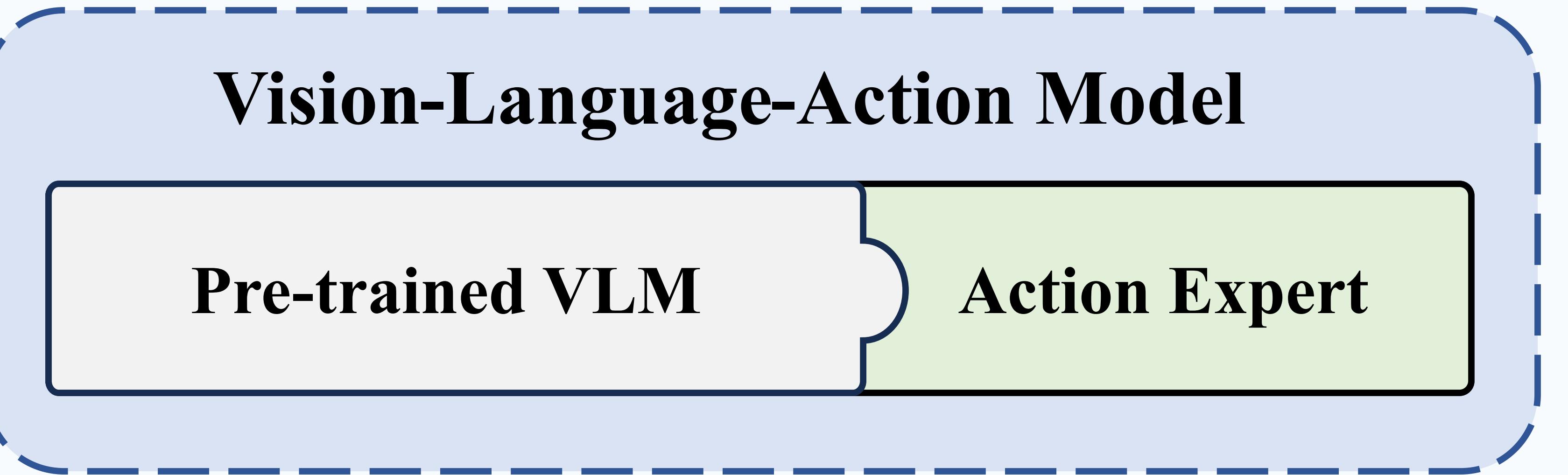


“Put the orange on the plate”

Obs. &
Instr.

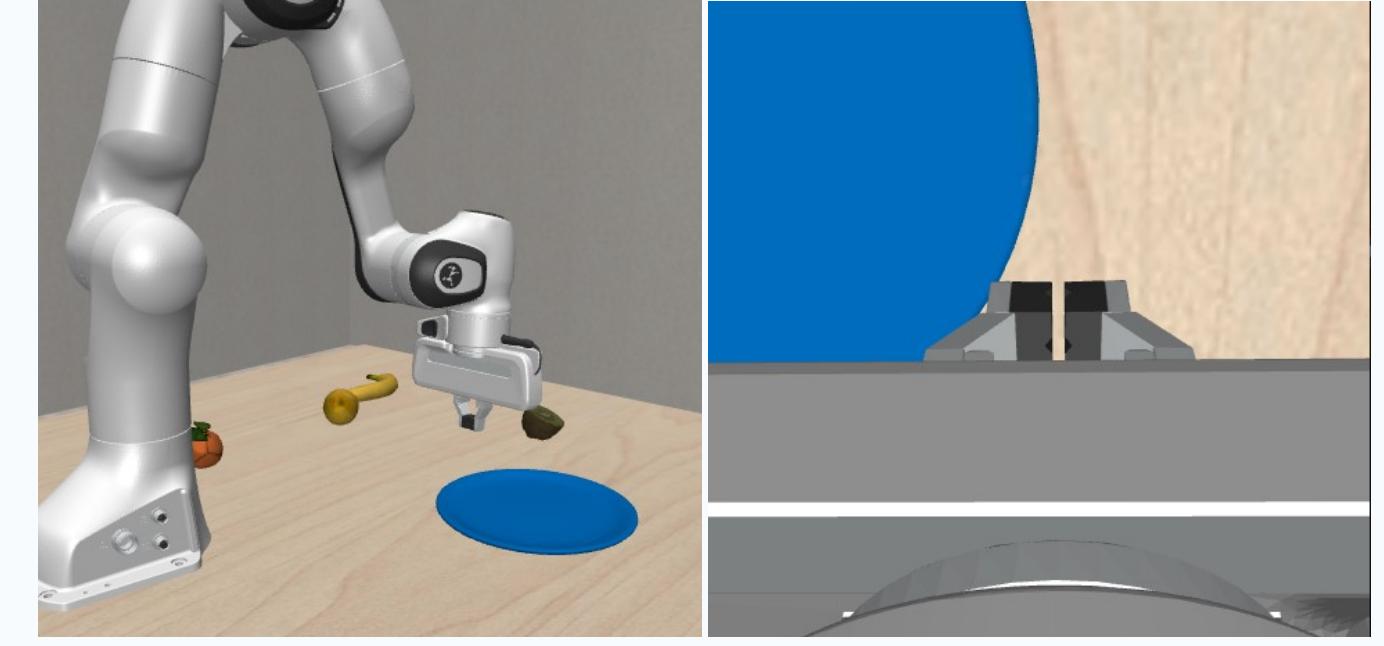
Correction
Instr.

Obs. & Instr.
→

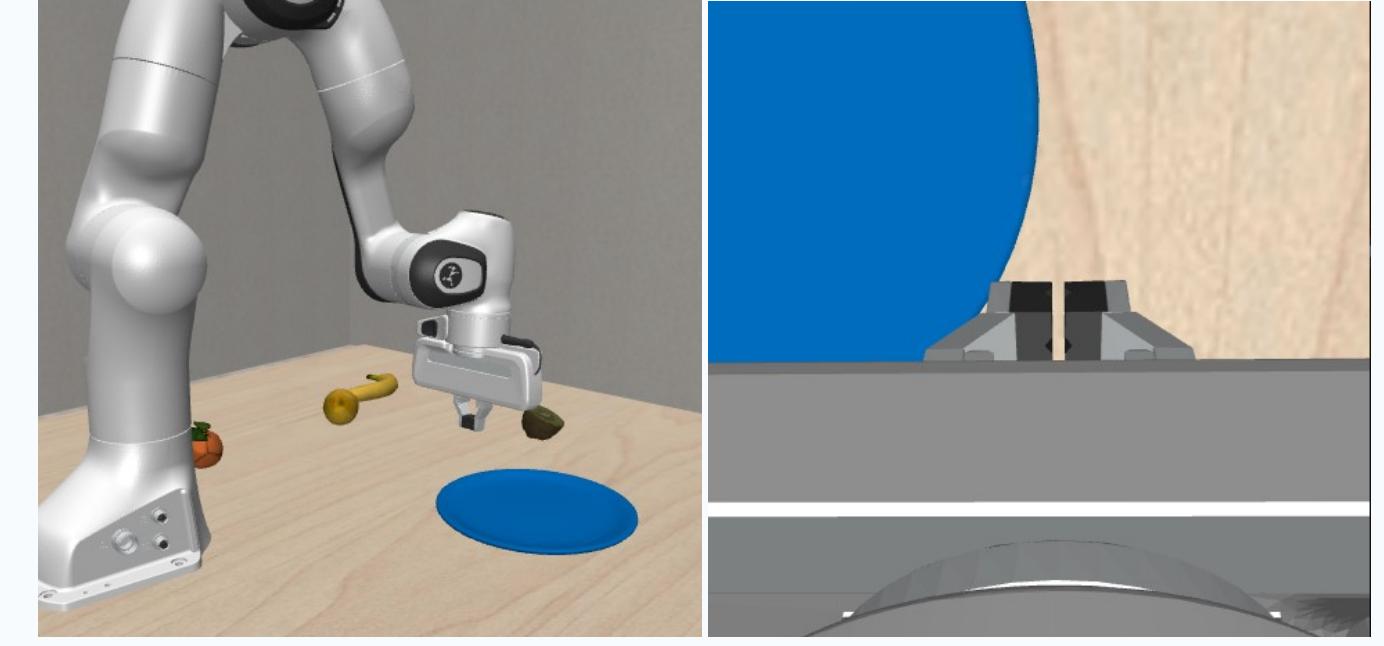


Failure Detection and Recovery in Robotic Manipulation

Joint or
Pose



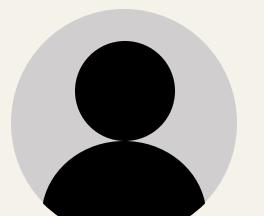
RLFT
⟳



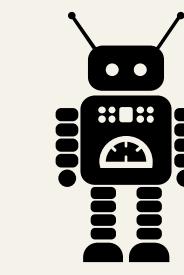
Action or
Execution
Results
↓
Correction
Action

Foundation Model

Large Language Model

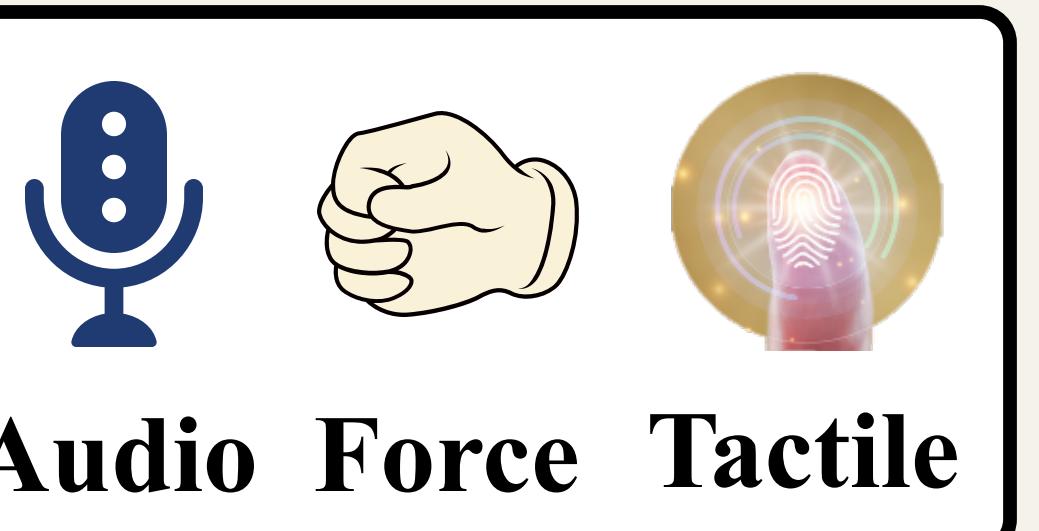


The orange slipped from the gripper.



Locate the position of the orange, then grasp it and put it on the plate.

Multimodal Large Language Model

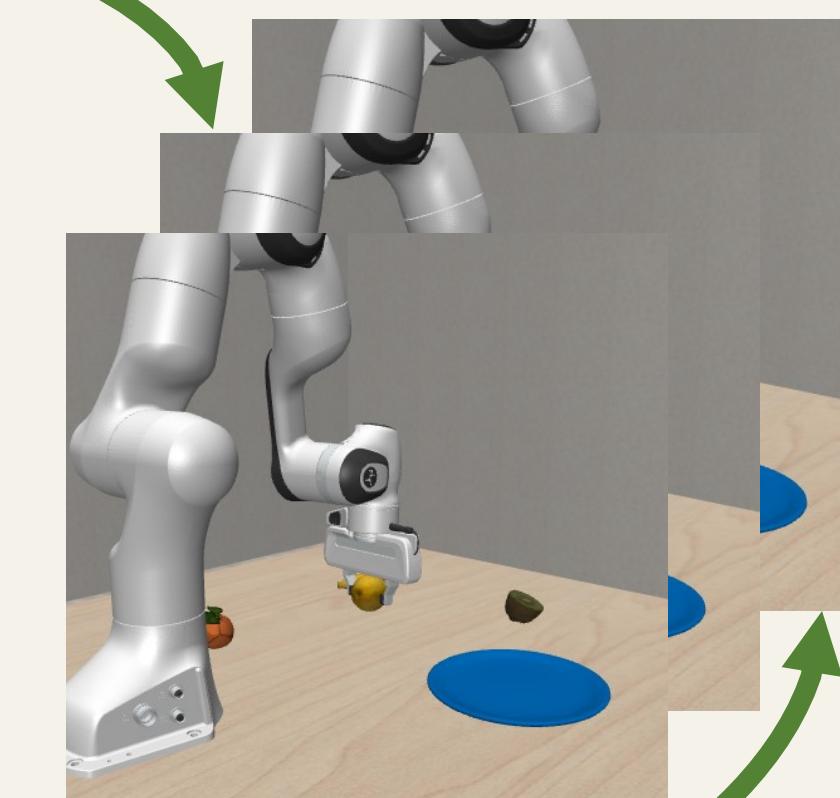


MLLM

1. Multimodal
Cross-checking

2. Replanning
Correction
⟳

S_t S_{t+1} S_{t+2}



World Model