LTI Colloquium Series

Kristina Toutanova

(Google AI language)

Friday, 4/26/19

2:30 pm Talk, DH 2315
4:00 pm Snacks, LTI 5th Floor

TRANSFER LEARNING FOR NATURAL NLP TASKS

Kristina Toutanova is a research scientist at Google AI Language in Seattle and an affiliate faculty at the University of Washington. She obtained her Ph.D. from the Computer Science Department at Stanford University with Christopher Manning, and her MSc in Computer Science from Sofia University, Bulgaria.

Prior to joining Google in 2017, she was a researcher at Microsoft Research, Redmond. Kristina focuses on modeling the structure of natural language using machine learning, most recently in the areas of representation learning, question answering, information retrieval, semantic parsing, and knowledge base completion. Kristina is a past co-editor in chief of TACL and was a program co-chair for ACL 2014.

I will cover recent work focusing on enabling NLP models to perform inferences required for natural end-user NLP tasks.

I will start by overviewing two new datasets developed at Google AI Language that represent user needs and push the abilities of our models to perform inferences required to address them. I will then talk about learning to perform such inferences through transfer from large unlabeled texts and related tasks with annotated data. I will show how models can learn to integrate information from bidirectional local and whole-document context, deriving distributed representations of words and larger units of text, and improving performance on multiple tasks. I will conclude with outlining open problems and areas of future work.