Learning Artificial Intelligence in General Gateway Courses using AI Chatbot

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Abstract

Demonstrating to undergraduate students how artificial intelligence (AI) can be integrated with teaching is timely and important nowadays. How to use AI to teach AI is even more interesting. This project will develop teaching aid that achieves three main goals: (i) teach undergraduate students, especially students from non-technical background, what AI education is about; (ii) expose undergraduate students to good-quality teaching aids that leverage AI technologies; and (iii) enrich student learning experience in a mobile manner inside and outside classroom. We propose a novel teaching framework based on AI Chatbot software for students to learn AI knowledge and perform self-assessment of their individual learning progress. Not only can the AI Chatbot provide students with AI knowledge in-line with the OBTL objectives of the course, the software provides learning of AI topics to occur inside and outside classroom. Inside classroom, it serves to demo AI games and disseminate AI knowledge content. Outside classroom, it serves as a Project Platform Tool that supports the implementation of the Discovery and Innovation-enriched Professional Curriculum, exposing students to use AI technology to create impactful submission for hackathons and competitions. Our preliminary evaluation on a semester of more than 150 students for a newly-offered GE course on AI has been encouraging.