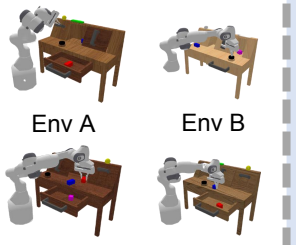
CEBench

Single-arm manipulation (Sim)

Static Environment



Instruction

Pick up the blue block and rotate it.

Proprioception

$\Delta T = [-0.9, 0.3, 0.1]$

$\Delta R = [9°, 12°, 3°]$

$\Delta Gripper$

Bimanual-arm manipulation (Sim)

Seen

Domain Randomization

Bimanual mobile manipulation (Real)

Seen

Domain Randomization

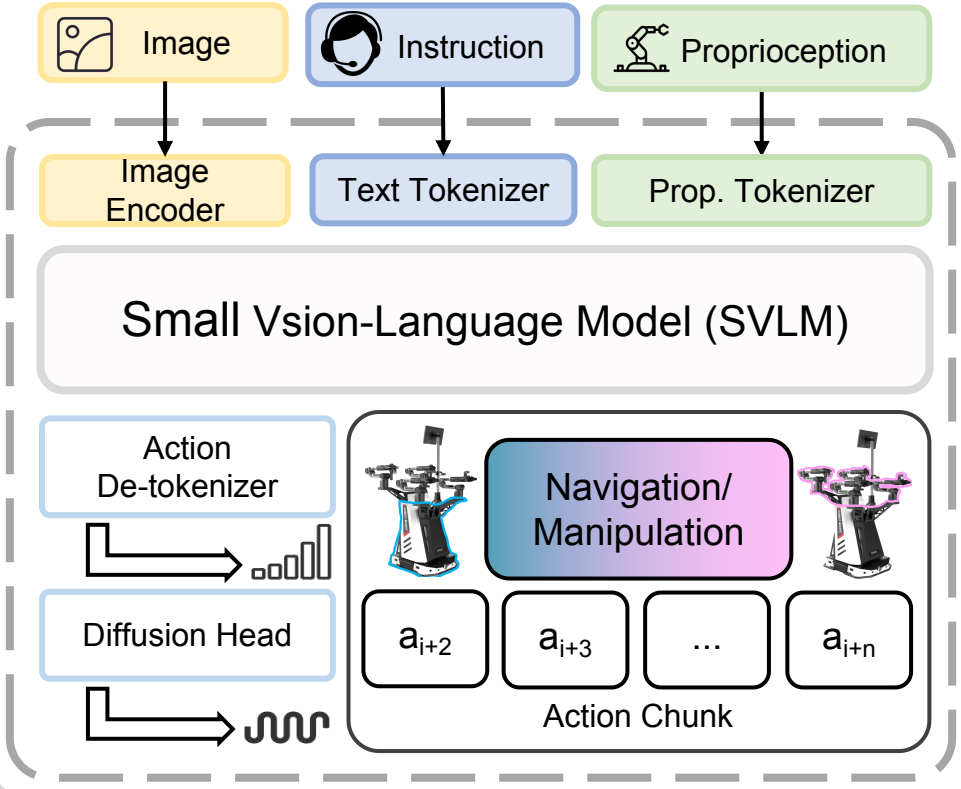
Research Focus

Q1: To what extent does model performance depend on parameter scale, and which techniques enable small models to achieve comparable performance to their larger counterparts?

Q2: Is pre-training necessary for small models to accomplish tasks in specific scenarios?

Q3: How to define a hybrid action space for cross-embodiment manipulation, including fixed-base and mobile ones?

Framework of LightVLA



Training Pipeline