Translational AI Center (TrAC) Seminar Fall 2024

Haifeng Xu
October 23rd at 11:00 AM (US Central Time)

Location and zoom link: https://trac-ai.iastate.edu/event/trac-seminar-series-haifeng-xu/

Economic Designs of Large Language Models

Abstract

Large Language Models (LLMs) are transforming many of aspects of the technology world and, importantly, also their commercial applications. Unlike standard machine learning technology development, enabling the use of LLMs in the e-commerce requires careful economic design to account for user preference, societal welfare efficiency, and strategic manipulations. This talk will illustrate how to integrate such economic designs into LLMs. We will illustrate this theme through two representative application domains: (1) how to guide language models to generate texts that serve the interest of a group of agents with heterogeneous preferences, with applications to online advertising auctions; (2) how to use language models to automatically generate marketing texts that are personalized towards each individual user's preferences, with applications to automate house listing generations on platforms like Zillow and Redfin. For both problem, we will demonstrate how these economics-driven designs of LLMs can lead to promising applications in the real world.

Short Bio

Dr. Haifeng Xu is an assistant professor in Computer Science at the University of Chicago. He works on Agentic AI, focusing on designing intelligence AI agents that can excel in strategic decision making and strategic communications. He is a recipient of AI2050 Early Career fellow, Google Faculty Research Award, ACM SIGecom Dissertation Award (honorable mention) and a few best paper or best student paper awards (the Web Conference, AAMAS). Haifeng publishes regularly at major conferences in machine learning and computational economics, and serves as area chair or senior program committee for ICML, EC, AAAI, IJCA, etc.

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