AI SEMINAR SERIES

Visual Recognition beyond Appearances, and its Robotic Applications



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WEDNESDAY MARCH 10 1-2 P.M. PACIFIC

Zoom <u>tinyurl.com/ydf946w7</u> Calendar link

tinyurl.com/y3kahh9s



ABSTRACT

The goal of Computer Vision, as coined by Marr, is to develop algorithms to answer What are Where at When from visual appearance. The speaker, among others, recognizes the importance of studying underlying entities and relations beyond visual appearance, following an Active Perception paradigm. This talk will present the speaker's efforts over the last decade, ranging from 1) reasoning beyond appearance for visual question answering, image understanding and video captioning tasks, through 2) temporal and self-supervised knowledge distillation with incremental knowledge transfer, till 3) their roles in a Robotic visual learning framework via a Robotic Indoor Object Search task. The talk will also feature the Active Perception Group (APG)'s ongoing projects (NSF RI, NRI and CPS, DARPA KAIROS, and Arizona IAM) addressing emerging challenges of the nation in autonomous driving, AI security and healthcare domains, at the ASU School of Computing, Informatics, and Decision Systems Engineering (CIDSE).

SPEAKER BIOGRAPHY

Yezhou Yang is an Assistant Professor at School of Computing, Informatics, and Decision Systems Engineering, Arizona State University. He is directing the ASU Active Perception Group. His primary interests lie in Cognitive Robotics, Computer Vision, and Robot Vision, especially exploring visual primitives in human action understanding from visual input, grounding them by natural language as well as high-level reasoning over the primitives for intelligent robots. Before joining ASU, Dr. Yang was a Postdoctoral Research Associate at the Computer Vision Lab and the Perception and Robotics Lab, with the University of Maryland Institute for Advanced Computer Studies. He is a recipient of Qualcomm Innovation Fellowship 2011, the NSF CAREER award 2018 and the Amazon AWS Machine Learning Research Award 2019. He receives his Ph.D. from University of Maryland at College Park, and B.E. from Zhejiang University, China.

Accommodations for disabilities may be made by contacting patravaj@oregonstate.edu.