THE EXPERIENCE IN TEACHING AND LEARNING THROUGH DEVELOPING AN AI PHARMACIST IN HONG KONG

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Students presenting their developed AI pharmacist app.

Introduction

- Healthcare professionals, including pharmacists, are scarce and are not readily available all the time for consultation, especially during lockdowns where public members are restricted from going out.

- To help tackle this, a group of students and teachers developed an artificial intelligence (AI) pharmacist.

- The rapid development of artificial intelligence has the potential to revolutionize the healthcare industry. [1]

- This study aims to explore the teaching and learning experience of students engaged in developing an AI pharmacist.

Method

- A lecturer guided six students to develop an AI Pharmacist app.

- Students were responsible for researching drug information and relevant health advice and disease information.

- Information generated by the students would be reviewed by the lecturer for accuracy.

- The data was incorporated into the AI Pharmacist and an IT specialist assisted in the development of the app.

- Active learning was encouraged through research, group discussions, and project-based learning. This approach could enhance students' critical thinking, problem-solving, and collaboration skills.

Live demonstration of the A.I. Pharmacist app showcased on an interactive display.

Empowering healthcare: The A.I. Pharmacist app provides insightful responses to an audio inquiry regarding persistent fever.

Discussion

- The development of an AI pharmacist requires a combination of computer science and healthcare knowledge, including an understanding of healthcare systems, the role of pharmacists in patient care, knowledge of drug interactions, pharmacokinetics, and disease states.

- The development of AI pharmacists poses several challenges for students. One of the main challenges is the integration of technical and healthcare knowledge. Students may come from either a technical or healthcare background, and bridging the gap between these two fields can be difficult.

- Another challenge is the rapidly evolving nature of AI technology means that students must be able to adapt quickly to new developments in the field.

- Further challenge is the ethical considerations involved. Students must be able to navigate complex ethical issues, such as data privacy and bias. This requires a deep understanding of the ethical principles involved in healthcare and technology.

- The development of an AI pharmacist presents a unique teaching and learning experience for students, characterized by its interdisciplinary nature and real-world applicability.

- Our experience suggest that students engaged in this project were able to develop valuable skills in AI, pharmacy, ethics, and teamwork, while also navigating the challenges inherent in such a complex undertaking.

- To further enhance the learning experience, educators could consider providing additional resources to help students bridge the gaps between disciplines, such as workshops on domain-specific knowledge or interdisciplinary communication strategies.

- Additionally, incorporating ethical considerations throughout the project can help students develop a deeper understanding of the ethical implications of AI in healthcare.

Conclusion

- The teaching and learning experience of students developing an AI pharmacist offers valuable insights into the potential benefits and challenges of interdisciplinary, real-world AI projects. Ultimately contributing to the ongoing discourse surrounding the integration of artificial intelligence in healthcare settings.

- By fostering collaboration and skill development across disciplines, these projects can help prepare students for the rapidly evolving landscape of healthcare and beyond.

Reference:
1. Kocakoç, İ.D. (2022). The Role of Artificial Intelligence in Health Care. In: Bozkuş Kahyaoğlu, S. (eds) The Impact of Artificial Intelligence on Governance, Economics and Finance, Volume 2. Accounting, Finance, Sustainability, Governance & Fraud: Theory and Application. Springer, Singapore. https://doi.org/10.1007/978-981-16-8997-0_11