Title: A multimodal platform with AI-Based 3D avatars for simulated patient–pharmacist conversations

Description:
We are developing a Nordic multimodal platform that enables advanced communication training for pharmacists and pharmacy students. The platform integrates chat, voice, and video interactions with AI-driven 3D avatars that act as virtual patients. These avatars can be customized and further developed based on user needs for example, different patient profiles, ages, languages, health conditions, and communication styles.

The goal is to create realistic, interactive, and flexible simulated encounters where users can practice person-centred communication, counseling, and clinical reasoning in a safe and scalable digital environment. The platform supports both individual learning and group-based teaching, and it can be integrated across various parts of pharmacy education and professional development. Research shows that pharmacists and pharmacy students need stronger person-centred communication skills, yet current training is highly resource-intensive. This platform will offer an effective complement to existing teaching by providing scalable, realistic practice opportunities. Improved communication is essential, as poor medication adherence remains a major global problem, but one that can be mitigated when healthcare professionals are skilled communicators.

We are also interested in developing an app to record and analyze interactions between patients and pharmacists (or students) in pharmacies or healthcare environments. The tool will be based on AI and will evaluate conversations against predetermined criteria, including the use of open-ended questions, demonstration of empathy, autonomy, and other pertinent factors important for successful medical treatment.

Reference:
[1] Bakhaya, Sara, et al. "Development and evaluation of AI chatbot tool for written communication training in self-care: Experiences of pharmacy students and faculty." Currents in Pharmacy Teaching and Learning 18.1 (2026): 102503.

Prerequisites:
- Proficiency in Python programming. Working knowledge of using compute resources.
- Course work: LLMs (1RT730). Knowledge of HCI is a merit.

Contact persons:
- Karin Svensberg (webpage), karin.svensberg@uu.se
- Ekta Vats (webpage), ekta.vats@it.uu.se

(Please include your CV, academic transcripts and a motivation letter)
Starting date: Jan 2026
No. of students: 1-2