Exploring Computational Approaches for Supporting Learning

This talk presents some research highlights at the intersection of AI and education. It is important, but challenging, to connect learners with information that is most effective for their learning goals. A process that combines technology and educational analysis may help:

- create efficient search engine algorithms that tailor their results for a user’s specific learning abilities and goals instead of generic relevance
- predict the instructional value of content
- develop empirical methods to get insight into what was learned

Kevyn Collins-Thompson’s University of Michigan team has explored these challenges through multiple projects: search engines that help people learn, algorithms to support vocabulary learning for both human and machine readers, and adaptive gaze-based technology for active learning while browsing. These efforts are cross-disciplinary and draw on insights from collaborators in cognitive psychology, computer science, and education.

Kevyn Collins-Thompson is an Associate Professor of Information and Computer Science at the University of Michigan, where he also is Director of the online Master of Applied Data Science program. His research explores models, algorithms, and software systems for optimally connecting people with information, especially toward educational goals. His work has been recognized with honors that include several best paper awards, the Coursera Outstanding Educator Award, and selection as a Distinguished Member of the ACM.