EVALUATING STUDENTS' LEARNING PERFORMANCE USING AI

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ABSTRACT:

Education is a crucial aspect of life that holds significant value for individuals, and a quality education is instrumental in achieving success. The development of any country depends on the quality of education we are providing to the students. To enhance the educational experience for students, continuous changes and advancements are taking place worldwide, encompassing teaching methods and curriculum design. Amidst these developments, artificial intelligence (AI) emerges as a flourishing technology that is revolutionizing various industries and making a profound impact on the world. Gradually yet steadily, AI has permeated every aspect of our existence, spanning from purchasing clothing to watching television and engaging in entertainment. It can pose an immense challenge for a single teacher to address the diverse needs of all students within a classroom, including those requiring remedial support as well as those who are more advanced. However, AI systems possess the capability to effortlessly adjust to the unique learning requirements of each student. They can tailor instruction specifically to their individual strengths and weaknesses, alleviating the burden on teachers and creating a more impactful and personalized learning journey for students. This paper provides the solution developed to know the performance of students' learning capacity using AI techniques.

Keywords : Artificial Intelligence, Student; Education; online learning

1.0 INTRODUCTION

AI systems have the ability to assess a student's preferred learning style and existing knowledge in order to provide tailored support and instruction that caters to their individual needs and preferences. By leveraging this capability, AI systems can deliver customized educational experiences that optimize the learning process for each student.

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AI has found its way into the field of education, bringing forth a multitude of possibilities. It has the potential to transform the way students learn and educators teach. By harnessing AI, educators can access innovative tools and resources that can enhance the effectiveness and efficiency of teaching practices. AI-powered systems can analyze vast amounts of data, identify patterns, and personalize learning experiences for students based on their individual needs and preferences. This technology holds the promise of creating a more engaging, adaptive, and inclusive educational environment.

Moreover, AI can assist in automating administrative tasks, freeing up time for educators to focus more on personalized instruction and student support. It can aid in grading assessments, providing timely feedback, and generating valuable insights about student progress. Additionally, AI-enabled educational platforms and virtual assistants can offer learners immediate assistance, guidance, and access to a vast array of educational content.

As the world continues to evolve, incorporating AI into the education system has the potential to unlock new possibilities and empower students with the skills and knowledge needed for success in an ever-changing landscape. However, it is essential to strike a balance between leveraging AI's capabilities and preserving the crucial role of human educators in fostering critical thinking, creativity, and holistic development in students.

2.0 IMPLEMENTATION

The system provides a online tutorials to the students. The student can study the entire subject using unit by unit level. Students can complete the study any unit according to the convenience. But student should complete the course within a stipulated time.

After completion of the unit, system asks questions in an objective type manner. The answers would be recorded and will be sent to the teacher for evaluation.

The modules involved in the development of this system are

- Registration process of the learner
- Registration process of the teacher
- Lesson uploading
- Administration
- Question paper setting
- Evaluation process
- Reports

The project involved analyzing the design of few applications so as to make the application more users friendly. To do so, it was really important to keep the navigations from one screen to the other we will ordered and at the same time reducing the amount of typing the user needs to do. In order to make the application more accessible, the browser version had to be chosen so that it is compatible with most of the Browsers.Functional Requirements : The proposed system provides a Graphical User interface (GUI) for the users to interact with the system.

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Here are some of the main features of this software are :
  • Enhances learning speed and enhances student involvement
  • Alleviates the burden on teachers by reducing their workload
  • Provides valuable data insights that can be acted upon

3.0 RESULTS AND DISCUSSION

3.1 INPUT DESIGN

The input design is the link between the information system and the user. It comprises the developing specification and procedures for data preparation and those steps are necessary to put transaction data in to a usable form for processing can be achieved by inspecting the computer to read data from a written or printed document or it can occur by having people keying the data directly into the system. The design of input focuses on controlling the amount of input required, controlling the errors, avoiding delay, avoiding extra steps and keeping the process simple. The input is designed in such a way so that it provides security and ease of use with retaining the privacy. Input Design considered the following things:

  • What data should be given as input?
  • How the data should be arranged or coded?
  • The dialog to guide the operating personnel in providing input.
  • Methods for preparing input validations and steps to follow when error occur.

Input Design is the process of converting a user-oriented description of the input into a computer-based system. This design is important to avoid errors in the data input process and show the correct direction to the management for getting correct information from the computerized system.

It is achieved by creating user-friendly screens for the data entry to handle large volume of data. The goal of designing input is to make data entry easier and to be free from errors. The data entry screen is designed in such a way that all the data manipulates can be performed. It also provides record viewing facilities.

When the data is entered it will check for its validity. Data can be entered with the help   of screens. Appropriate messages are provided as when needed so that the user will not be in maize of instant. Thus the objective of input design is to create an input layout that is easy to follow.

3.2 OUTPUT DESIGN

A quality output is one, which meets the requirements of the end user and presents the information clearly. In any system results of processing are communicated to the users and to other system through outputs. In output design it is determined how the information is to be displaced for immediate need and also the hard copy output. It is the most important and direct source information to the user. Efficient and intelligent output design improves the system's relationship to help user decision-making.

Designing computer output should proceed in an organized, well thought out manner. The right output must be developed while ensuring that each output element is designed so that people will find the system can use easily and effectively. When analysis design computer output, they should Identify the specific output that is needed to meet the requirements.

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Select methods for presenting information.
Create document, report, or other formats that contain information produced by the system. The output form of an information system should accomplish one or more of the following objectives.

- ➢ Convey information about past activities, current status or projections of the future.
- ➢ Signal important events, opportunities, problems, or warnings.
- ➢ Trigger an action.
- ➢ Confirm an action.

CONCLUSION

AI not only aids in grading exams by comparing answers to an answer key but also has the capacity to analyze and evaluate more subjective assessments, such as essays, by compiling data on students' performance. In cases where a significant number of students are struggling with a particular question, AI can pinpoint the specific information or concepts they are missing. This allows educators to target their efforts towards enhancing materials and teaching methods in those areas.

Additionally, some students may feel hesitant to take risks or receive constructive criticism in a traditional classroom setting. However, AI provides a comfortable environment for students to make necessary mistakes for the sake of learning and receive valuable feedback for improvement. This can foster a supportive and encouraging learning atmosphere where students can develop their skills without fear of judgment.

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