

Profile of the Data to Actionable Knowledge Lab at Harvard

Website: <https://finale.seas.harvard.edu>

Project duration: 4-6 months (to be discussed with mentee)

Brief description: The Data to Actionable Knowledge Lab (DtAK) aims to create AI agents that support human decision-making in health contexts and beyond. Our work is accomplished through developing methods for reinforcement learning (to create adaptive agents), probabilistic methods (to manage uncertainty), and human-AI design (to interface effectively with people). In the context, the goal of this research experience is to allow users to add additional information about themselves at the time of use, and have that information be appropriately incorporated into underlying probabilistic and decision-making models. Specifically, most current statistical models are designed to be trained and then tested on a specific set of input features; however, in many contexts, the user may have something important to share (e.g. a drug allergy or a pre-existing condition). LLMs are flexible, but do not necessarily incorporate information in principled ways. This project will develop ways to do this that are both principled and flexible.