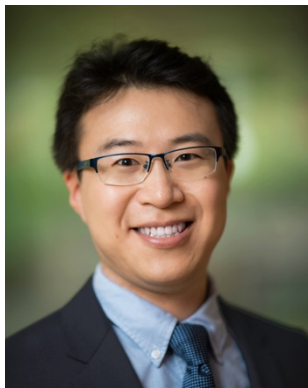UNC GREENSBORO | Department *of* Computer Science

Department of Computer Science
Colloquium Series

Support Professional Search Through Machine Learning

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Date: Thursday, Feb 16th,2023
Time: 10am-11am
Location: Petty Science Building 150

Abstract:
Unlike everyday Web search, professional search tasks are not finished in minutes, but usually take days, weeks, and even months. Typical examples of such tasks include systematic literature review in the health domain and electronic discovery in the legal domain. In these tasks, users often aim to achieve high recall, i.e., to identify nearly all relevant documents in a collection. Machine learning techniques are useful tools to support users in sifting through increasingly large collections with reduced efforts in manual assessment.

In this talk, I will discuss two lines of our recent work on this topic. The first work introduced a simple explainable search algorithm that emulates how medical experts make relevance assessments. Surprisingly, the algorithm was found to work at least as well as complex blackbox algorithms. The second (ongoing) work explores a special type of systematic literature review task from the environmental domain, where the extreme scale and high-recall requirement necessitates creative use of machine learning techniques.

Biography:
Yue "Ray" Wang is an assistant professor in the School of Information and Library Science at the University of North Carolina at Chapel Hill. His research interests include text mining, machine learning, and information retrieval. His recent work focuses on designing and evaluating interactive and interpretable machine learning algorithms that can help users gain knowledge from large unstructured text. He publishes in a broad range of venues in computer and information sciences, including SIGIR, WSDM, CIKM, ACL, EMNLP, WWW, KDD, CHI, AMIA, and JAMIA. He serves as a regular program committee member for WSDM, SIGIR, and WWW. He received the Best Paper Award in WSDM 2016 and Outstanding Program Committee Member Award in WSDM 2016, 2019, 2020, and 2022.