Chatbots as Pedagogical Tools: A Feasibility Study

Project Number: 6000834

Principal Investigator: Prof. Sie Yuen John LEE

Grant Type: TDG

Abstract:

High-quality essays and computer programs can now be automatically composed by chatbots. State-of-the-art chatbots are driven by Large Language Models trained with neural networks on digital text harvested from the web. As ever larger amounts of texts become available for training, chatbot performance can be expected to improve in the years to come, and chatbot use can be foreseen to become pervasive among the public in the long term. It is therefore critical for educators to start preparing students to engage meaningfully with chatbots.

This forward-looking project investigates the feasibility of harnessing chatbots as pedagogical tools. We evaluate a variety of teaching and learning activities in which university students discuss, critique, and revise chatbot-generated materials. We report students' learning outcomes and attitude towards these novel learning activities, encompassing students in Hong Kong and in Singapore, in both engineering and the humanities. Project results will provide quantitative assessment on student interaction with chatbot materials, which will inform future design for chatbot use in the classroom.