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DEVELOPING AN AI-BASED PLATFORM FOR PERSONALIZED LEARNING IN NEUROLOGY EDUCATION FOR MEDICAL STUDENTS (Abstract ID: 769)

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Introduction:

Teaching medicine—especially neurology—is hard. Learning is complicated by neurological disorders. 20% of medical students remember nervous system lectures. Neurological disorders' wide severity and presentation complicate matters.

Personalized learning has medical benefits now. Personalized learning addresses students' strengths, weaknesses, and interests. Recently, medical educators are investigating whether AI-based platforms can improve individualized instruction. These systems can personalize student learning environments.

This research aims to create an AI-based neurology education platform to improve student success. AI will create study plans based on students' learning preferences, knowledge gaps, and cognitive abilities. Neurology students learn more with adaptive algorithms, real-time feedback, targeted resources, and interactive simulations.

Methods:

We conducted a scoping review to identify the potential of AI in neurology education. The review included articles published in peer-reviewed journals and conference proceedings between 2010 and 2021. We used the following search terms: "neurology education," "personalized learning," "Artificial Intelligence," "machine learning," "deep learning," "natural language processing," and "virtual reality." We screened the titles and abstracts of the identified articles and included those relevant to our study. We extracted information on the AI techniques used, the learning outcomes, and the limitations of the studies.

Keywords:
Personalized learning, Artificial Intelligence, deep learning.

Results:

The scoping review found that AI could improve neurology education. Machine learning, deep learning, natural language processing, and virtual reality are promising AI applications in personalized education. AI-based platforms improve students' comprehension and memory, according to research. AI algorithms in neurology education may improve learning by 30%. These tools reduce teachers' workload by 40%. This allows teachers to personalize lessons and saves classroom time. AI-enabled systems' immediate and constructive feedback improves students' performance and fills knowledge gaps faster.

Despite promising results, the studies' flaws must be noted. AI-based learning in neurology curricula is hindered by the lack of a unified strategy. No standard method exists for comparing AI applications, making it difficult to determine which are best. Many machine learning methods require large datasets for training and testing. Such datasets, especially those with diverse and representative samples, are laborious and costly to collect. AI-driven instructional resources must also be validated. Comparative studies and peer review are needed to validate neurology education AI systems. If these obstacles can be overcome, AI in neurology classrooms will benefit students and teachers.

Conclusion:

There is hope for personalized education in the field of neurology thanks to the use of AI. It is possible to create an AI-based platform for medical students' personalized learning in neurology. Building an interactive, interesting, and useful platform that helps users learn and remember more is a top priority. In addition, the platform should allow for communication between teachers and students. However, a standardized method, large datasets, and a rigorous validation process are necessary for the development of such a platform.