Learning Visually Guided Latent Actions for Assistive Teleoperation

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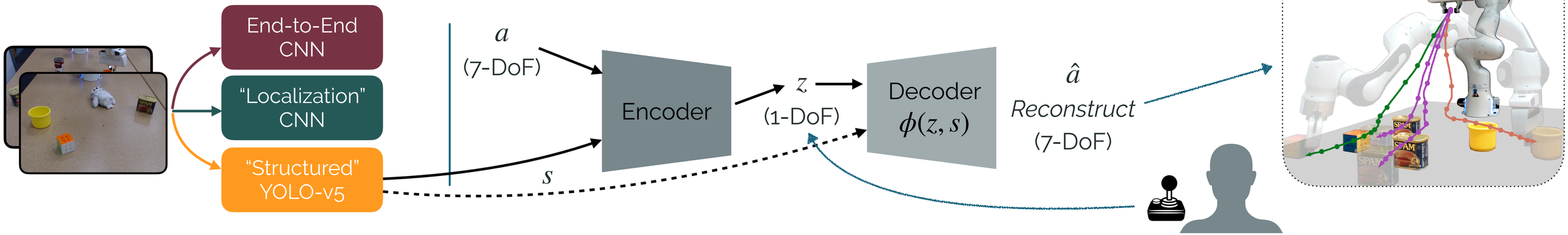
Paper & Code

Latent Actions: Low-dimensional, task aware controllers for high-dimensional robots.

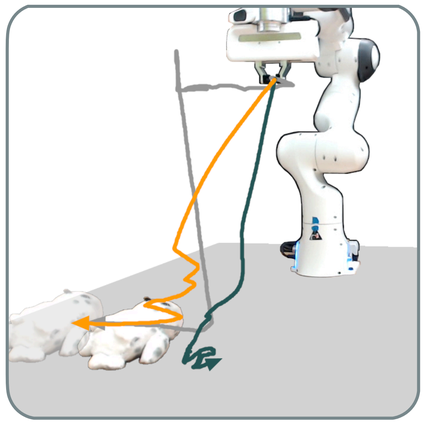
Problem: Generalizing to new tasks & objects; ***what's the right inductive bias for perception?***



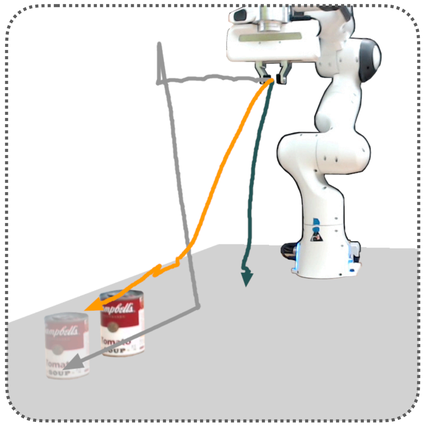
User Study:

Few-Shot Generalization from *just 3 demos*?

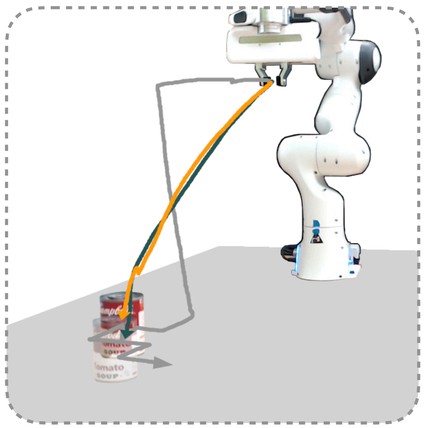
- End-Effector Control (6 x 1 DoF)
- Localization-Only (Oracle Classification)
- YOLO-v5 (Structured & Pretrained)



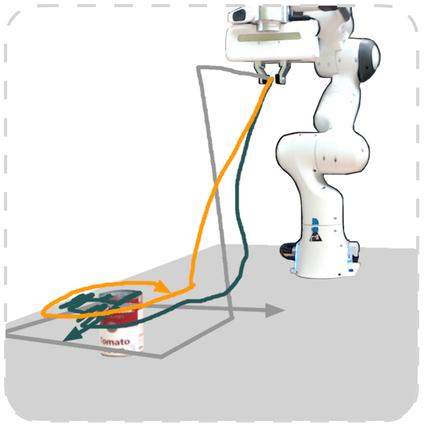
Train Task
Push the animal west.



Seen Task (Few-Shot)
Push the soup can south.



Near Task (Few-Shot)
Push soup can southeast.



Far Task (Few-Shot)
Rotate around the soup.