RoboHive

A unified framework for Robot Learning

Vikash Kumar, Rutav Shah, Gaoyue Zhou, Vincent Moens, Vittorio Caggiano, Jay Valik,
Abhishek Gupta, Aravind Rajeshwaran

UNIVERSITY OF WASHINGTON · Berkeley UNIVERSITY OF CALIFORNIA · THE ROBOTICS INSTITUTE · TEXAS The University of Texas at Austin · OpenAI · Google AI · Meta AI

Benchmarks & Datasets

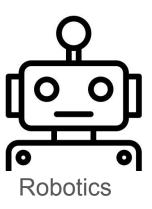NLP ✔

Vision ✔

Robotics ✘

RoboHive - a unified robot learning framework

Designed to fuel the next era of generalization first robot learning
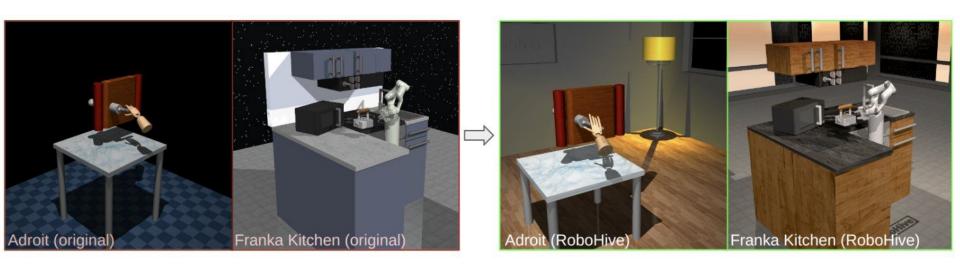
🏳️‍🌈multiple domains
🏳️‍🌈diverse tasks, &
🏳️‍🌈varying levels of generalization

Design Principle

Builds on challenges that
- weren't released as benchmarks
- but have evolved to be ones over time

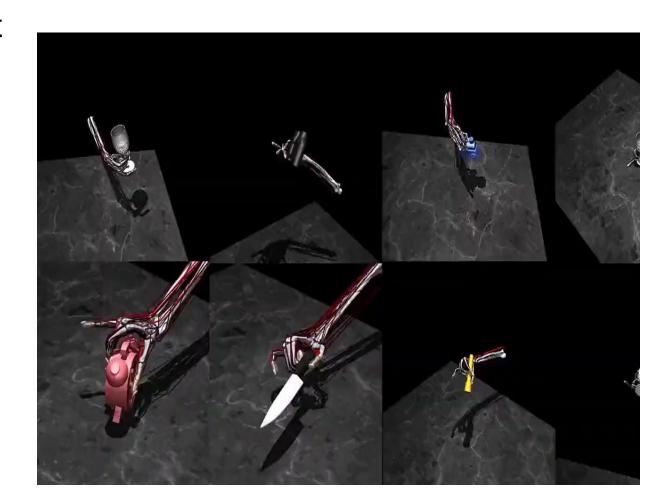Adroit (original) Franka Kitchen (original) ⟹ Adroit (RoboHive) Franka Kitchen (RoboHive)

Hardware Support

Lower the entry barrier to real-world

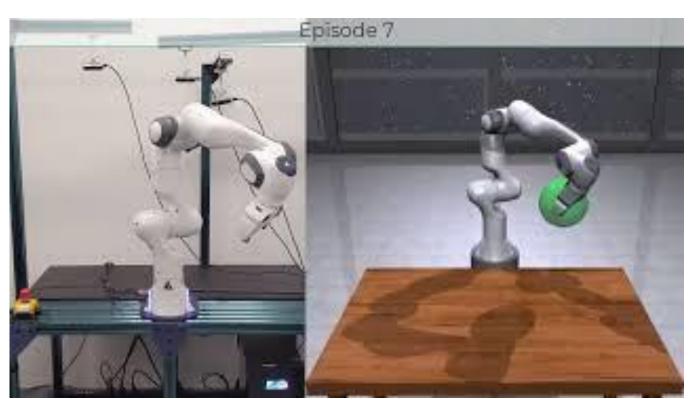integrated support for

- common sensors
- robotic hardware

Simulation-Hardware Bridge

A single flag to switch between sim and real

Meet the real-world via

✅On hardware training
✅sim2real transfer
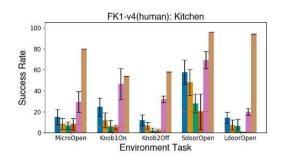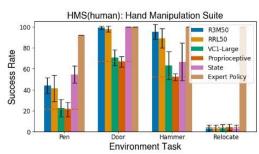
RoboSet: Multi-Task Multi-Skill Dataset
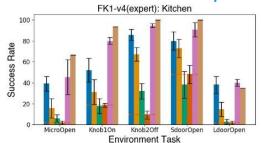

Real

Sim

Supports Diverse Robot Learning needs

- Benchmarking
- Generalization
- Datasets
- Foundation models
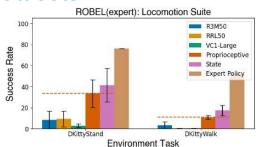- Pre-training
- Skill training
- Transfer learning

Human datasets

Expert datasets

A large multi-year effort fueling multiple research directions & collaborations along the way.

Students+collaborators: @rutavms @GaoyueZhou @VincentMoens @CaggianoVitt @jdvakil @aravindr93 @abhishekunique7 @vikashplus

pip install robohive

tinyurl.com/robohive