of an entire class in its learning makes the grading process easier, and the teachers have a clearly-set-out overview

**3. SCOPE:-**

Application of it which can be used in different areas:

1. Any colleges, schools can make use of it, for the departmental level and at basic subject level for providing a brief . overview of the performance related to particular course.
2. Any industrial firm or company can also make use of this application with minor changes to evaluate the performance . of their employees for selecting best employee based on his productivity.

**4. FUNCTIONALITY:-**

1. This system is specifically developed for the faculty and students. 2. It provides information about Test Performances, detailed analysis of each subject, anytime. 3. It provides with immediate updates in the Test performance based on previous test. 4. It also acts as a platform where the complete academic information about the student 5. It provides Students Test Performance in consolidated and detailed performance sheets 6. It also detect the marks of upcoming examination of student. → Student's record can also be maintained, and Faculty and Course details can also be maintained without manual work.

**5.AIMS & OBJECTIVES:-**

1.The aims and objective of the project that will be accomplished after completion of this project were carried out on their sub chapter .To allow users (faculty) to analyse progress of his subject.

2. To allow students to compare his performance in different tests.

3.To provide convenience to faculty to guide and mentor students in their academic performance Providing the online interface for students, faculty etc. The increasing efficiency of school's record management.

4.Decrease time required to access and deliver student records. To make the system more secure, decrease time

**II. LITERATURE SURVEY**

Performance Analysis Systems are backbone for every guide and mentor as well. A proper guidance and help using statistical data will surely help and individual to progress and in turn the success of firm associated with him. A background study is done to review similar exiting systems used to perform student performance analysis. We start our literature survey with the help of first understanding three existing systems which are similar to proposed system.

**[1] STUDENT PERFORMANCE ANALYSIS SYSTEM (SPAS):-**

This pre-existing system. It is similar to the proposed system in following aspects. It helps faculty to record of the student's marks, performance and analyze the performance of students in "Web page development "subject only. It helps the faculty to detect the student's performance using Data Mining Technique of Classification. Faculty to faculty login has been provided in this system and only the faculty can doing analysis of student's performance in that particular subject and store the result. It generates reports of analysis in Portable Document Format (PDF) as well as XCL sheet and illustration using charts.

**[2] FACULTY SUPPORT SYSTEM (FSS):**

Faculty support system is a open source analysis software system. It is low in cost as WEKA to analyze the student's performance in a course offered by Navsahyadri Institute of Technology (Polytechnic), Niagoan Pune. Faculty support system is able to analyze student's data dynamically with the flow of the time to create or add a new rule. The update of new rule is possible with the help from domain expert. The rule is determined by data mining technique such as classification technique. FSS focuses on identification of factors or skill of that contribute to performance of student in particular course and what are extra activities are required for them.

**[3] STUDENT PERFORMANCE ANALYSER (SPA):-**

Student performance analyser is existing secure online web-based software. It can be enables educators to view the performance of the student and keep track of school's data. The SPA is a tool designed for analysing, storing displaying and getting feedback of student assessment data. It is a powerful analyser tool used by schools worldwide to perform the analysis and display the analysis data once raw student data is uploaded to the system. The analysis-id done by tracking the student or class to get the overall student's performance or class. This would allow the educators or faculty's to identify the current student's performance easily. Other than , it enables various kinds of reports of the student's performance such as progress report and achievement report is to be generated.

**PROPOSED SYSTEM**

The proposed system provides the student an easiest and perfect data about student's projects and academic percentages. Students can view all the information in just one click within a second which saves a lot of time and effort. The proposed system maintains a database of students to store all the information like results, projects,

performance, etc. This system is very secure and pure, there is no chance to loss of data. Adding and searching the information is very easy which does not take much time and physical effort. This system have 3 major modules which is comprises in sub-module as follows:

**1] STUDENT REGISTER :-** Student can register and obtain credentials.

- Login: Student can login using credentials.
- Personal and Academic Details: Student can fill his/her profile and academic details.
- View Projects: Students can view the projects.
- View Attendance & Academic Marks: Students can view the attendance and marks by using graphs.
- View Events: Students can see the events held or going to held.
- View Notice: students can also see the notice.

**2] TEACHER**

- Login: Teachers can login using credentials.
- Approve Students: They can approve the students.
- Add Students Marks: They can add the student's academic performance.
- Upload Attendance: They can upload student's attendance.
- Add Project Details: They can also add project details.
- View Assigned Events: They can see the assigned

**REQUIREMENT ANALYSIS .**

1. User Interface:- It Contains Buttons, checkboxes, Text fields, Graphical Analyzer.

2. Hardware Requirements:- Windows: Windows 7 Or Above

Processor: i3 Or Above – HDD: 256GB RAM: 2 GB

3. Software Requirements:- Python IDLE 3.6.

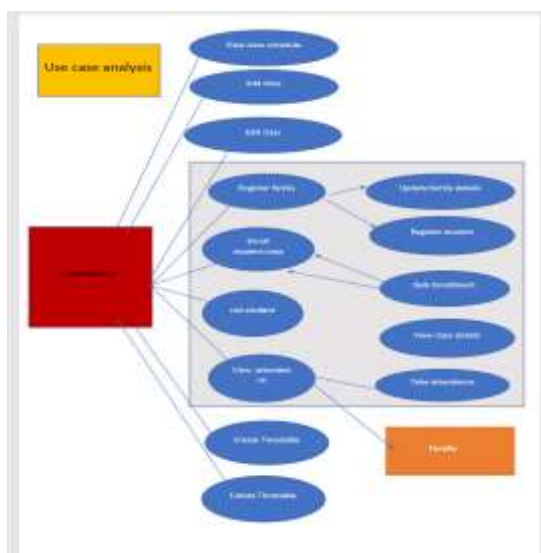
Python Libraries:- \ tkinter \ coracle \ pandas \ matplotlib \ numpy \ scleral \ tabulate \  
openpyxl

Microsoft Excel 2020. ORACLE 11G Express Edition.

Programming Language : Python-Machine Learning

**ADVANTAGES:-**

1. GUI is user friendly.
2. Easy for faculty to manage student database.
3. Easy for student to view his academic records and performance.
4. Academic records and performance analysis can be stored in image or graphical format.
5. For any enrolment of each course show the pie chart.
6. Machine learning regression algorithm is used to predict marks for upcoming examination.
7. You can easily update and maintain data in digital format.
8. No threat of Data loss as multiple copies of data can be created.



USE CASE ANALYSIS

**STUDENT PERFORMANCE ANALYSIS SYSTEM LOGIN PAGE**

**HOME    SEARCH    LOGIN PAGE**

WELCOME TO OUR COLLEGE !!!!!!!

**FIG.1 HOME PAGE**

**USER LOGIN ::**

STUDENT ID:  
PASSWPRD:

**FIG.3 STUDENT LOGIN**

User name:  
PASSWORD:

**FIG.2 ADMIN LOGING PAGE**

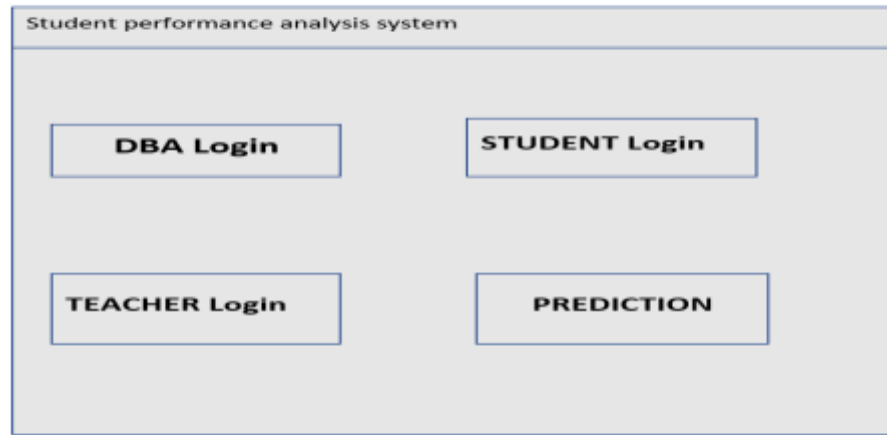
**NAME:**  
**LAST NAME:**  
**E-MAIL ID**

**STUDENT REGISTATION**

REGISTRATION ID::  
PASSWORD::

**SUBMIT**

LOGIN PAGE



## RESULT

**FEATURE SCOPE** :: In this project within the system source codes, prediction tree generated from WEKA is not updated dynamically. Thus in future a dynamically prediction model could be implemented by train the prediction model itself. Whenever a new training set are fed in to the system.

## CONCLUSION::

This 'Student Performance Analysis System' has been developed successfully. It was also tested successfully by taking few test cases. It is user friendly and has required options, which can be used by user to perform desired operation. According to the result analysis the current model works properly. It has achieved the goal of getting 100% accuracy within the desired format. We have implemented various best practices to create and train our model. Throughout the development of the model we have learned various best practices and architecture patterns which required in today's industry.

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