Learning Robotic Manipulation

The first part of this talk covers work leveraging machine learning to create representations useful for robotic manipulation. Simulation is used to develop priors for tasks such as planning, visual-tactile shape completion, and reachability analysis to improve robotic grasping performance. The second part of the talk overviews recent work in robotic multi-task reinforcement learning.

Biosketch: Jake Varley received his PhD in 2018 working in the Columbia University Robotics Group working with Professor Peter Allen. His research focuses on building robotic perception and grasping systems, with a strong interest in the interplay between robotics, simulation, and machine learning. He has also worked as a machine learning researcher at Clarifai, and worked in the Hubo Lab at KAIST as an NSF EAPSI Fellow. Prior to graduate school, he earned a Bachelors in Computer Science (6-3) from MIT. Jake is also a contributer to the open source robotics simulator GraspIt!