AIDUCATE: YOUR SMART TUTOR

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Abstract:

Our social reality's ongoing "datafication" has led directly to the emergence of new data-driven business models. Consequently, the market for services related to education is expanding quickly. The emergence of educational technology (EdTech) companies that provide data-driven pedagogical solutions has caused a significant upheaval in the education sector. Even with the market's current status, very few companies are creating tailored learning experiences by utilizing all that AI and LLM have to offer. Furthermore, by using a comparative lens, this study examines how other jurisdictions handle inclusion and equality concerns, highlighting both successful strategies and enduring difficulties. Our project is a recommendation system that offers the response to the query entered from the uploaded PDF and suggests relevant pictures and videos to help the answer generator make more sense. It also includes one to one teaching with the help of video calling which is available on the same platform. This study clarifies the changing legal landscape around educational fairness and inclusion by critically analyzing significant court decisions, legislative directives, and international agreements through a thorough assessment of pertinent literature. Additionally, it looks into how pedagogical techniques, institutional policies, and educational practices are affected by the practical application of legal ideas The need for personalization and adaptability concurrently drives the conversation around AI-based learning systems.

Keywords: EdTech, AI, and LLM, tailored, utilizing, recommendation, personalization.

Introduction:

Large language models (LLMs), like ChatGPT, or generative artificial intelligence (GAI) are seen as a disruptive force that will fundamentally alter the education industry. The capacity of ChatGPT and, more recently, GPT4 to produce coherent and contextually relevant answers to challenging questions is seen as a major advancement in the field of conversational AI. It is already starting to change education in both positive and negative ways. The fact that big "techlords" are heavily investing in the development of pedagogical solutions based on artificial intelligence raises the question of whether schools and universities are ready to integrate technologies laden with massive amounts of data into the pedagogical processes in the classroom. It is challenging to provide solutions for these and related challenges because of a dearth of information, the complexity of the problems, and the chaotic market. In addition, the dynamics of the digital transformation are propelling the educational technology (EdTech) industry to rise significantly. Still, despite forecasts indicating that the global EdTech market would reach $8 trillion by 2020, EdTech growth remains comparatively moderate to other industries. There are several advantages for LLMs in the field of education. LLMs may generally improve the quality of the educational process and provide students with a wealth of extra knowledge. For example, LLMs can assist students in honing and strengthening their language proficiency. Two LLMs have the ability to produce chatbots that mimic conversations with natural speakers or interactive dialogues. They can also assist with producing transcripts or subtitles for videos, which can help make instructional information more accessible to students with impairments

Objective:

1. **Enhancing Accessibility and Inclusivity**: It will provide access to vast amounts of information and educational resources to a global audience, regardless of geographical location or socio-economic status.

2. **Fostering Personalized Learning**: It can tailor educational content to individual learning styles and paces, providing personalized feedback and guidance to optimize learning outcomes.

3. **Real-World Applications**: They can help students and professionals solve real-world problems by providing relevant information like videos, pictures, suggesting solutions, and offering examples of best practices in various fields.

Methodology:

1. The first step in using the platform is to sign up and log in. Email verification is required for the login page in order to guarantee authentication.

2. The user will be directed to the homepage after logging in, where all the modules of the web application will be available.

3. Asking questions from the pdf is the project's central element. In this module first step is to upload the pdf and then write the question you wish to ask in the prompt.

4. The app will also suggest images and videos that are relevant to the query posed based on the results it has generated it will help the student in understanding the solution more visually and clearly.

5. To clear the doubt and queries related to any topic from the video we have also added a one- To-one teaching module between expert and student via video calling.

6. It is hard to write Sql command for complex queries and to encounter this we have added Learn Sql module which will help in getting the Sql command for the question asked in natural language.

Results and Conclusions:

❖ It will assist educators in creating high-quality educational materials, including lesson plans, lecture notes, quizzes, and interactive activities, saving time and ensuring consistency.

❖ Virtual assistants powered by LLMs provide 24/7 support for queries, helping students navigate course, content, and other services.

❖ It begins by outlining the purpose and research history of LLMs and by outlining the fundamentals of large models. After that, it addresses the connection between educational LLMs and intelligent education and provides an overview of the state of educational LLM research at the moment. We have found that several barriers still stand in the of the development and application of AI and LA-based solutions in the educational domain. These barriers may be overcome by

changing our focus from the student to the educator. Because of this, the usual level of discussion is theoretical, and the available data no longer supports the effective and efficient application of AI in education.

Innovation In the Project:

In this project we have focused majorly on providing personalized learning and reducing the time in searching for information hear and there by providing all the material needed to understand any topic on a single platform, we attempted to cut down on students' time. We also made the web application more user-friendly so that anyone could use it without any trouble.

Scope For Future Study:

1. The concept may be implemented on large scale to know practical feasibilities, as of now we have designed for satisfying minimum requirement. The same design can be used to develop a working model for moderate to larger scale & also need deeper investigation for practical consideration.
2. We have developed a prototype working model. Same application with some addition and modification can be implemented for revenue generation by launching it over internet .