

Robotics is having its *open-source* moment



THE PATH

01 · WHAT CHANGED

Early signal → missing tools →
LeRobot

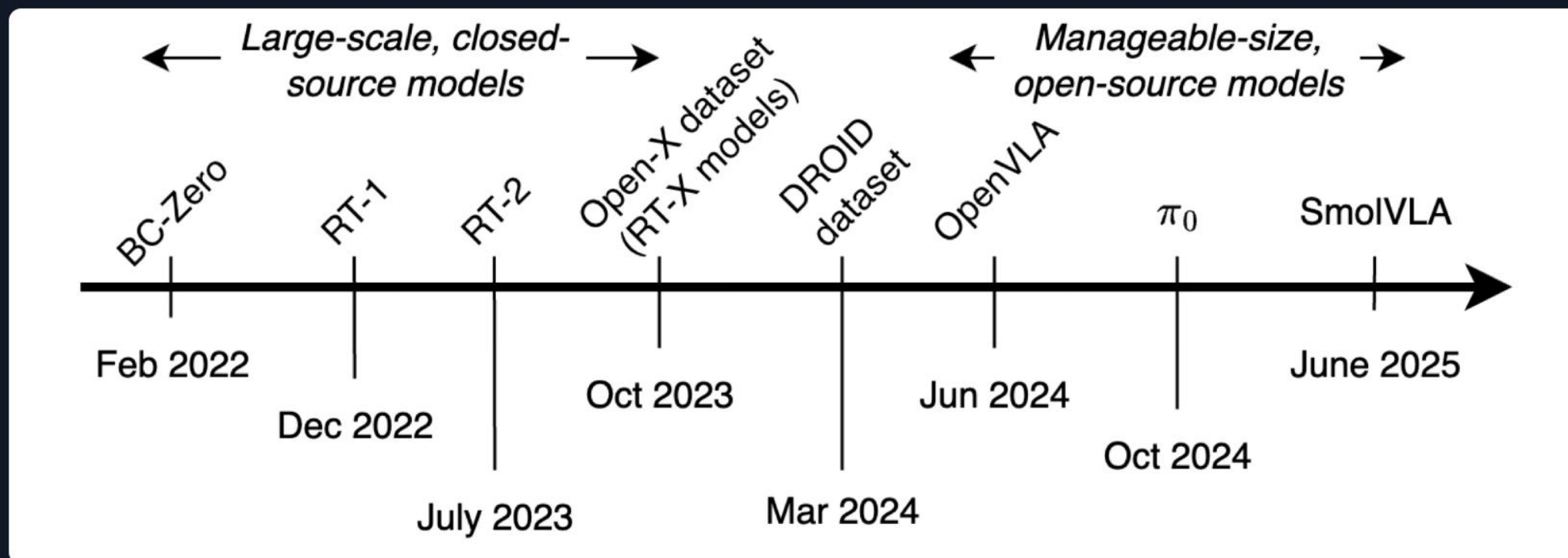
02 · WHY IT COMPOUNDS

Data → community → open
models

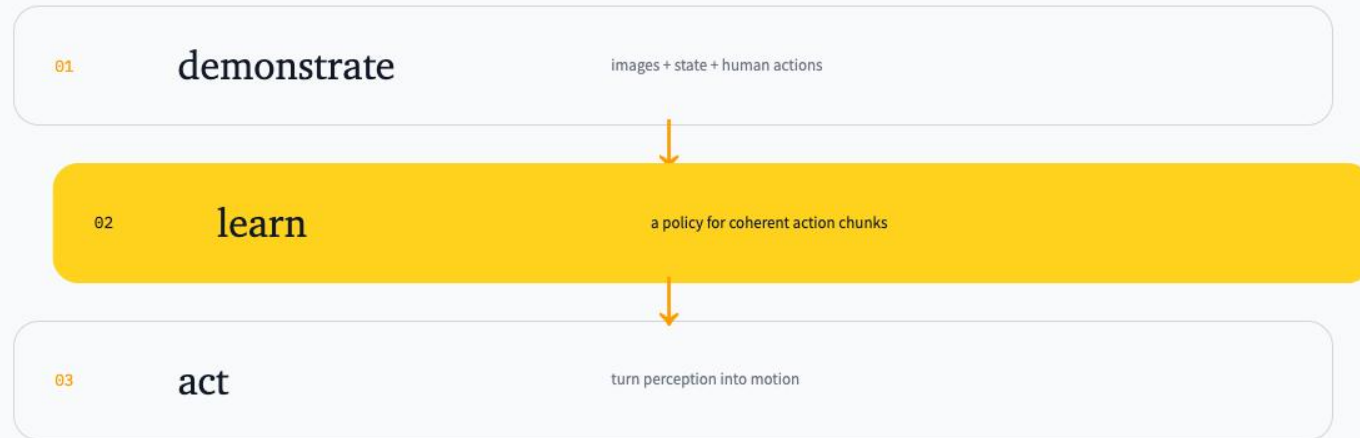
03 · WHAT WE DO NOW

Start building → learn → lead
together

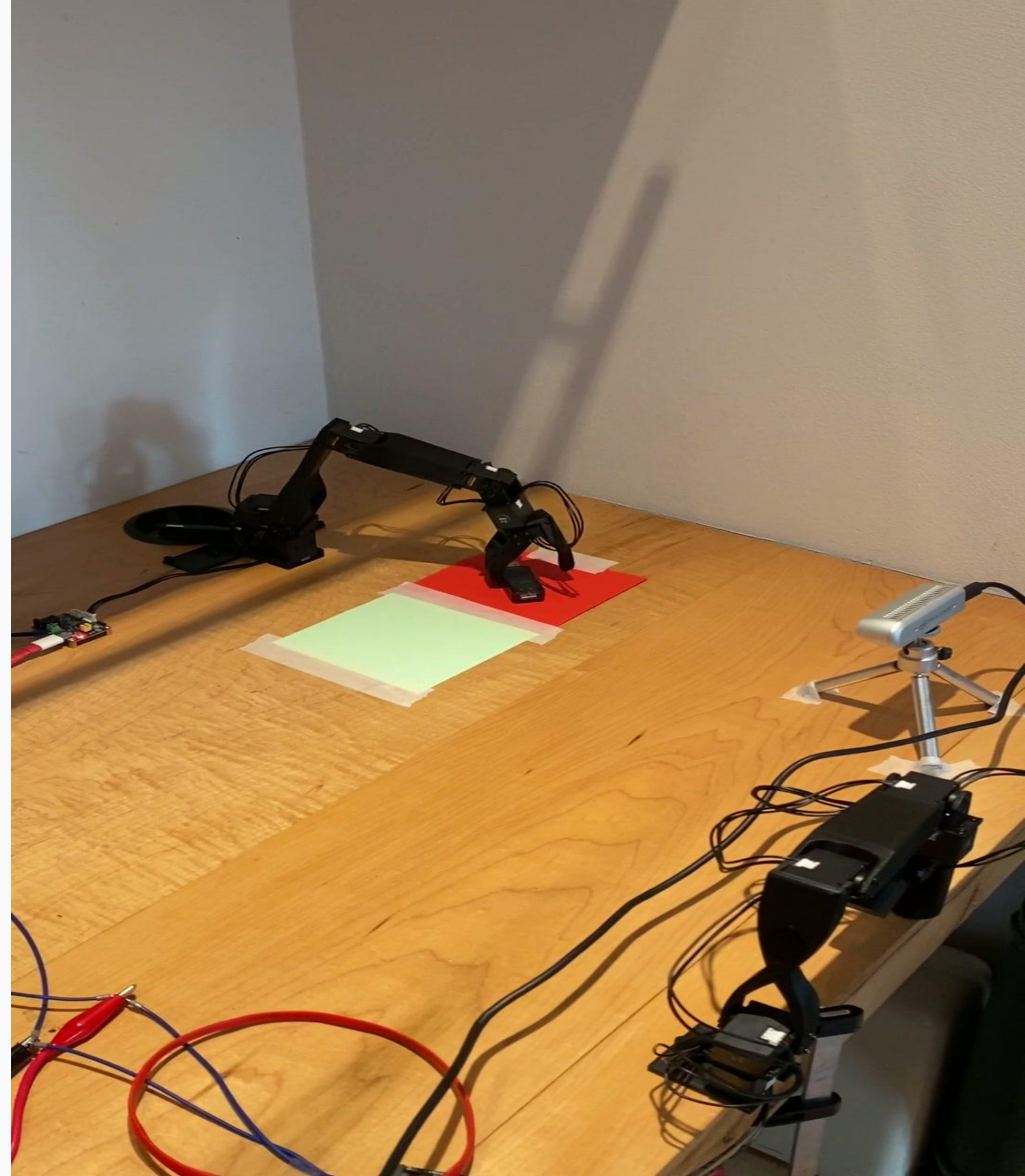
Three years ago,
I was teaching *one robot*.



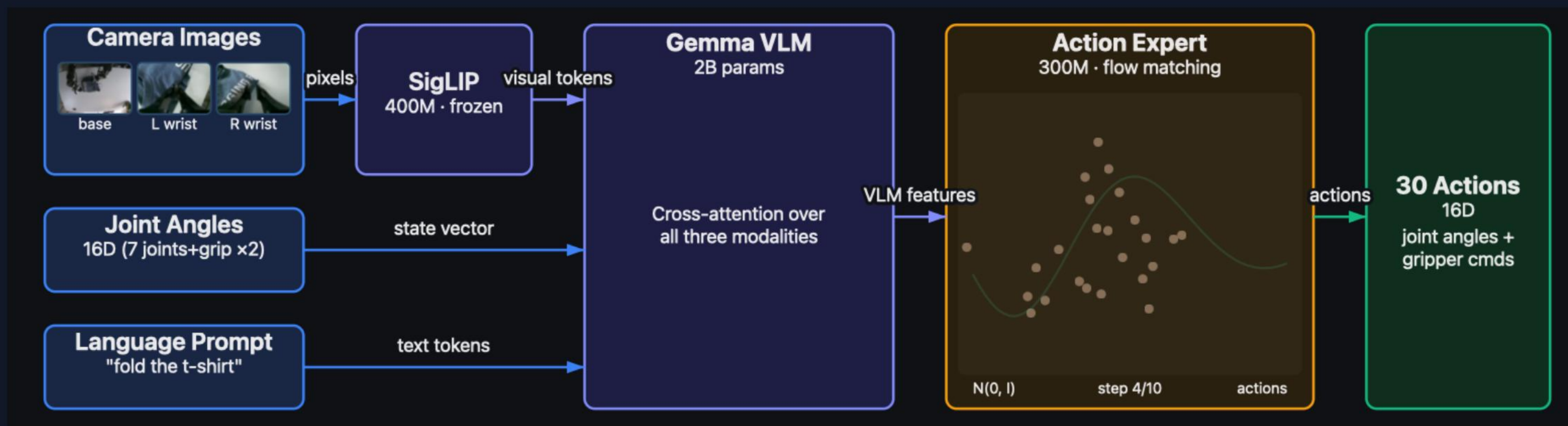
The robot learned *from examples.*



The task starts moving from code into **data**.



Perception becomes *physical action*.



images + robot state + task context → coordinated motor actions

THE PROMPT IS EXPANDING

Language, or a human demonstration of the task



“Future robots will not be
programmed task by task.
They will learn.”

program every motion → **teach through experience**

The idea was out there.
The community was only beginning.



Hugging Face



LeRobot

very early

a handful across Europe

scattered online

Hugging Face · Paris

LeRobot begins

WHAT LEROBOT IS

The tools *I wish I had.*

One open stack for end-to-end robot learning—from a physical robot to data, a trained policy and a measured result.

20K+

Discord community

#1

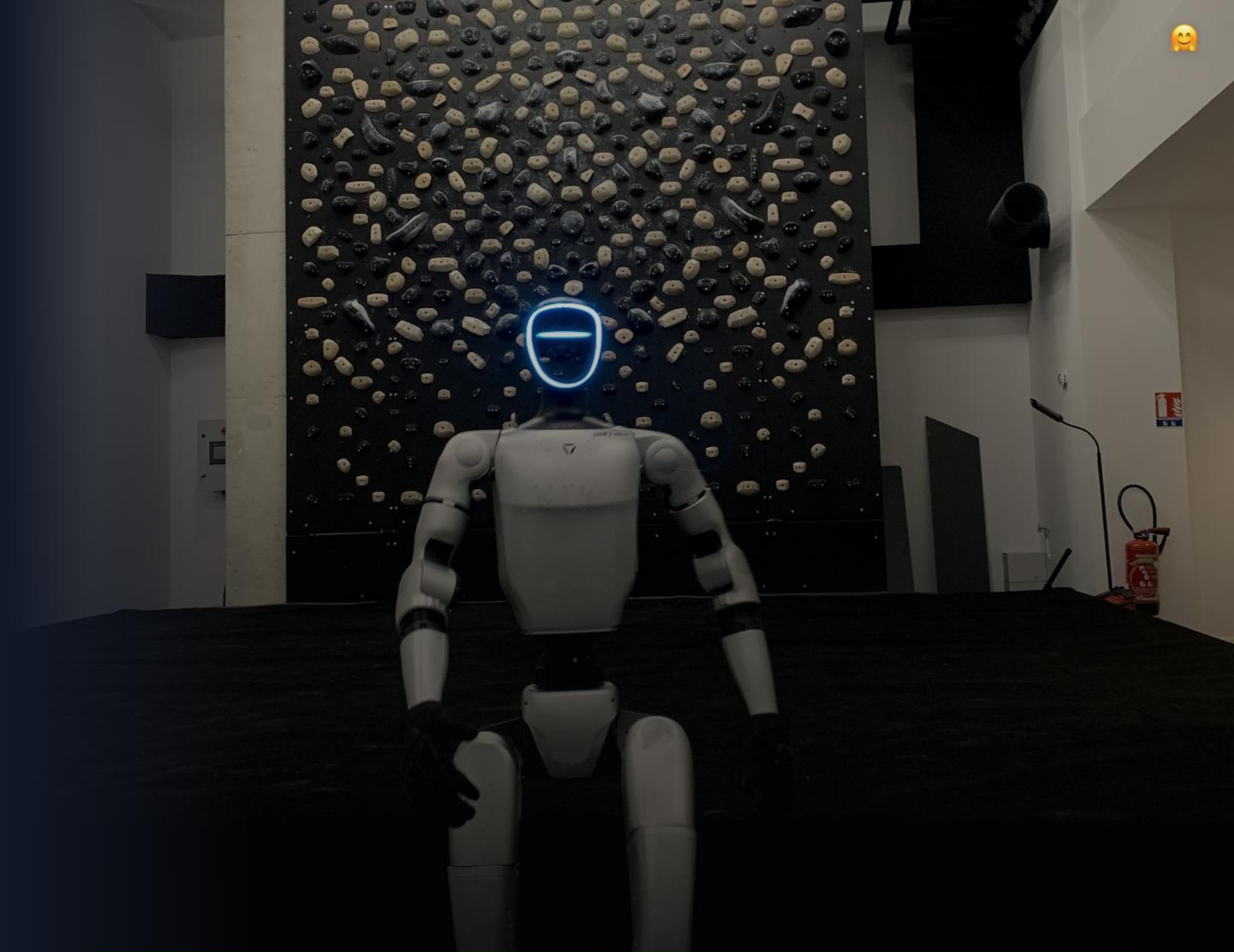
most-starred open-source robotics library

01 robots + teleoperation

02 LeRobotDataset + Hub

03 models + training

04 evaluation + corrections



SO-101 and *the robot ecosystem*



ROBOTS

SO-101

SO-100

Koch v1.1

LeKiwi

Hope Jr

Reachy 2

Unitree G1

Earth Rover Mini

OMX

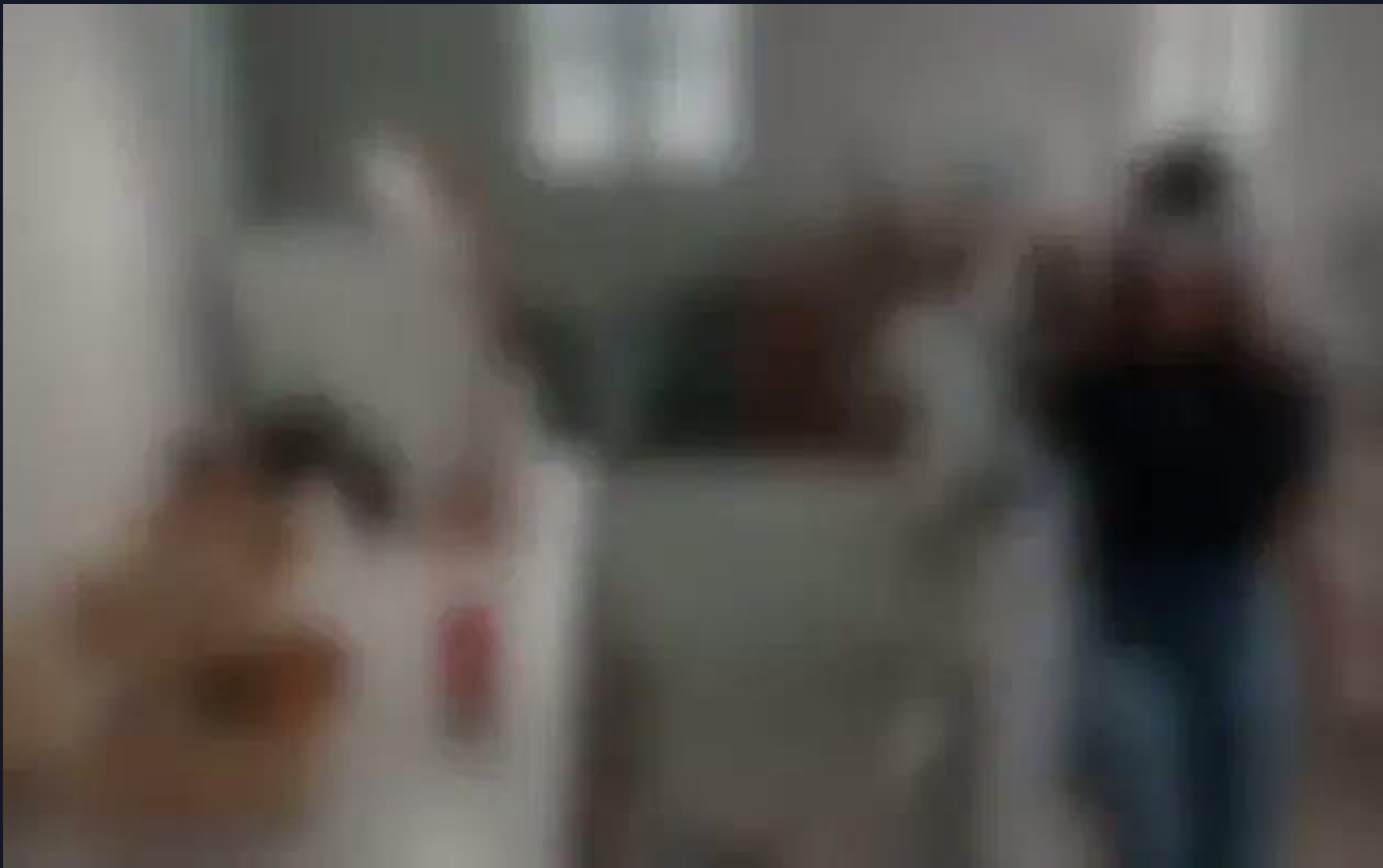
OpenArm

reBot B601-DM

Third-Party Robots &
Teleoperators



Teleoperation: *show the robot what to do*



A person controls the robot

A leader arm or another input device supplies the actions.

LeRobot records the experience

Camera images, robot state and actions become a dataset of demonstrations.

The policy learns from those examples.

LeRobot *datasets*

One episode.
One recorded attempt.

Camera views, robot state and actions stay aligned on one timeline.

LeRobot
lerobot/agibotworld_task_327
Number of samples/frames: 2602
Number of episodes: 2
Frames per second: 30
Episodes: Episode_0, Episode_1

Episode 0

observation.images.top_head, observation.images.hand_left, observation.images.hand_right, observation.images.head_center_fisheye, observation.images.head_left_fisheye, observation.images.head_right_fisheye, observation.images.back_left_fisheye, observation.images.back_right_fisheye

Language instruction: ["Supermarket pickup - Produce area. A robot is in front of the fruit shelf in the supermarket."]
Hotkeys: Space to pause/unpause, Arrow Down to go to next episode, Arrow Up to go to previous episode.

00:01 / 00:43

	state	action
action_0	0.78	1.83
action_1	0.61	0.78
action_2	0.61	0.81
action_3	-0.71	-0.71
action_4	1.05	1.05
action_5	1.44	1.44
action_6	0.72	0.72
action_7	1.98	1.98



The LeRobot *policy library*

Learn from your demonstrations

Train a task policy such as ACT using recorded robot experience.

Adapt a pretrained model

Fine-tune a VLA such as SmolVLA for your robot and task.

POLICIES

ACT

SmolVLA

π_0 (Pi0)

π_0 -FAST (Pi0Fast)

$\pi_{0.5}$ (Pi05)

MolmoAct2

VLA-JEPA

EO-1

LingBot-VA

FastWAM

EVO1

NVIDIA GR00T

X-VLA

Multitask DiT Policy

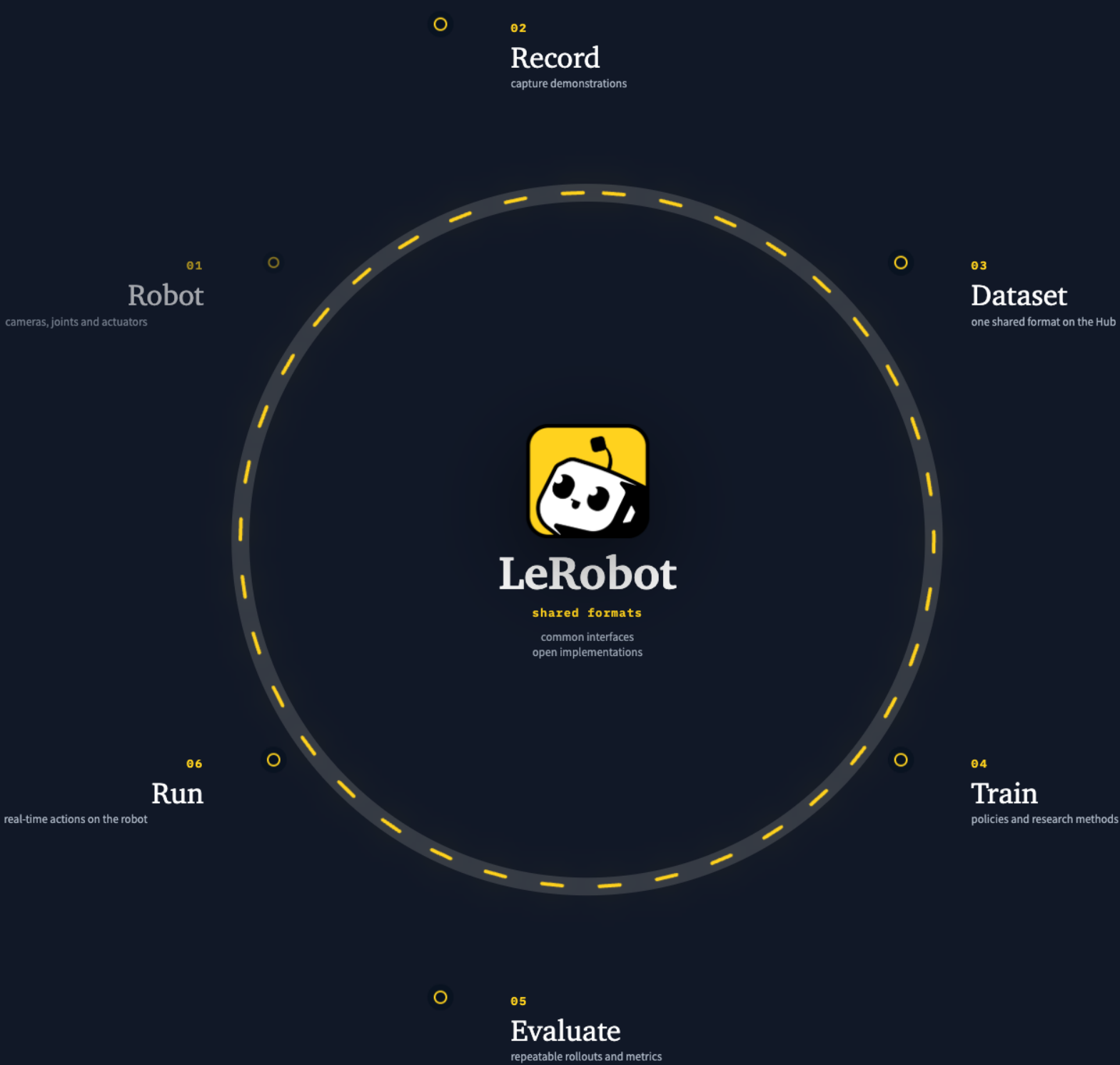
WALL-OSS



ONE CONNECTED WORKFLOW

From robot to data *and back.*

LeRobot connects the tools around a learning robot, so an experiment can move from a demonstration to a trained policy without rebuilding the stack.



THE LOOP COMPOUNDS

Every rollout can become better data.

Three years later,
open-source robotics
can do this





Folding clothes, *from data to capability.*

5,688

real-world episodes

8

physical setups

131 h

demonstrations

25+

different shirts



WHAT WE LEARNED

Consistent demonstrations mattered
enormously.



The whole path *is now open*

01

hardware

setups + control

02

demonstrations

5,688 episodes

03

training

code + models

04

curation

reward model

05

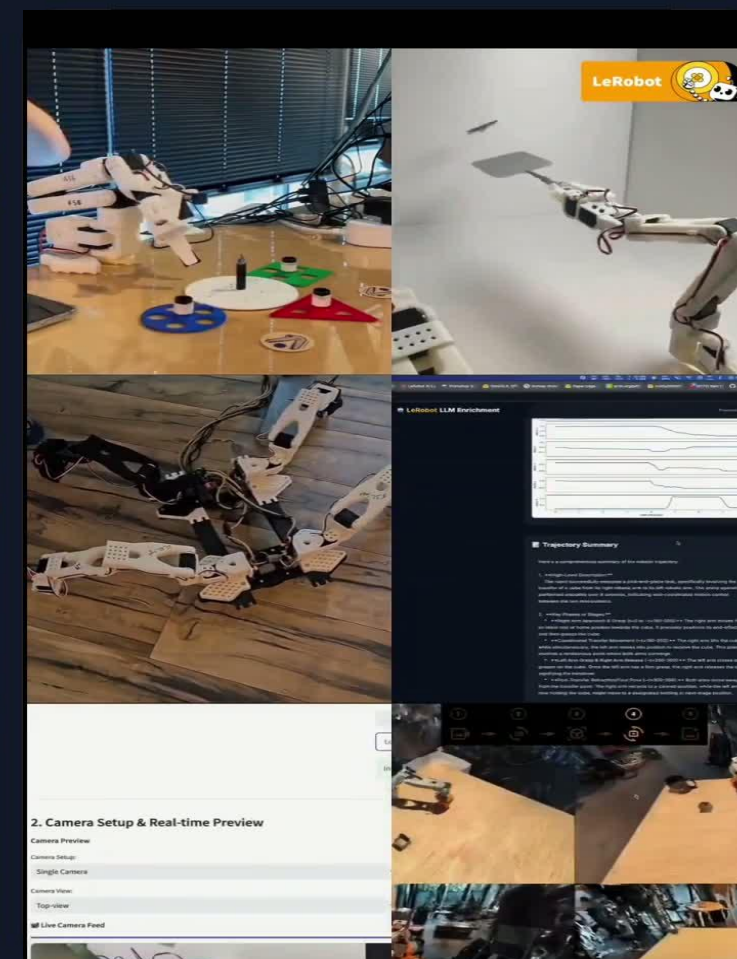
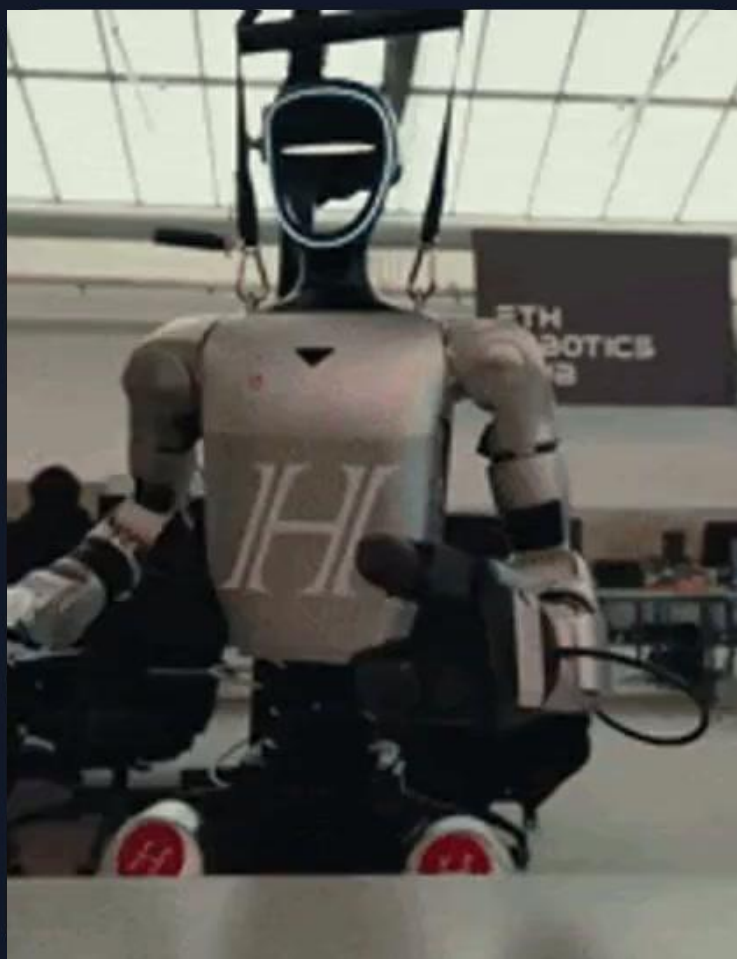
evaluation

filmed protocol

If nobody else can run it, *it is not yet shared progress.*

No single team could *build all of this.*

But by sharing and building in the open, we can grow the impact and potential of this technology.



The ecosystem is *compounding in public.*

Hub datasets

80,825

+28.2% / 3mo



Mar 2024 · 6

Aug 2026 · 80,825

GitHub stars

27.5K

Builders following and supporting the open robotics stack.

Discord members

20K+

A community sharing experiments, answering questions and building together.



Who is using *LeRobot*?

Industry ↔ research, learn from each other quicker.





OPEN RELEASES • ARRIVING AT ONCE

Then the last six months *happened.*



01 • FOUNDATION POLICY

Xiaomi Robotics-1

02 • LEROBOT POLICY

WALL-OSS

03 • WORLD + ACTION

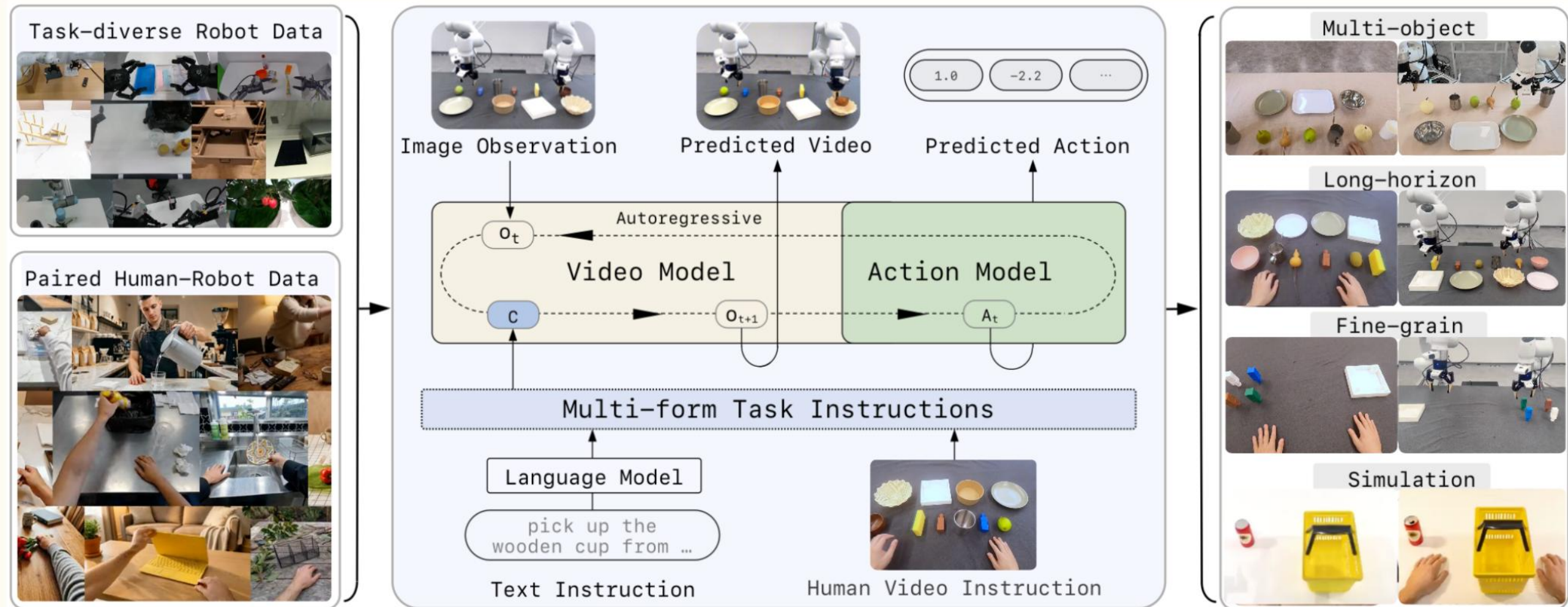
NVIDIA Cosmos 3

04 • LEROBOT POLICY

MolmoAct 2

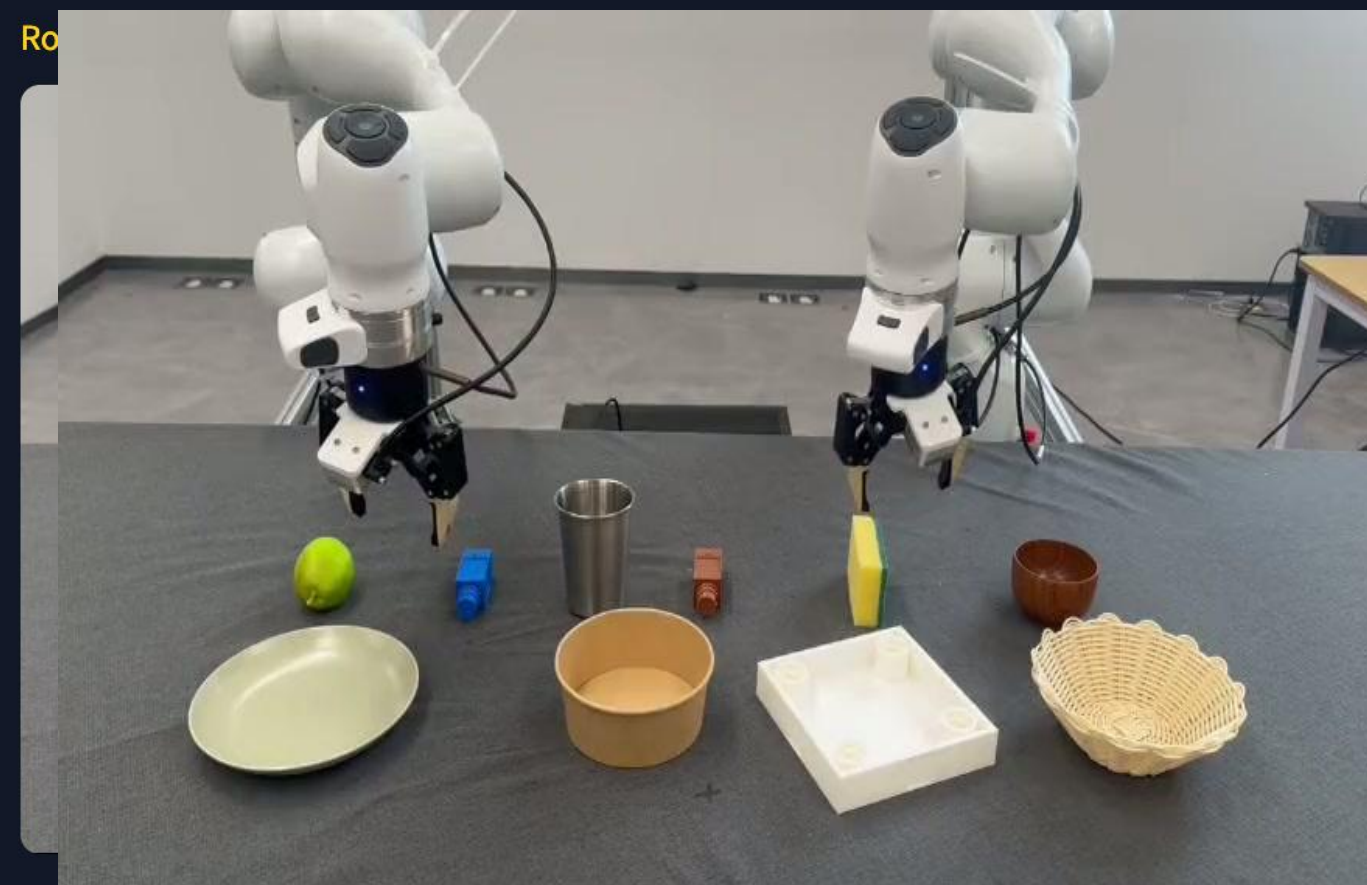
Also in LeRobot: SmoIVLA • $\pi_{\text{te}}/\pi_{\text{te-s}}$ • GR00T N1.7 • X-VLA • VLA-JEPA • FastWAM • LingBot-VA • EVO1

World-action models: *the video becomes the prompt*



Show intent once. A pretrained policy uses the example to act.

Show the task.
The robot follows the example.



Cup into basket · pear onto plate · sponge into tray

THE OPEN-MODEL PRECEDENT

Open models now compete *at the frontier.*

AND THE INTELLIGENCE IS

downloadable.

Frontier capability no longer requires permission from a frontier lab.



Trending last 7 days

All **Models** Datasets Spaces

deepseek-ai/DeepSeek-V4.1-Flash
 Image-Text-to-Text • 763B • 288k • • 2.3k

Edge0/Edge0-35B-A3B-preview
 Text Generation • 35B • Upd... • 8.11k • 1.45k

openbmb/MiniCPM5-2B
 Text Generation • 3B • Upda... • 207k • 1.37k

nex-agi/Nex-N2.5-mini
 Text Generation • 35B • Upda... • 4.54k • 775

Qwen/Qwen3.8-27B
 Image-Text-to-Text • 28B • 7.7M • • 15.1k

Hugging Face Trending • last 7 days



NOW IMAGINE

You can download *robot intelligence.*

GLOBAL

LOCAL

LOCAL



open robot policy

visual + language + action priors

your machine

the right embodiment for the work

your task data

tools · tolerances · process knowledge

→ capability for your process

Downloadable intelligence is not downloadable industry. Hardware, integration and process knowledge still live here.



Robots will see our world.

We should be able to inspect them.

01

Control

Run the exact model on infrastructure you control.

02

Audit

Test how it behaves in your factory, home or hospital.

03

Improve

More people can find failures and contribute fixes.

Openness does not eliminate risk. **It broadens who can find and fix it.**



The fastest path to
millions of robots is open.



Let millions of people participate in teaching the physical world.



THREE THINGS TO REMEMBER

The shift is here. Start learning now.



#Beginner mode

```
pip install lerobot
```

#Advanced mode

```
git clone git@github.com:huggingface/lerobot.git
```

```
cd lerobot
```

```
pip install -e "[many-cool-options]"
```

01 Tasks move from code into data.

02 Open tools move the starting point.

03 Time to start is now.

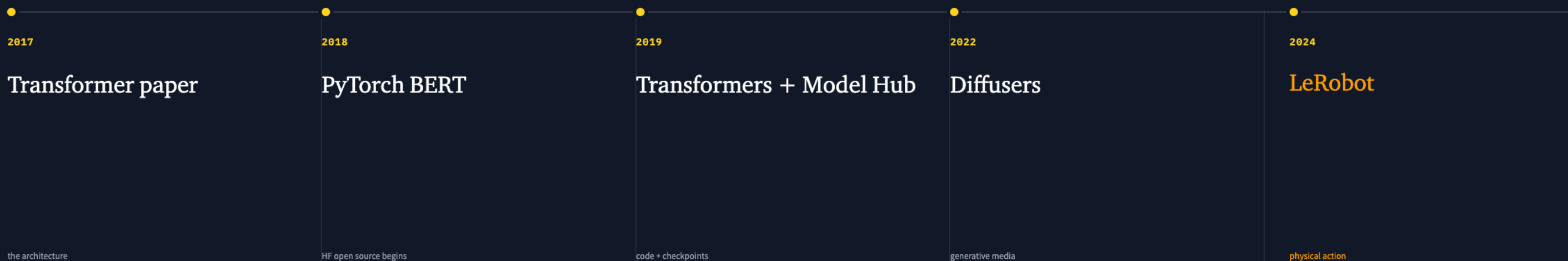
This is
our chance.



with LeRobot

Downloadable intelligence is not downloadable industry. Let's build the capability here.

Hugging Face grew with *the open-source AI stack.*



Each wave of research became **shared infrastructure.**

Millions of open artifacts.

One shared platform.

THE HUB

Storage

Everything you save

models · datasets · Spaces · buckets

Compute

Everything you run

Spaces · Jobs · inference

Community

Everything you share

papers · discussions · posts

OPEN LIBRARIES

Transformers

language · vision

Diffusers

image · audio · video

Datasets

data at scale

LeRobot

physical action