Teaching Students to Build Responsible AI Agents Using a Real-life Social Service Case Study

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Abstract

As the use of Artificial Intelligence, including Gen-AI, is rapidly growing, it is important for interested computing and information technology students to learn how to design and code AI bots and agents. For this reason, computer science educators often need assignment case studies and themes that students in the course can use as a practical example to learn and build. In addition, this is typically done in groups so that students can work together to build a complicated and professional application, at the same time engaging in peer learning and team project management. The Eastern Institute of Technology in New Zealand has strong connections with the industry and its community, and aims to inform its students about the needs of society in general. Good application building also involves relationships with end users. Therefore, we have created a case study on building an AI voice agent for elderly people, especially in residential facilities. This brief includes relevant details and important psychological and privacy considerations. In conjunction with this teaching practice, we have created a research proposal revolving around the feedback from our students as well as sample nurses and caregivers who would introduce this application to the elderly users. The research objectives focus firstly on the educational benefits, and secondly on the potential feasibility of AI agents to make a difference in helping lonely and elderly people. The findings and analysis will contribute both to the technical and the educational literature.

Keywords: artificial intelligence; computer science education; teamwork; group learning; project-based learning