

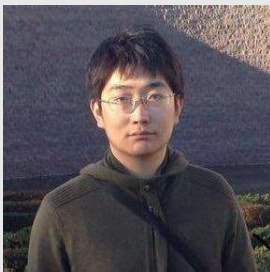
Understanding Event Processes in Natural Language

Monday, March 8, 2021, 16:30 MST

Via Zoom: <https://asu.zoom.us/j/89817732811>

Abstract

Human languages evolve to communicate about real-world events. Therefore, understanding events plays a critical role in natural language understanding (NLU). A key challenge to this mission lies in the fact that events are not just simple, standalone predicates. Rather, they are often described at different granularities, form different temporal orders, and directed by specific central goals in the context. This talk will present two parts of our recent studies on Event-Centric NLU. In the first part, I will talk about how logically-constrained learning can teach machines to understand temporal relations, membership relations and coreference of events (e.g., what should be the right process of “defend a dissertation”, “taking courses”, “publish papers” regarding “earning a PhD”?). The second part will talk about how to teach machines to understand the intents and central goals behind event processes (e.g, do machines understand that “making a dough”, “adding toppings”, “preheating the oven” and “baking the dough” lead to “cooking pizza”?). I will also briefly discuss some recent advances and open problems in event-centric NLU, along with a system demonstration.



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Bio

Muhao Chen is a researcher at USC ISI. Prior to USC, he was a postdoctoral fellow at UPenn, hosted by Dan Roth. He received his Ph.D. degree from UCLA Computer Science Department in 2019. His research focuses on data-driven machine learning approaches for processing structured data, and knowledge acquisition from unstructured data. Particularly, he is interested in developing knowledge-aware learning systems with generalizability and requiring minimal supervision, and with concrete applications to natural language understanding, knowledge base construction, computational biology and medicine. Muhao has published over 40 papers in leading AI, NLP and Comp. Bio/med venues. His work has received a best student paper award at ACM BCB, and a best paper award nomination at CoNLL. Additional information is available at <https://muhaochen.github.io/>

Host: Pratyay Banerjee, Yezhou Yang, Chitta Baral

The Active Perception Group explores robotic visual learning, tying together the fields of active vision, natural language processing and AI reasoning.

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