Project Number: 20

Project Title: Development of AI Chatbots for Student Wellbeing

Project Clients: Jihyun Lee (Professor in the School of Education, UNSW)

Project specializations: Software Development;Artificial Intelligence (Machine/Deep Learning, NLP);

Number of groups: 3 groups

Main contact: Jihyun Lee (Professor in the School of Education, UNSW)

Background:

This project aims to develop AI (Artificial Intelligence)-based chatbots to support student wellbeing.

In this project, students can develop AI chatbots aiming to help students in terms of self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (see this website: https://casel.org/fundamentals-of-sel/what-is-the-casel-framework/) or student learning engagement (motivational, emotional, behavioral), learning strategies (cognitive, meta-cognitive, self-management), and social influences from teachers, peers, and family networks (see Lee & Shute, 2010). Students can choose one of these aspects of student wellbeing or combination of them.

Recent research demonstrates the potential of AI-driven chatbots (Hsu et al., 2022; Xia et al., 2023) to enhance student learning and address mental health concerns (He et al., 2023; Li et al., 2022). However, most studies on AI's impact on wellbeing have focused on clinical populations, leaving a significant gap in understanding its effects on the wellbeing of non-clinical, student populations. Student wellbeing requires a different focus than wellbeing of clinical patients. Wellbeing is a multidimensional construct, involving social-emotional learning (CASEL, 2020), encompassing student engagement (motivational, emotional, behavioral), learning strategies (cognitive, meta-cognitive, self-management), and self- and social-awareness of influences from teachers, peers, and family networks (Lee & Shute, 2010).

Requirements and Scope:

Students will develop AI chatbots (software tools), targeted for secondary school students or university students. The project scope is the design and development of software/system application.

Required Knowledge and skills:

AI chatbots (software tools) to be developed in this project should be user-friendly, easy to use with well-structured design. AI chatbots should allow users to have conversations,

guidance, and support in the area of learning, social-emotional learning, and personal growth.

Expected outcomes/deliverables:

Source code, documentation, and user-friendly AI systems for student wellbeing