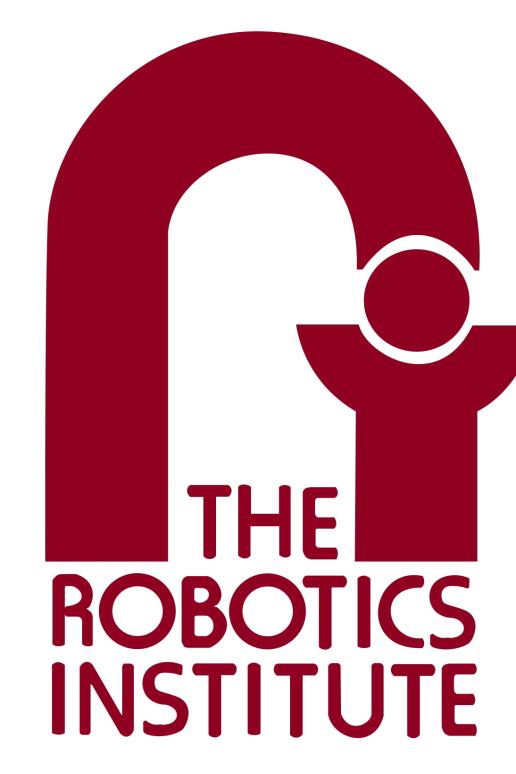
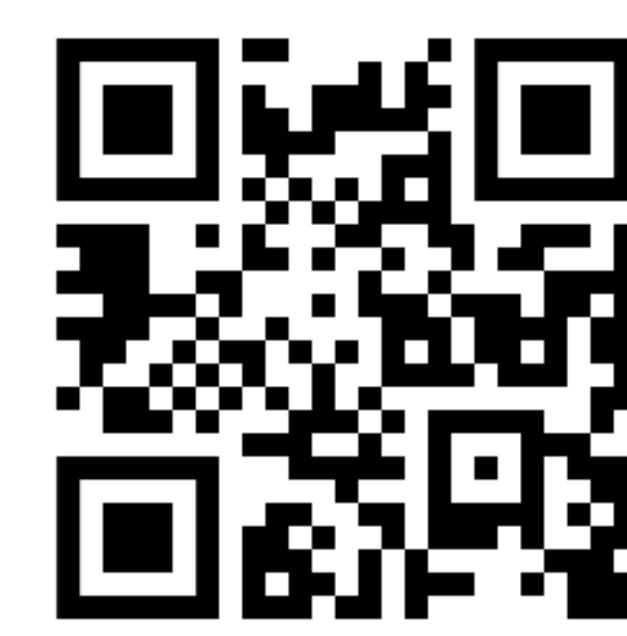


Efficient RL via Disentangled Environment and Agent Representations

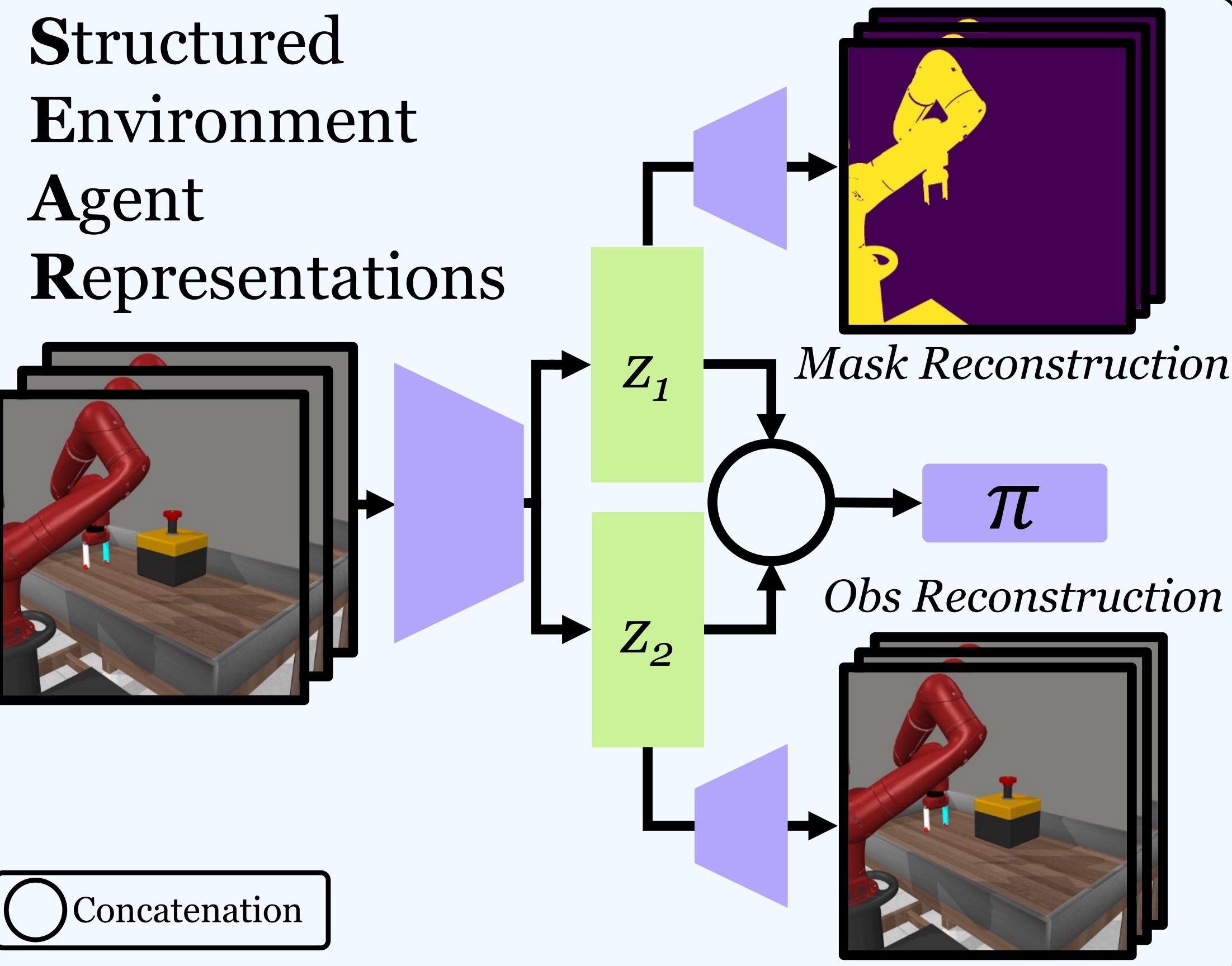
Kevin Gmeli^{*} Shikhar Bahl^{*} Russell Mendonca Deepak Pathak



<https://sear-rl.github.io/>

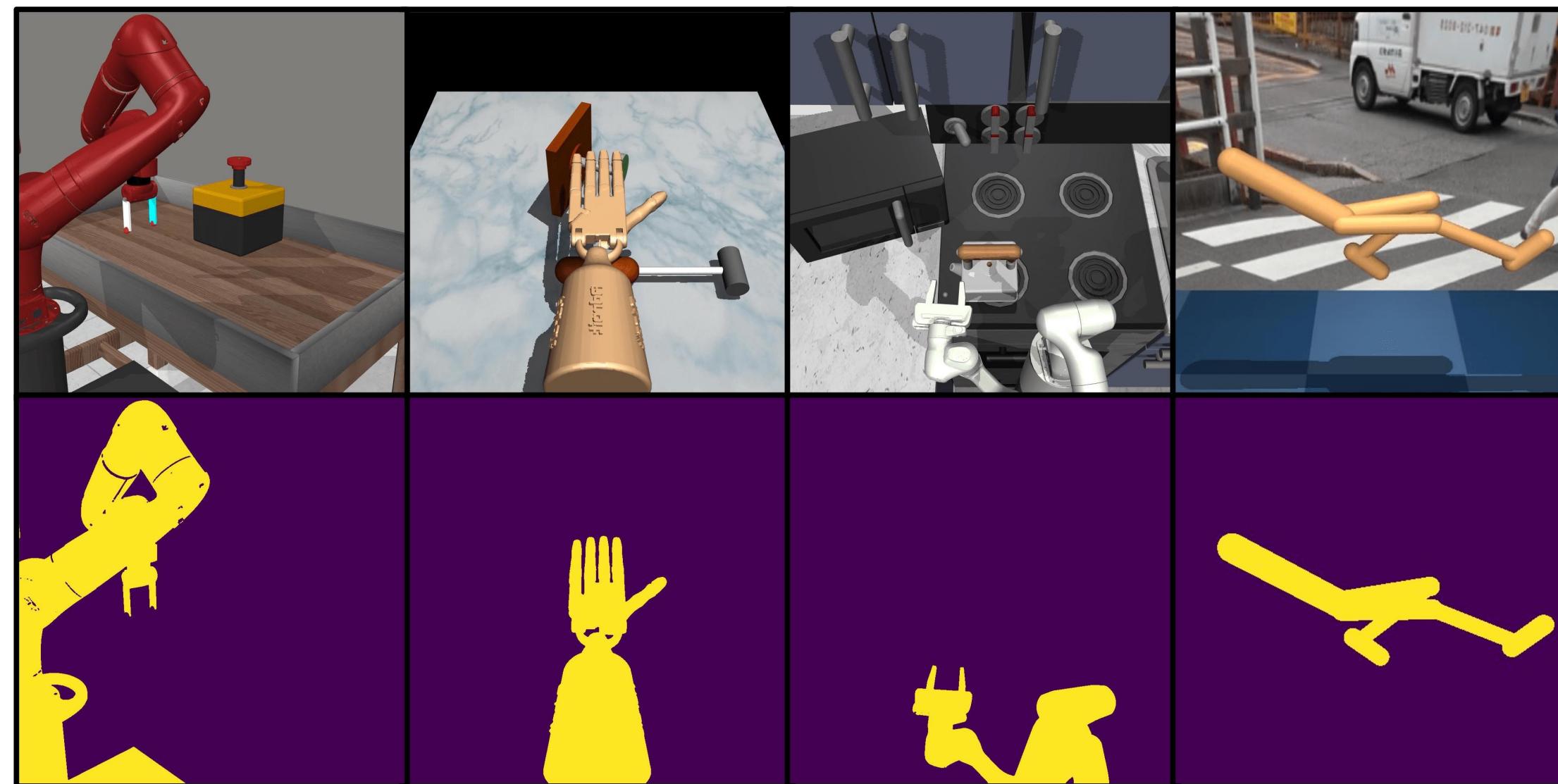
How can we disentangle agent from environment in a visual RL setup?

We augment the RL loss with agent-centric and environment-centric losses

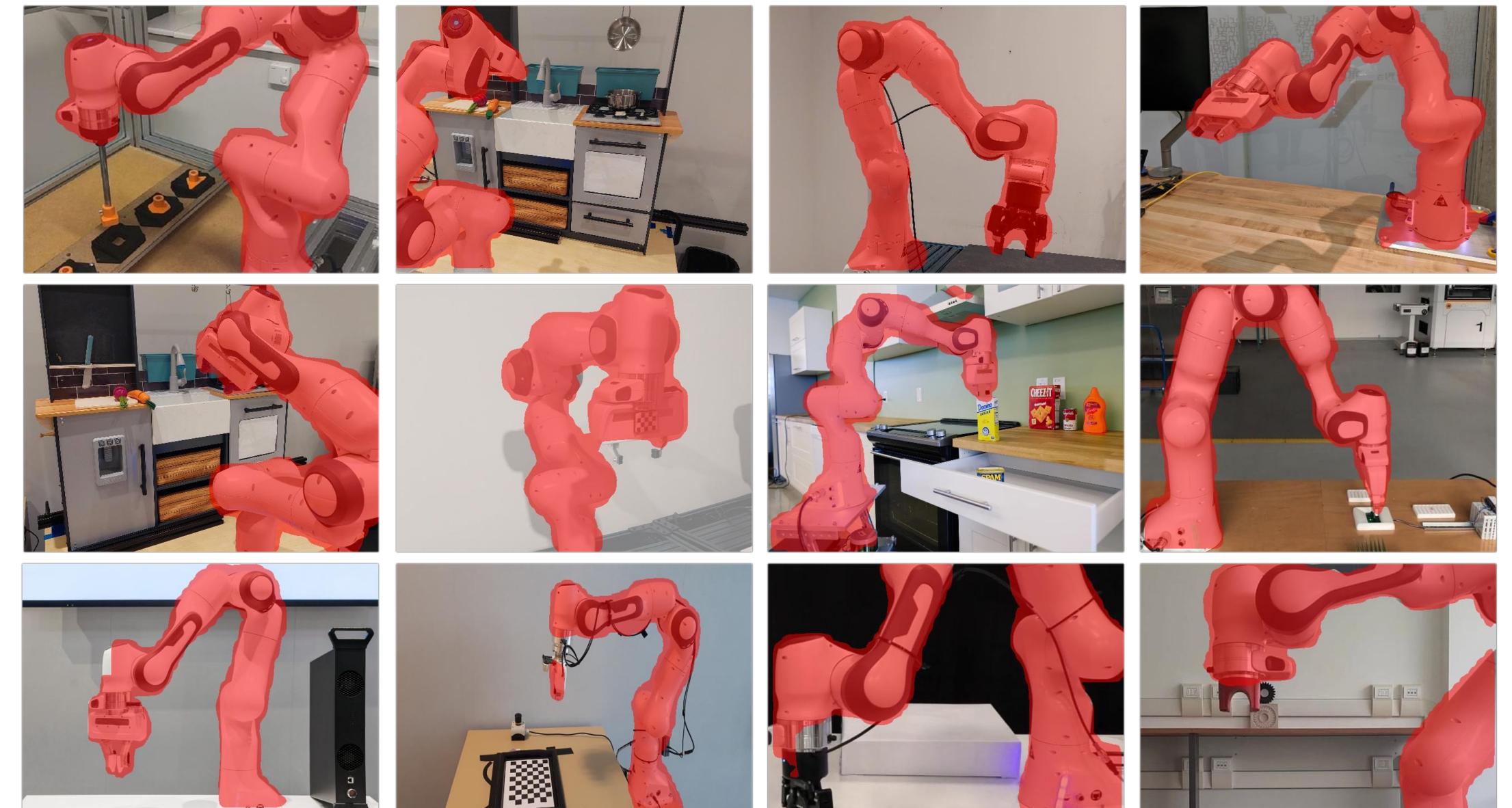


How do we obtain robot masks?

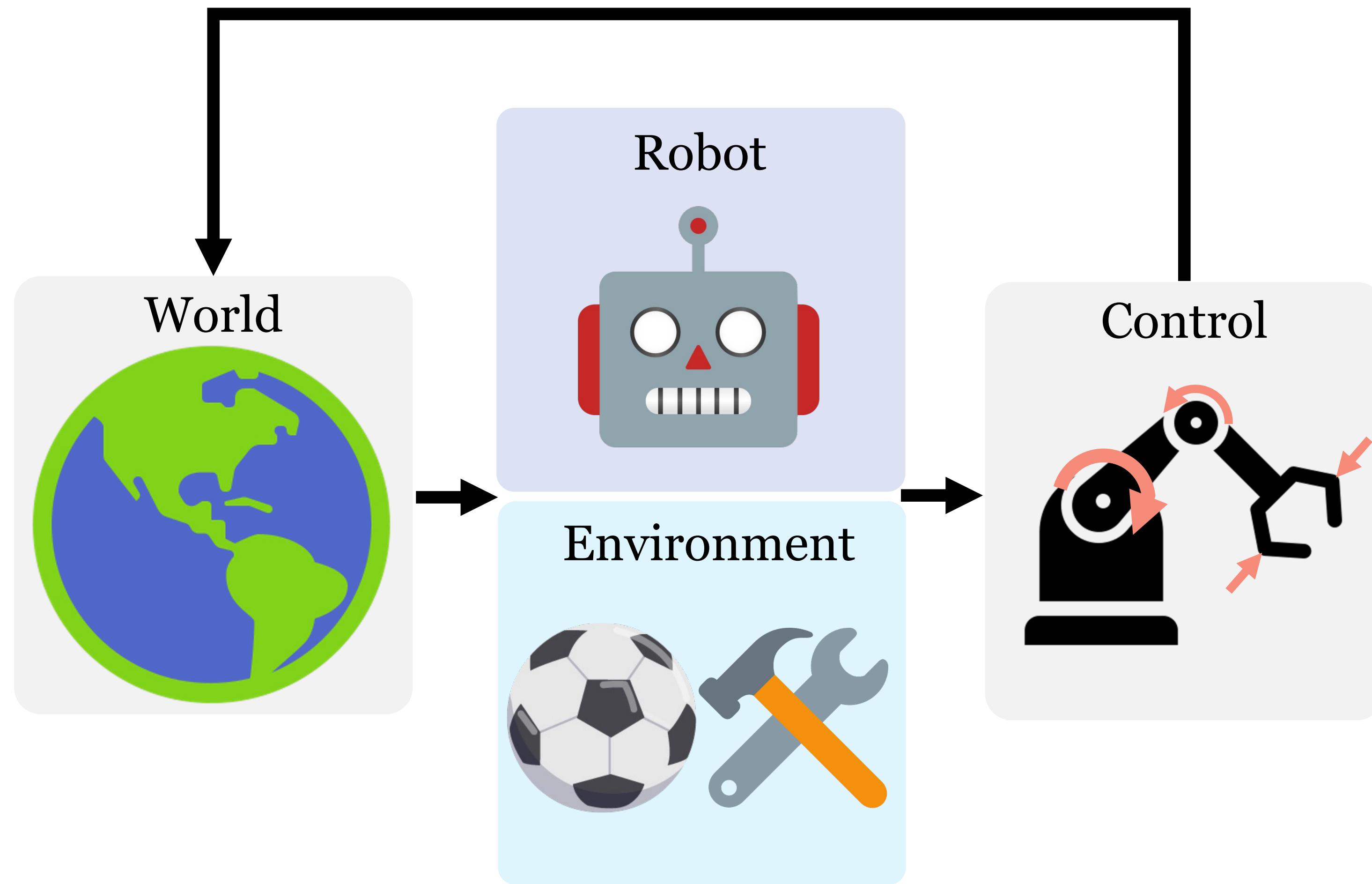
We can directly get masks from a simulator



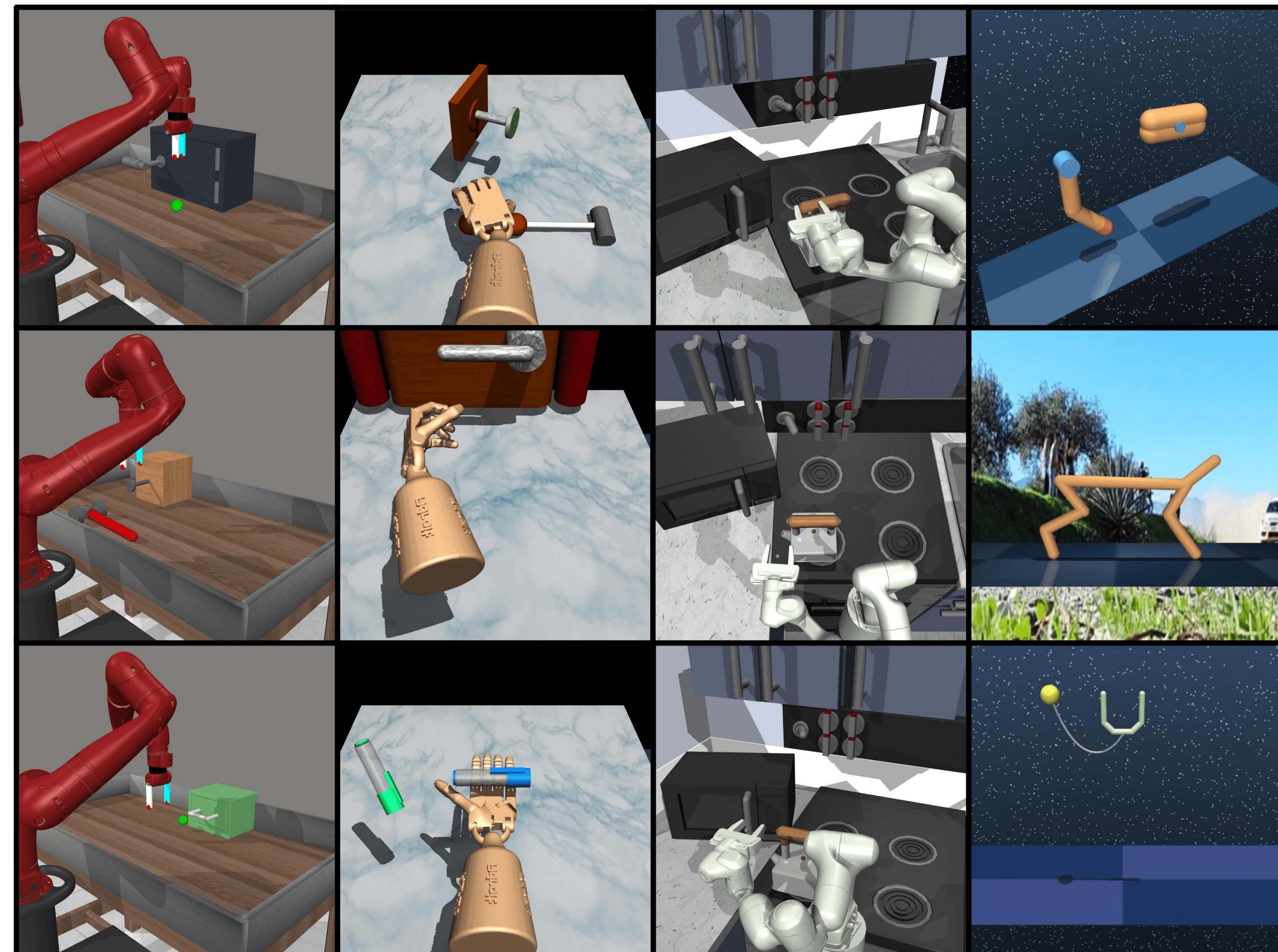
Or fine-tune a segmentation model



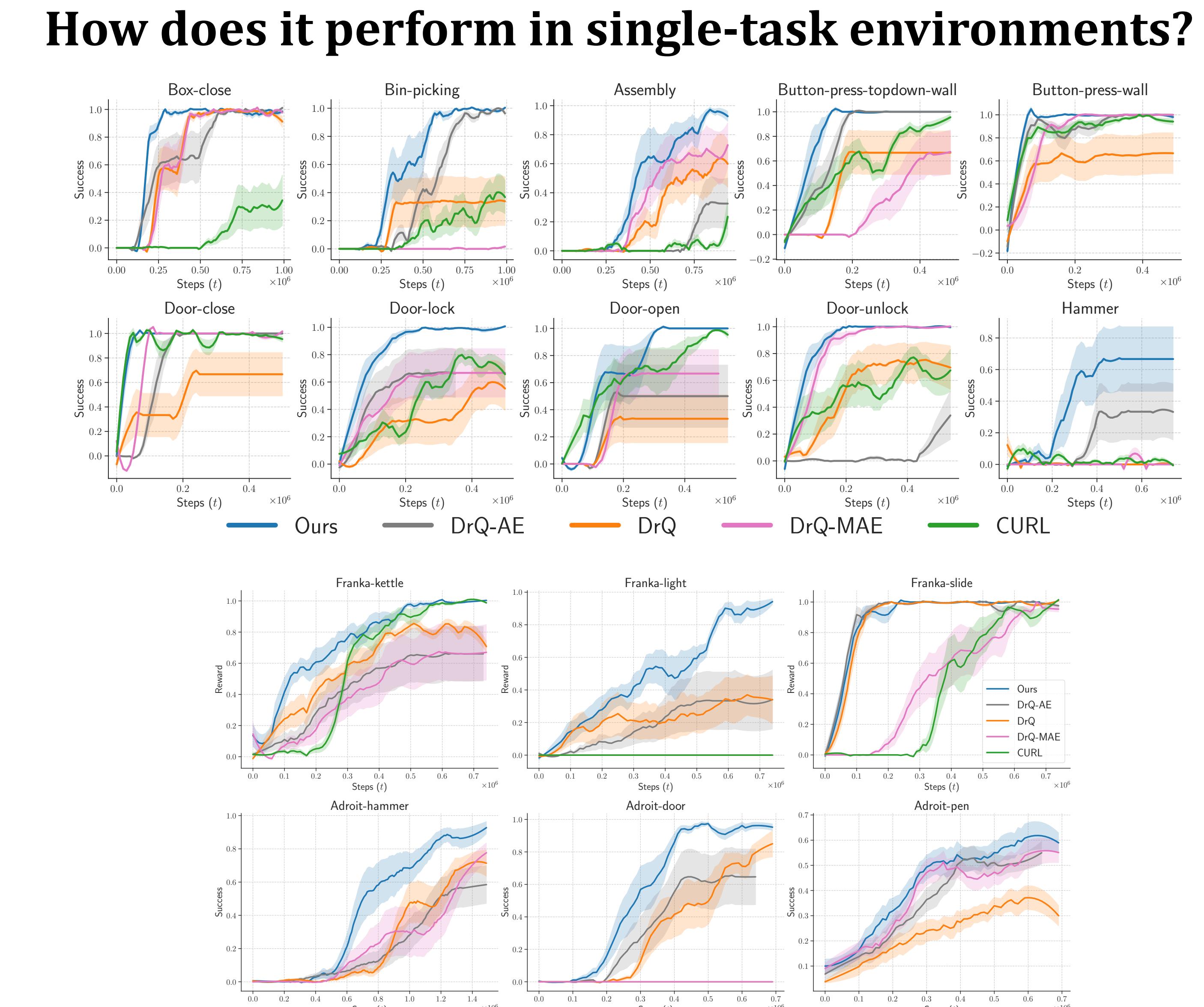
Structured Environment Agent Representations (SEAR)



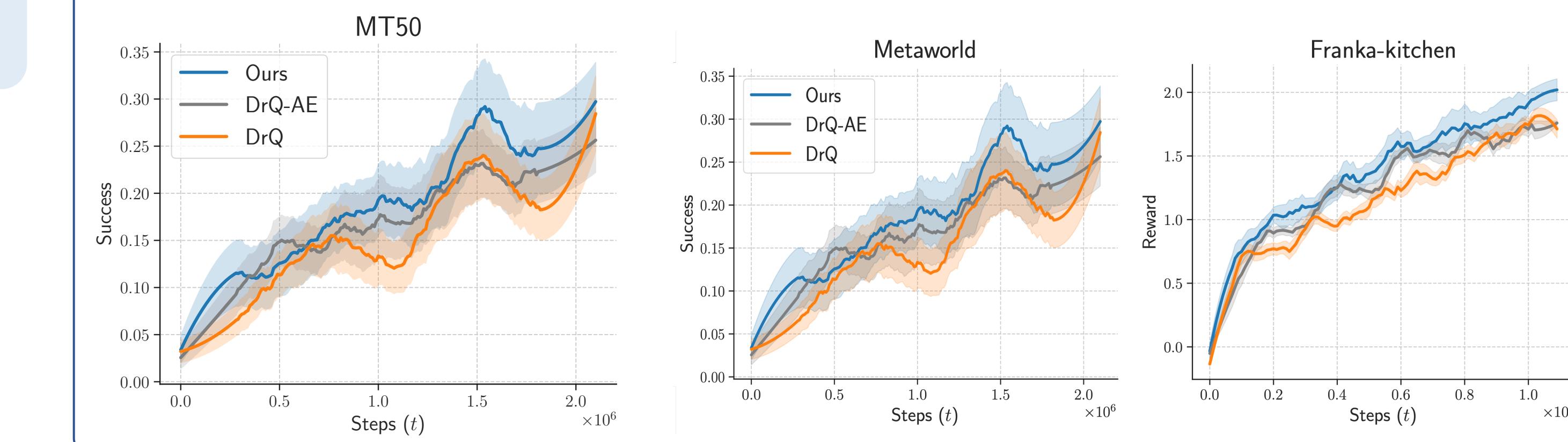
Use visual knowledge of the agent to learn the agent-environment split, by reconstructing the agent mask



18 tasks spanning 5 robots across 4 simulation suites



What about multi-task environments?



What about noisy masks?

