



Artificial Intelligence in Healthcare

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In many critical healthcare, business and industry processes, human expert skills are rare, experts take years of training, and their availability is a bottleneck affecting both manufacturing efficiencies as well as health and safety during the long training process. The talk will present the ongoing development of AI technology, specifically off-policy reinforcement learning methodology, which are aimed at novel ways of developing human-in-the-Loop-AI technology called skill mining. Skill mining encompasses artificial refinement of human expert skills (be they motor skills or cognitive skills or both) from observing digitally captured human actions and the sensory context of their decisions. We will outline our work on the development of Skill Mining, including our work on the AI clinician (Komorowski et al, 2018, Nature Medicine) and our program for harnessing skill mining opportunities in Healthcare (Gottesman et al, 2019, Nature Medicine) for both decision support and autonomous treatments.