Abstract:

Textual data is ubiquitous in various domains of modern machine learning and data science. In many practical scenarios, one wishes to establish either causal links among semantic meanings of texts or drawing conclusions on causal queries that involve textual data. In this talk, we discuss several research problems in this regard, including commonsense causality reasoning and drawing causal queries involving textual data. We will give an overview of different approaches and frameworks for these problems, including our ROCK framework for the CCR task that is based on the potential-outcomes framework. We finish the talk by discussing outstanding problems and avenues for future work. This talk is based on https://arxiv.org/abs/2202.00436, https://arxiv.org/abs/2202.00848, and some ongoing work.

About the Speaker:

Jiayao Zhang graduated from HKU with a Bachelors in Engineering (Computer Science) in 2019 and is currently a 4th-year Ph.D. candidate at the University of Pennsylvania advised by Dan Roth and Weijie Su. Jiayao’s research interest spans machine learning theories, commonsense reasoning in natural language processing, causal inference, and algorithmic fairness. Jiayao has been an intern in the ML&Forecasting Team under the AWS AI Labs since May 2022. More information can be found at https://www.jiayao-zhang.com.