

Student Performance Prediction and Feedback Analysis

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INTRODUCTION

- Massive Open Online Courses attract and enroll a high number of students.
- High ranking universities have adopted MOOCs as an efficient dashboard platform where learners from around the world can participate in such courses.
- One of the essential and most challenging issues for these educational institutions is the prediction of students performance and collecting the feedback from the students while the course is underway.
- This could be very useful in e-learning platforms to improve and manage the courses

EXISTING SYSTEM

- Most MOOCs are still taught by an individual instructor or a relatively small team of instructors.
- Due to the high student-to-teacher ratio in MOOCs, traditional methods for feedback are not efficient. Consequently, an innovative approach is needed to manage the course, especially to monitor student progress and analyze student feedback

LITERATURE REVIEW

- It is based on the IEEE paper “Students Performance Prediction in Online Courses Using Machine Learning Algorithms “ which describes how to predict the student performance
- Two predictive models have been designed namely students’ assessments grades and final students’ performance.
- It is based on the IEEE paper “Improving MOOCs Using Information From Discussion Forums: An Opinion Summarization and Suggestion Mining Approach” which describes how posts made on forums by participants can also provide meaningful information to assess and improve the effectiveness of MOOCs.

Objectives

- To develop a system able to predict the student outcome based on the students activities.
- And a system able to analyze the student feedback.

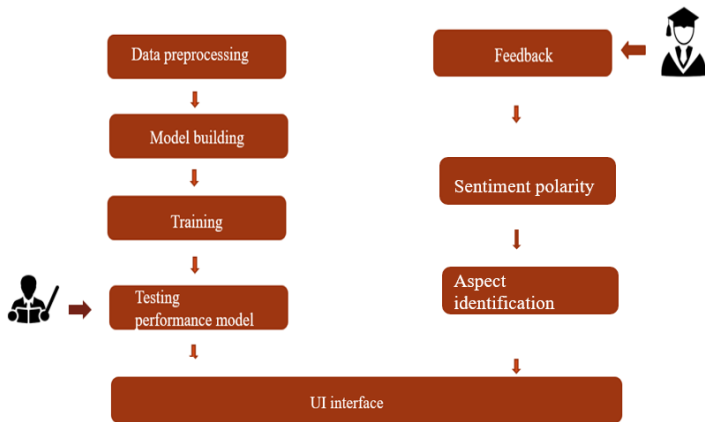
PROPOSED SYSTEM

- A predictive model have been designed namely students performance prediction this model can be used to predict the performance that influence students' learning achievement in MOOCs.
- And also propose a model to categorize the students feedback that allows instructors to improve their course and thereby student engagement and learning.

System Implementation Details

- The basic functionalities in the system are :
 - OULAD Dataset is used to train the Student performance Model and using Random Forest a model is build.
 - Feedback system has created,to obtain student feedback polarity and aspect identification (Assessment,Instructor,Course,Material) using LDA
 - Trained Models is Intergrated with Flask where tutor can input the student register number and prediction is available next and also tutor can check the students feedback.

ARCHITECTURE



RESULT

Login page.

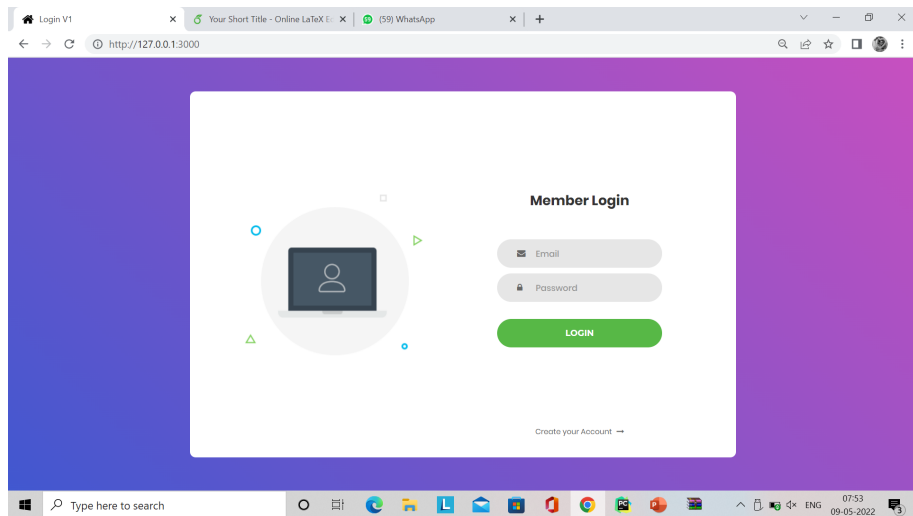


Figure 11

Tutor home page.

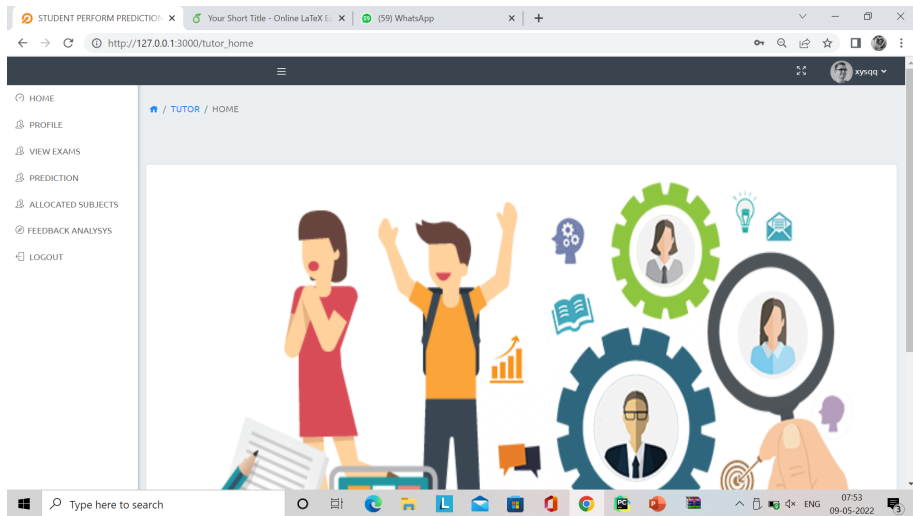


Figure: UI

Prediction

The screenshot shows a web browser window with the URL `http://127.0.0.1:3000/exam_result_predict`. The browser's address bar and tabs are visible at the top. The web application has a dark sidebar on the left with a menu containing: HOME, PROFILE, VIEW EXAMS, PREDICTION, ALLOCATED SUBJECTS, FEEDBACK ANALYSIS, and LOGOUT. The main content area has a breadcrumb trail `TUTOR / HOME`. The central part of the page is titled "CHECK PERFORMANCE" and contains a form for a student's registration number. The registration number "26262" is entered in a light blue box. Below the input box is a blue "PREDICT" button. Underneath the button, a table displays the student's performance metrics. The table has two columns: the metric name and its value. The metrics listed are Days Studied (60.0), Activities Engaged (205.0), Total Clicks (755.0), Assessments Completed (9.33333), and Average Assessment Score (75.5556). At the bottom of the table, the "Prediction Result" is shown as "PASS". The Windows taskbar is visible at the bottom of the screen, showing the search bar, task view button, and several application icons including Edge, File Explorer, L, Mail, Teams, and others. The system clock in the bottom right corner shows the time as 08:25 on 09-05-2022.

STUDENT PERFORM PREDICTION x Your Short Title - Online LaTeX Editor x (59) WhatsApp x +

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HOME PROFILE VIEW EXAMS PREDICTION ALLOCATED SUBJECTS FEEDBACK ANALYSIS LOGOUT

TUTOR / HOME

CHECK PERFORMANCE

REG NO: 26262

PREDICT

Days Studied :	60.0
Activities Engaged :	205.0
Total Clicks :	755.0
Assessments Completed :	9.33333
Average Assessment Score :	75.5556
Prediction Result :	PASS

08:25 09-05-2022

Figure: UI

Prediction

Prediction

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🏠 HOME

👤 PROFILE

👤 VIEW EXAMS

👤 PREDICTION

👤 ALLOCATED SUBJECTS

📊 FEEDBACK ANALYSYS

🚪 LOGOUT

🏠 / TUTOR / HOME

CHECK PERFORMANCE

REG NO:

Days Studied :	15.0
Activities Engaged :	78.0
Total Clicks :	232.0
Assessments Completed :	1.88888
Average Assessment Score :	55.0
Prediction Result :	FAIL

🪟 🔍 Type here to search

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Figure: UI

Feedback

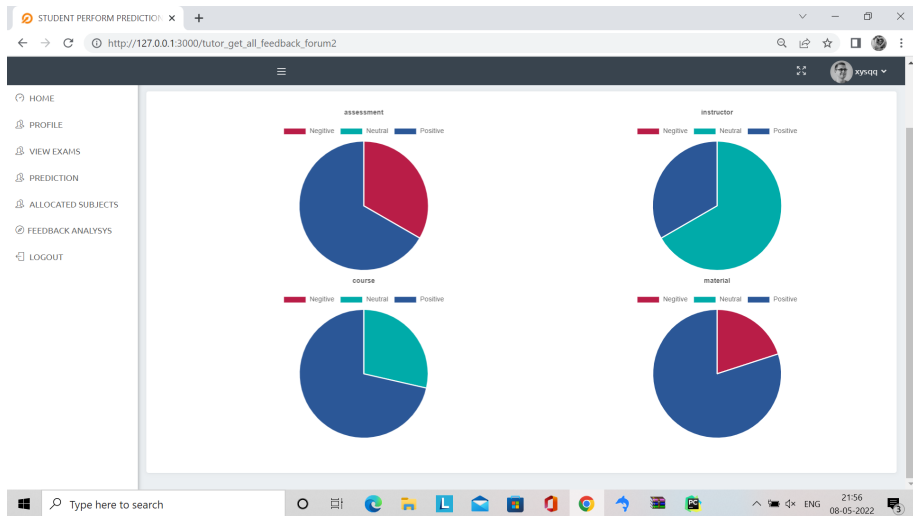


Figure: UI

Register

Sign Up

Name
Name...

Place
Place...

District Kannur

Subject python

Photo
Choose File No file chosen

gender
☐ Male
☐ Female

Figure: UI

Student home



Figure: UI

Feedback

STUDENT PERFORM PREDICTION x Your Short Title - Online LaTeX Editor x (59) WhatsApp x +

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☰ 🔍 Arun student ▾

🏠 HOME
👤 PROFILE
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👤 MARKS
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🚪 Logout

🏠 / STUDENT / HOME

FEEDBACK

FEEDBACK

SEND

Windows Search: Type here to search

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Figure: UI

- Implementing feedback analysis of discussion forum.

Thanks

THANK YOU