

Object Picking and Constrained Placement by Visual Reasoning

Shih-Min Yang | Örebro University

Yufei Zhu | Örebro University

Rishi Hazra | Örebro University

Karol Wojtulewicz | Linköping University

Kamran Hosseini | Linköping University

Industrial supervisor: Sebastian Zudaire | ABB

Academic supervisor: Martin Magnusson | Örebro University

Summary

This project aims to develop a robotic pick-and-place system that intelligently plans and executes object placement in specific poses, addressing complex constraints found in industrial tasks like kitting and assembly. A key task example involves placing objects by specified shape and color into corresponding containers. We demonstrate the reasonable success of individual modules and the success of the integrated module, showcasing the system's overall effectiveness in complex pick-and-place tasks.

WARA connection

This project is connected to WARA Robotics.