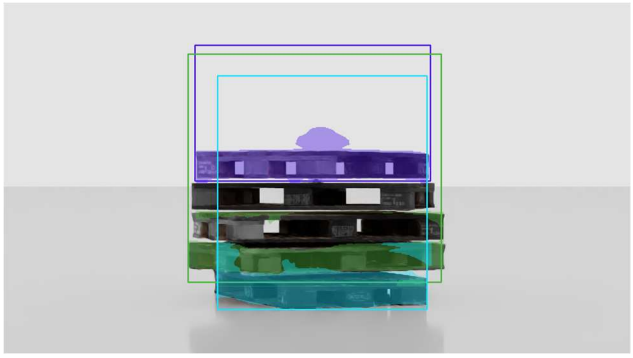
별첨 3. Biweekly 보고서

Biweekly Research Progress Report

Name	:	Joungbin Choi	
Advisor	:	Prof. Young-Keun Kim	(signature)
Period	:	Week 2~3	
WBS	:	1.1. Develop Isaac Sim workspace	

Research Results in This Biweek

- In industrial environments, detecting and unstacking randomly placed pallets is the one of the tasks.
- To avoid defect in real world, the simulation tool, called Isaac Sim, is utilized to create the digital twin system.
- For second and third week, building the workspace in simulation is finished. The piper robot arm, RGBD camera, and pallets are successfully placed.
- Datasets are collected in simulation.
- The training had done with Yolov8-seg model.
- Successfully detecting individual pallet when they are stacking randomly.



Research Items in Next Biweek

1. Develop the piper robot arm in Isaac Sim.
2. Robot arm reach to the side of the pallets.

Issues and Overall Progress

- Fluently processing
- More tasks should be research(e.g. reinforce learning)