Abstract:
AI aims to build systems that interact with their environment, with people, and with other agents in the real world. This vision requires combining perception with reasoning and decision-making. It poses hard algorithmic challenges: from generalizing effectively from few or no samples to adapting to new domains to communicating in ways that are natural to people. I'll discuss our recent research thrusts for facing these challenges. These will include approaches to model the high-level structure of a visual scene; leveraging compositional structures in attribute space to learn from descriptions without any visual samples; and teaching agents new concepts without labels, by using elimination to reason about their environment.

Bio:
Gal Chechik is a Professor at Bar-Ilan University and a director of AI research at NVIDIA. His current research focuses on learning for reasoning and perception. In 2018, Gal joined NVIDIA to found and head nvidia's research in Israel. Prior to that, Gal was a staff research scientist at Google Brain and Google research developing large-scale algorithms for machine perception, used by millions daily. Gal earned his PhD in 2004 from the Hebrew University, and completed his postdoctoral training at Stanford CS department. In 2009, he started the learning systems lab at the Gonda brain center of Bar Ilan university, and was appointed an associate professor in 2013. Gal authored ~120 refereed publications, ~49 patents, including publications in Nature Biotechnology, Cell and PNAS. His work won awards at ICML and NeurIPS.

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