

Trends in Biomedical Information Extraction in the LLM Era



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12:00 – 1:00 PM
BMI Classroom 4004
Woodruff Memorial Research Building

or

Join us on Zoom link:

<https://zoom.us/j/98747350361>



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Abstract: While LLMs are dominating the field of NLP, biomedical information extraction (named entity recognition, relation extraction, slot filling) remains a relevant task for knowledge discovery. A recent example is the use of knowledge graphs extracted from scientific literature to facilitate grounding and mitigate hallucinations in LLMs. In this context, are tailored supervised models needed for information extraction or can we simply use zero-shot extraction from frontier LLMs? What about encoders (e.g., BERT) vs decoders (e.g., GPT-x)? Are we better off pretraining biomedical language models from scratch or can we simply continue pretraining on top of general LMs? Culling examples from my lab's work in recent years, Dr. Kavuluru will try to answer these questions and present recent (and likely future) trends in biomedical information extraction.

Biography: Dr. Ramakanth Kavuluru is a professor of biomedical informatics (Department of Internal Medicine) in the College of Medicine at the University of Kentucky (UKY). He graduated with a PhD in computer science in 2009 from UKY with a focus on the security properties of pseudorandom sequences. Subsequently, he worked in knowledge-based search systems for biomedicine as a postdoctoral scholar at Wright State University. Since 2011, he has been working as a faculty member at UKY focusing on natural language processing methods and their use in biomedical research and healthcare delivery. High-level applications of his research include cohort selection for clinical trials, literature-based knowledge discovery, computer assisted coding, social-media based surveillance for substance abuse, and clinical decision support for precision medicine. Thus far, a total of seven doctoral students (six CS and one Statistics) and ten masters students (seven CS, two Data Science, and one Biostatistics) have graduated with him as their primary advisor.