

Top 60+
Open source
Robots



LEARN ROBOTICS & AI

BECOME A SELF-TAUGHT ROBOTICS/ CV/ ML ENGINEER



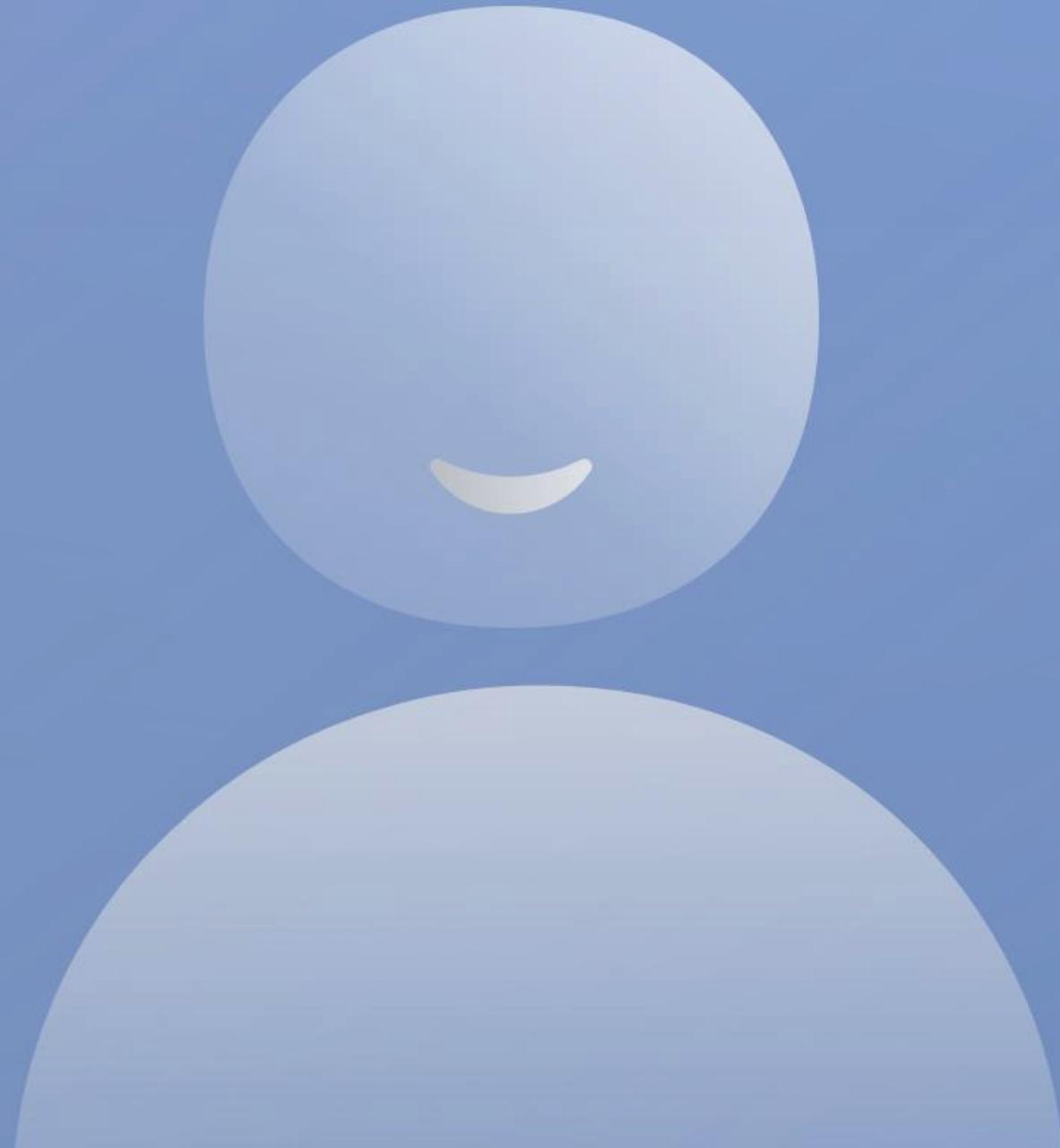
K. Wyrobek, E. Berger, H.F.M. Van der Loos, and K. Salisbury.
Towards a personal robotics development platform:
Rationale and design of an intrinsically safe personal robot. ICRA 2008.

PR-1



[Wyrobek, Berger, van der Loos, Salisbury, ICRA 2008]





Technical Skills

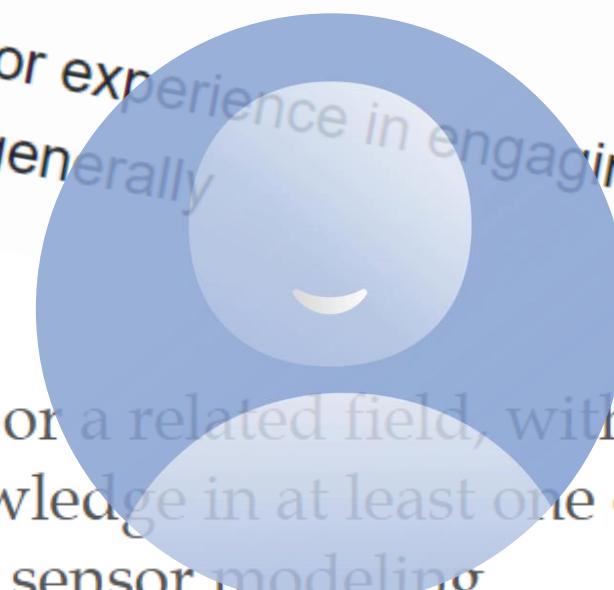
Graduate degree in engineering or computer science.

Practical knowledge in robotics, perception, and multi-agent systems.

Strong software development skills, especially with Linux.

Skills and experience:

- Graduate degree in engineering/CS or a related field, with applicable work experience.
- Strong practical and theoretical knowledge in at least one or more areas of: state estimation, localization, mapping, calibration or sensor modeling.
- Strong software development skills in modern C++.
- Understanding of software development workflows, life cycles and development methodologies.
- Excellent leadership, teamwork, and communication skills.
- Ability to independently develop software development plans, including scope, timelines, and budgets.
- Hands-on experience with real world autonomous systems.



But ...



You don't have to!

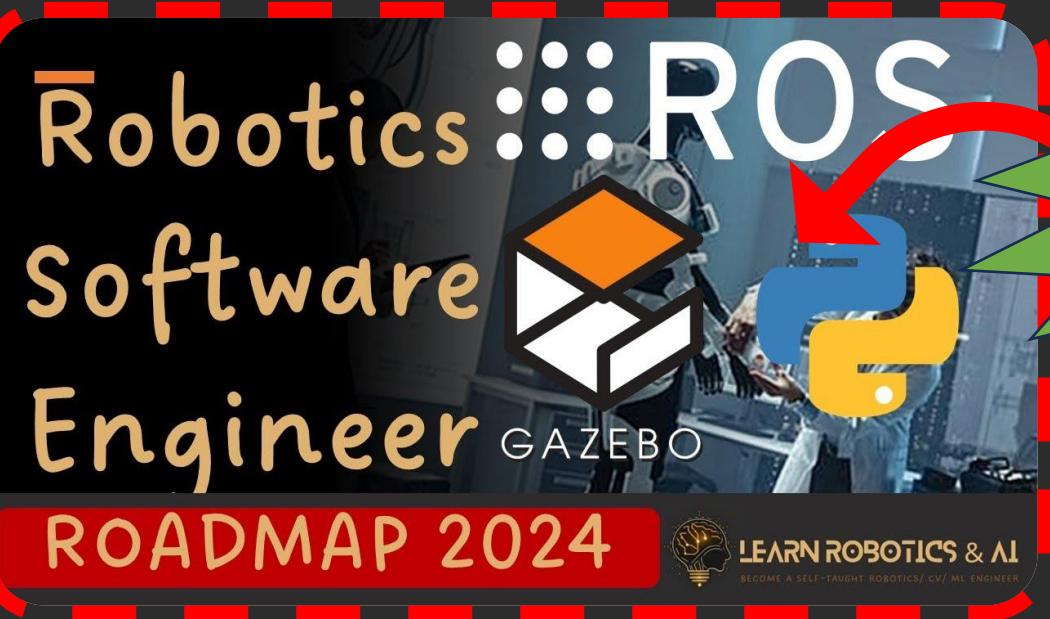
When to invest in a robotics kit

Develop robotics software skills

Apply to internships/part time roles

Get access to company robots

Invest in a robotics kit



Gain robotics software skills in simulation!

Optional

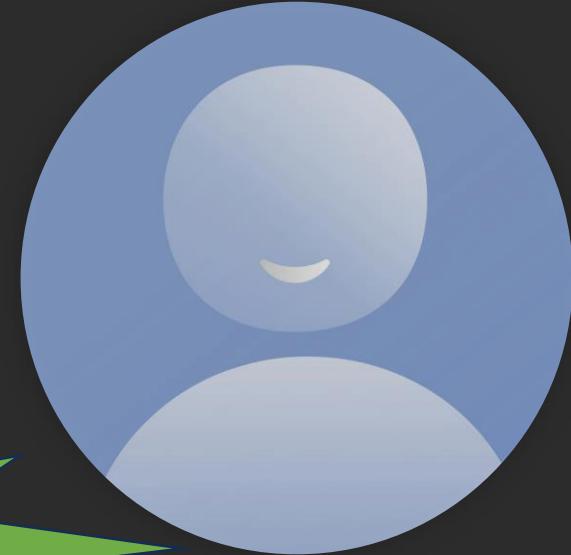


Don't

...

For
hobbyists

buy cheap arduino kits



What to look for when choosing a robotics kit

Compatibility with
ROS, Python and C++

Similar to hardware
used in companies

Community support

Software ecosystem

Cost and budget

Reviews and
warranty

Open source licensing

Documentation



WHEELED MOBILE
ROBOTS

#1

Turtleboot



Original TurtleBot

(Discontinued)



TurtleBot 2 Family

(Discontinued)



TurtleBot 2



TurtleBot 2i



TurtleBot 2e



TurtleBot Euclid

TurtleBot 3 Family

Burger



Waffle



Waffle Pi



TurtleBot 4 Family

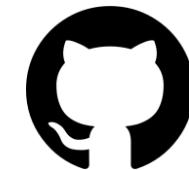
NEW



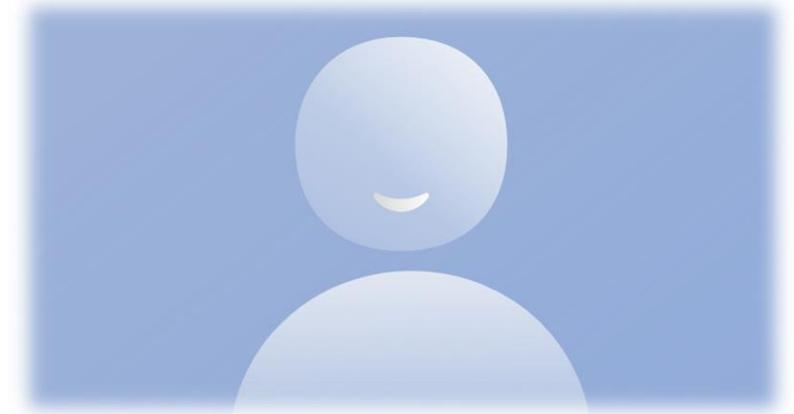
Lite



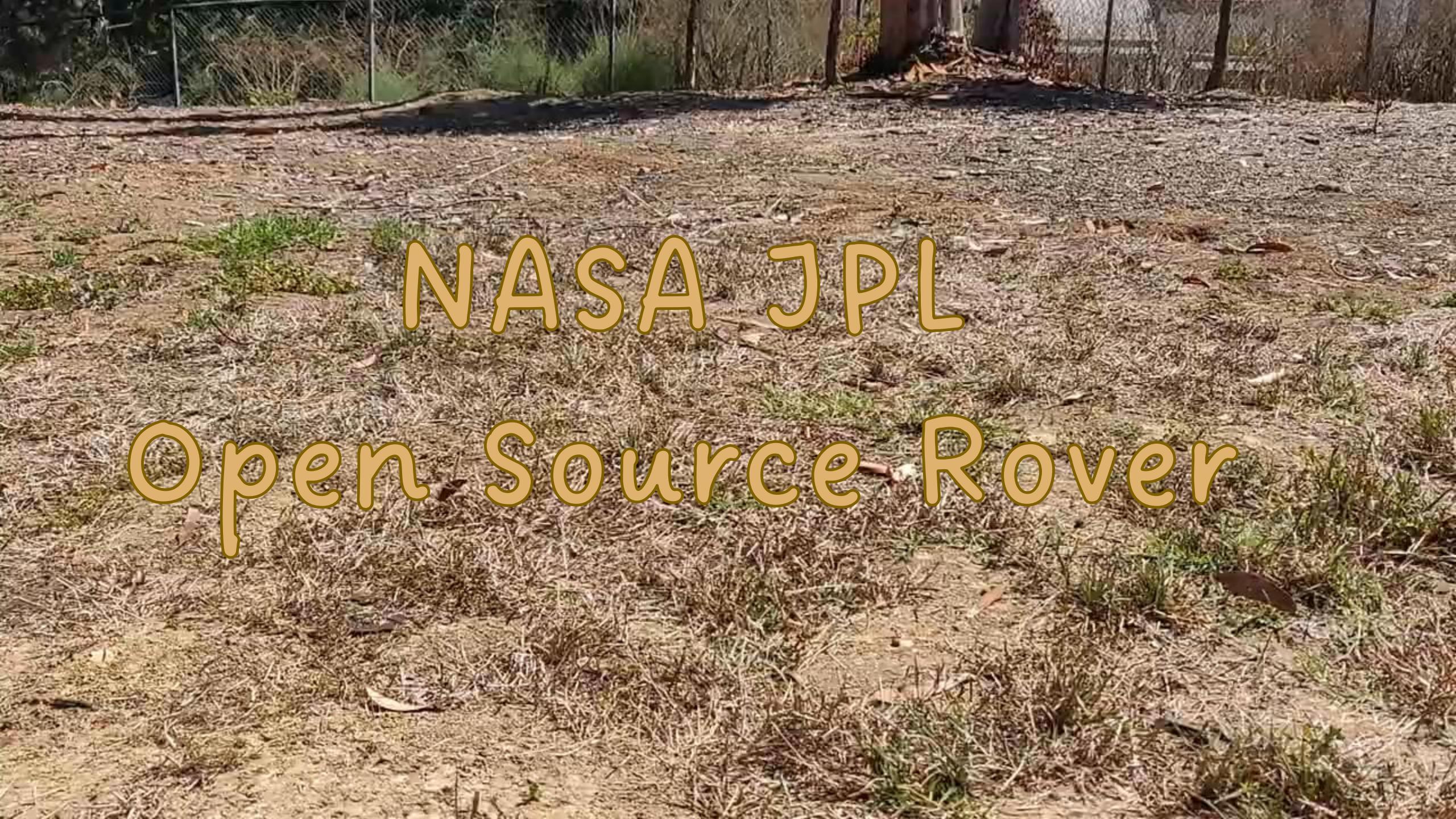
Standard



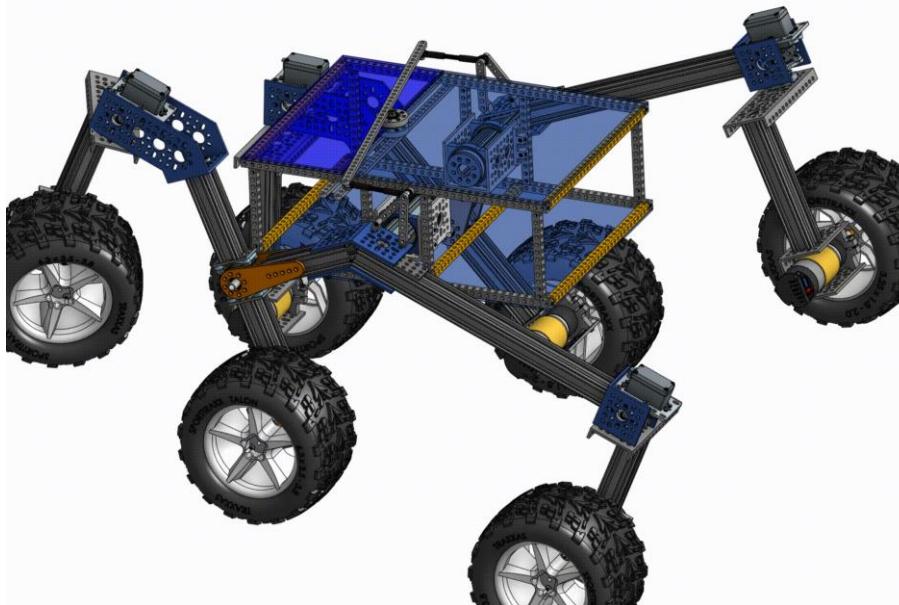
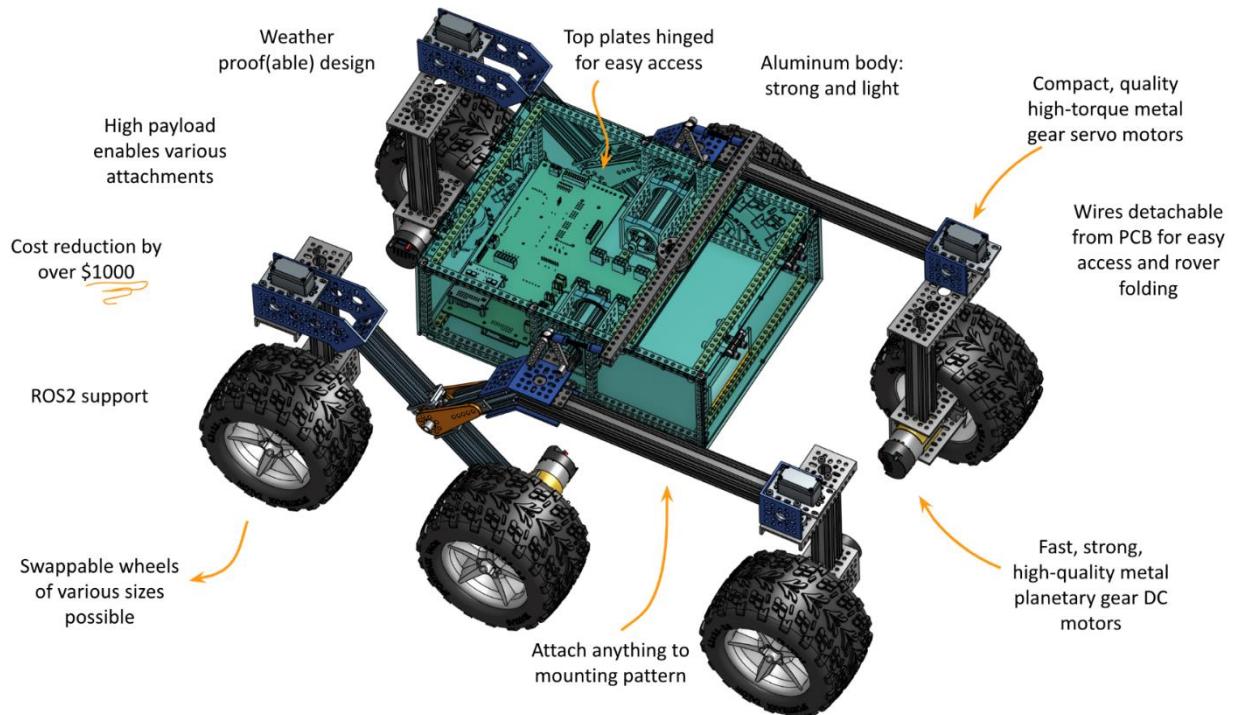
Buy/ build



#2

The background of the image shows a grassy field with dry, brownish grass and some green patches. A chain-link fence runs across the top of the frame, and there are some trees and bushes behind it. The overall lighting suggests a sunny day.

NASA JPL
Open Source Rover



Buy/ build



#3

Sawppy the rover

You'll Find It All Ready



Buy/ build



#4

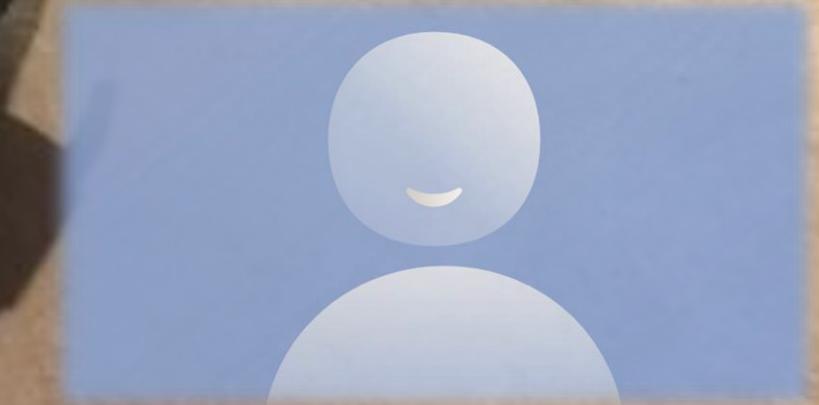


Donkey Car





Buy/ build



#5



Mars Rover

NASA



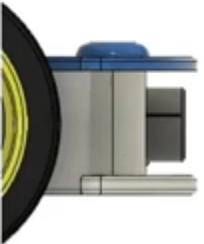


Buy/ build



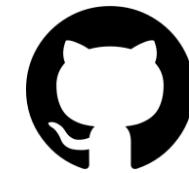
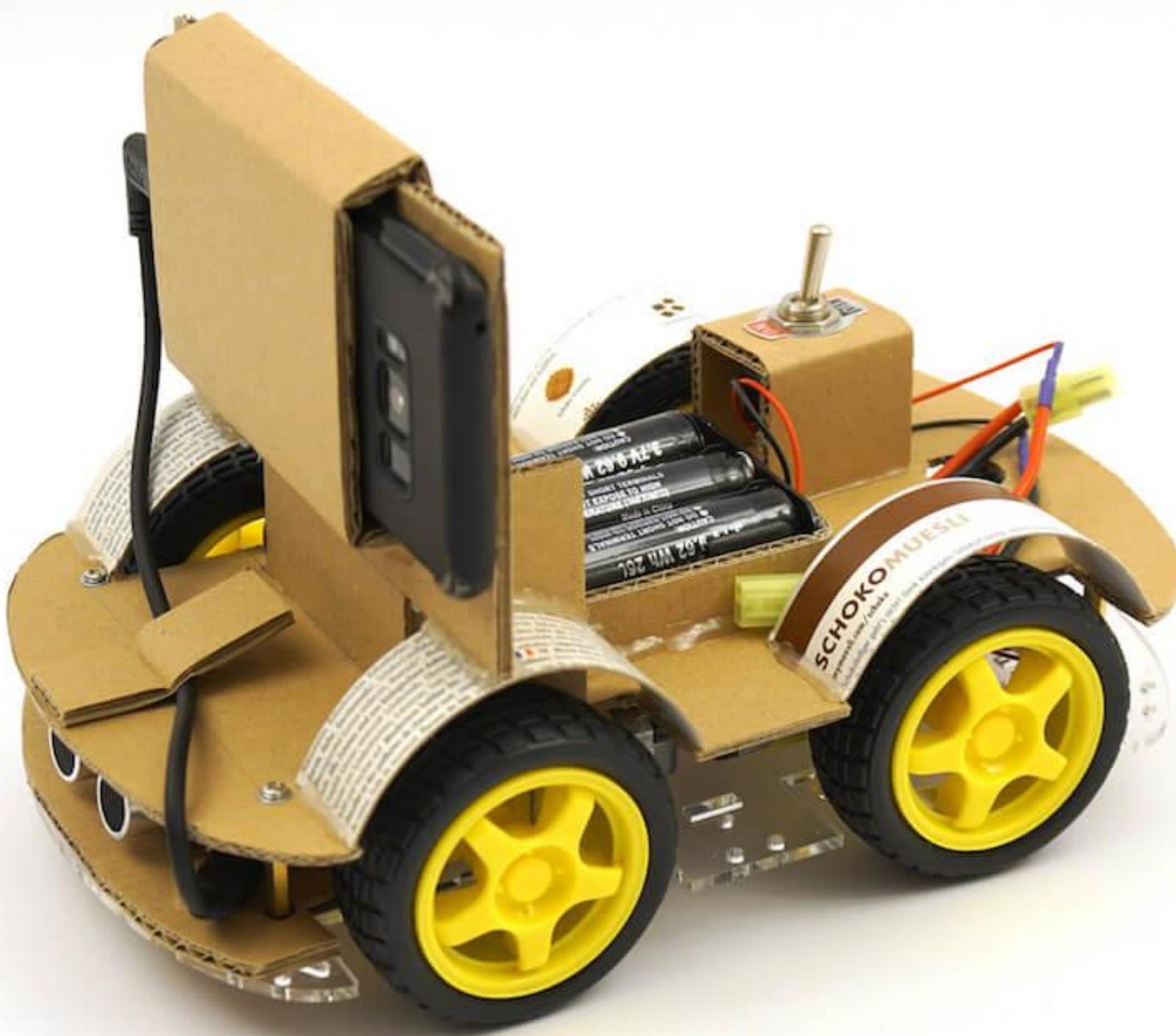
#6

OpenBot



This video is narrated. Please turn on your audio for the best experience.





Buy/ build



#7



OpenMower

OpenMower

DIY Smart Mowing Robot for Everyone





Buy/ build

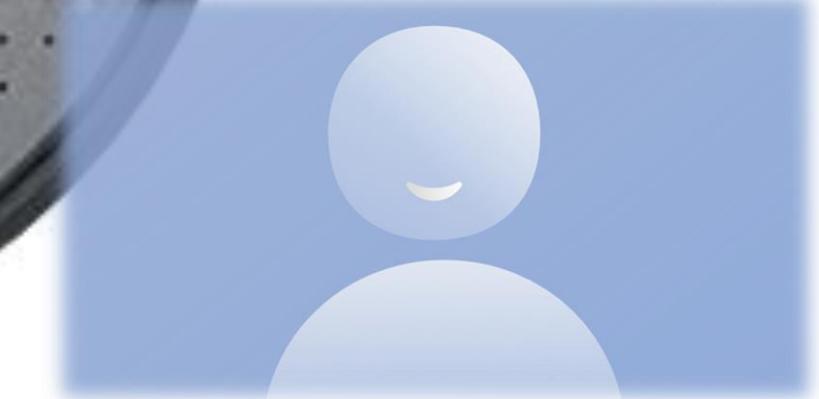
#8

iRobot Create 3





Buy/ build



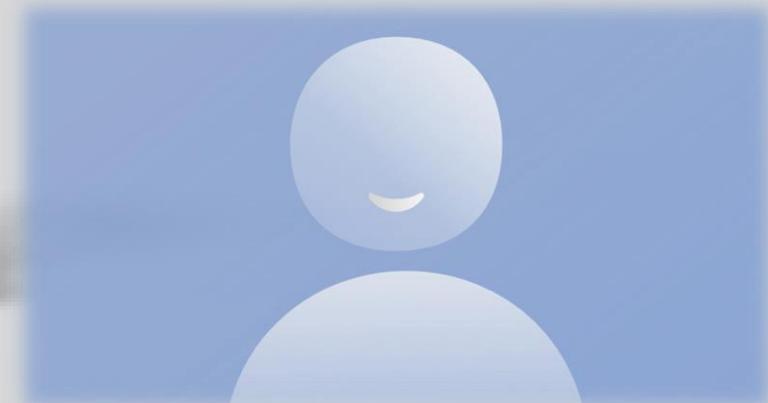
#9

hello robot™
stretch

Stretch™ RE1
Workplace Teleoperation



Buy/ build

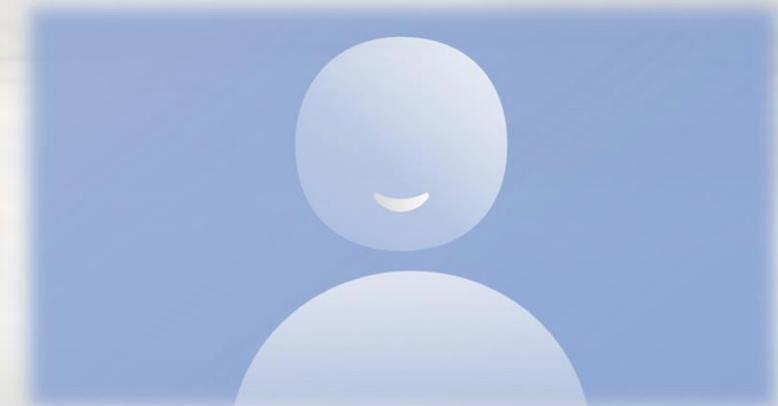


#10

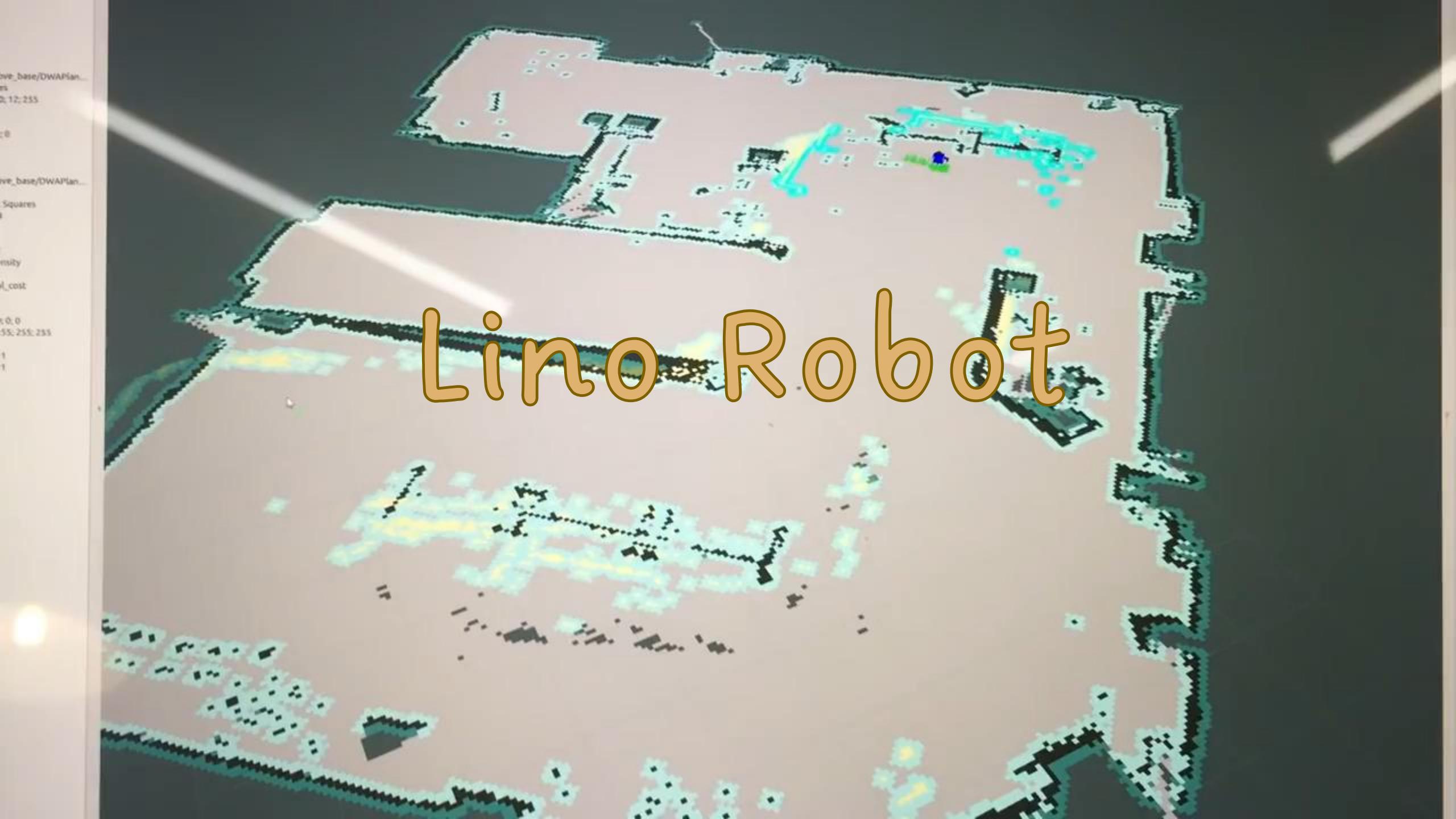
Kaya Robot



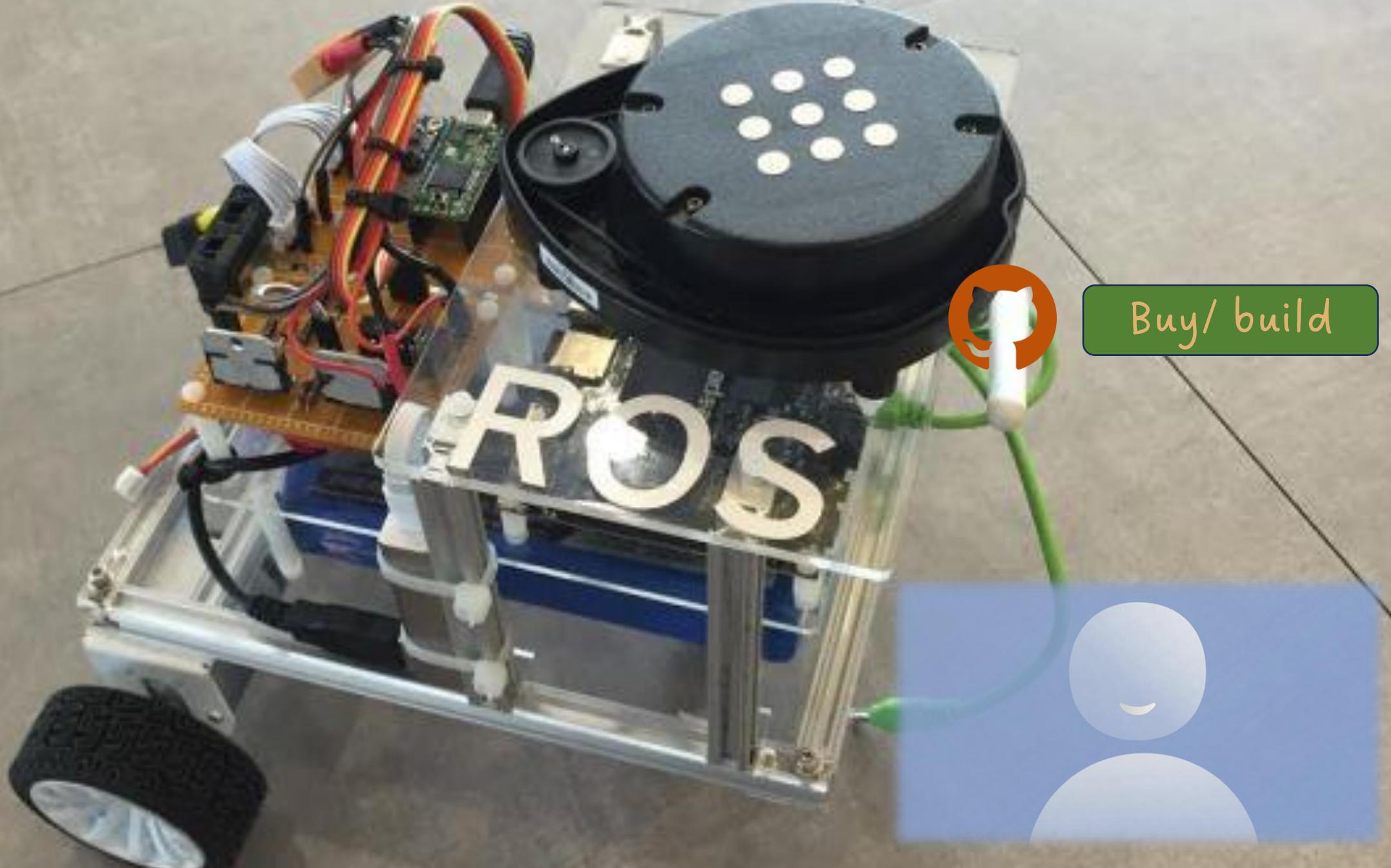
Buy/ build



#11



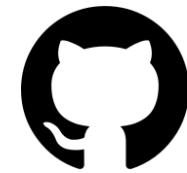
Lino Robot



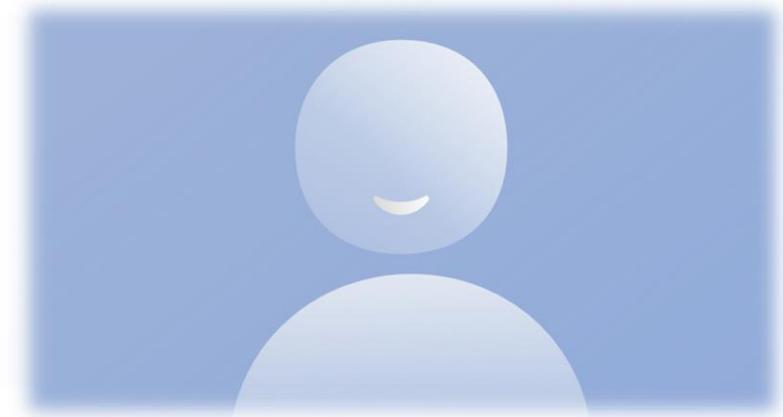
Buy/ build

#12

ROSBot 2R



Buy/ build



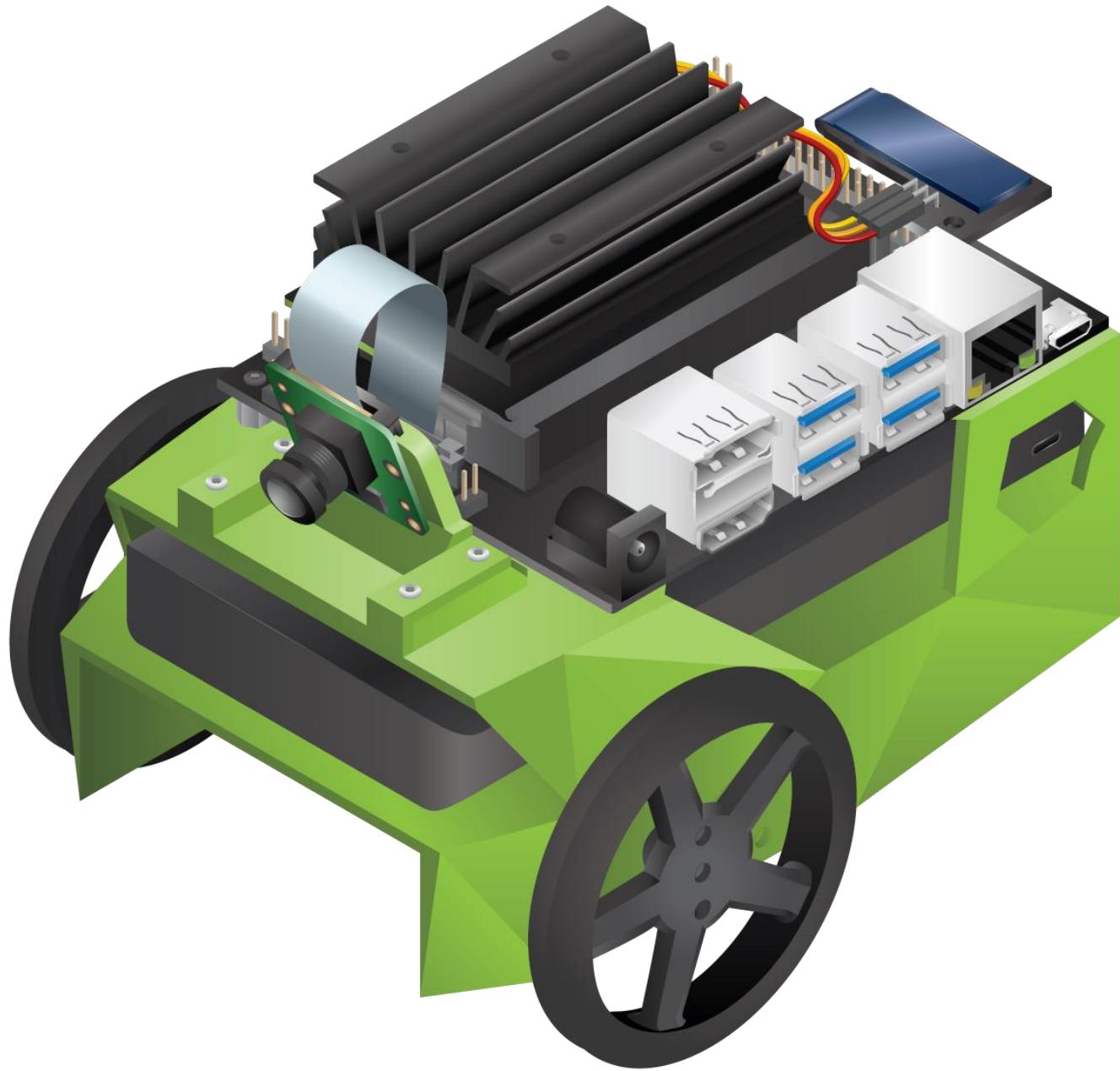
#13

GPU TECHNOLOGY
CONVENTION

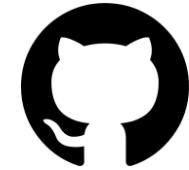
JetBot

SAN JOSE MARCH 1 CONVENTION CENTER





~\$150



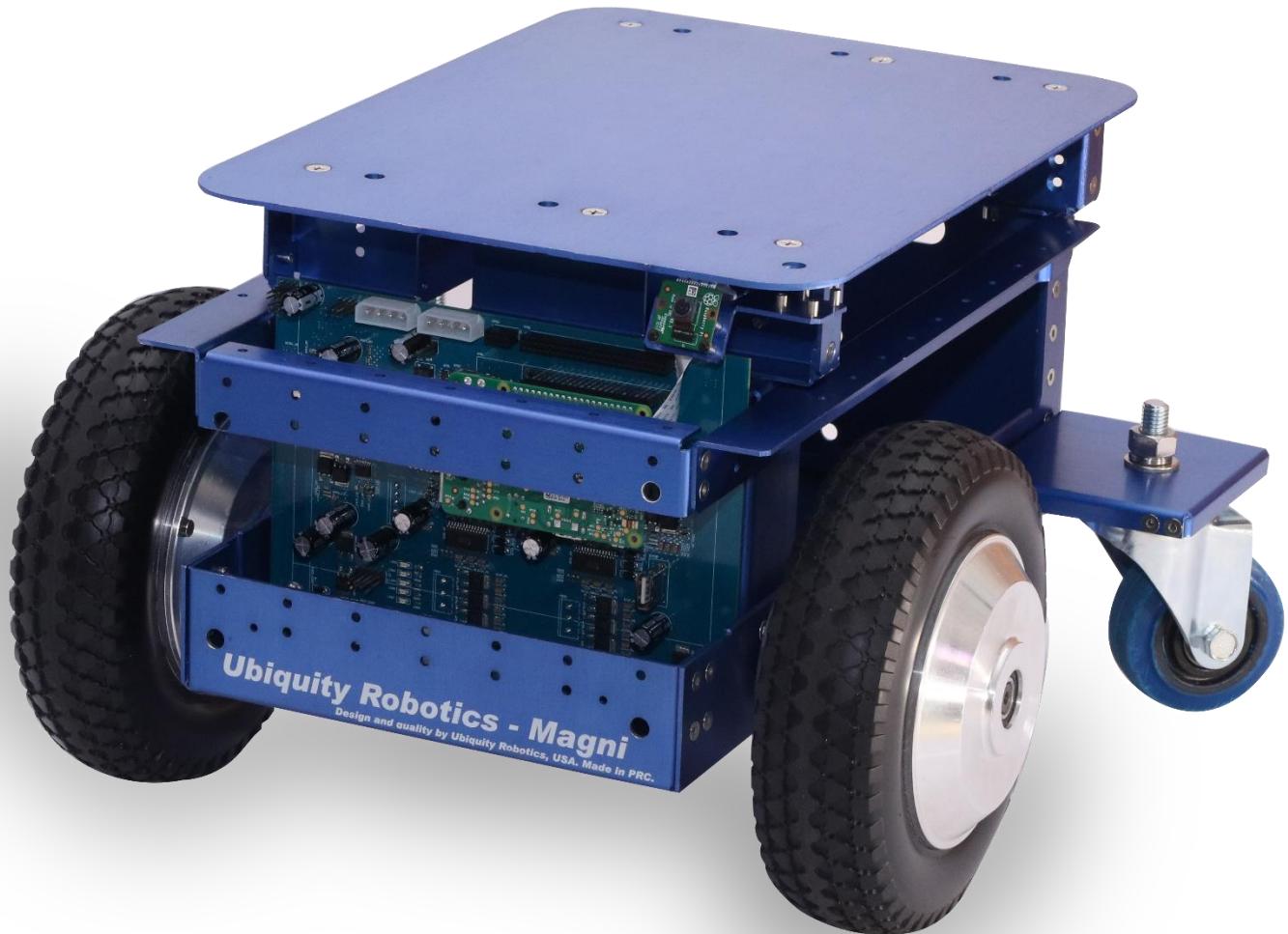
Buy/ build



#14

MagniRobot





Buy/ build



#15



OpenPodCar

*If I have seen further
on the shoulders of



Buy/ build

#16

MORPH



Buy/ build



#17

MUSHR



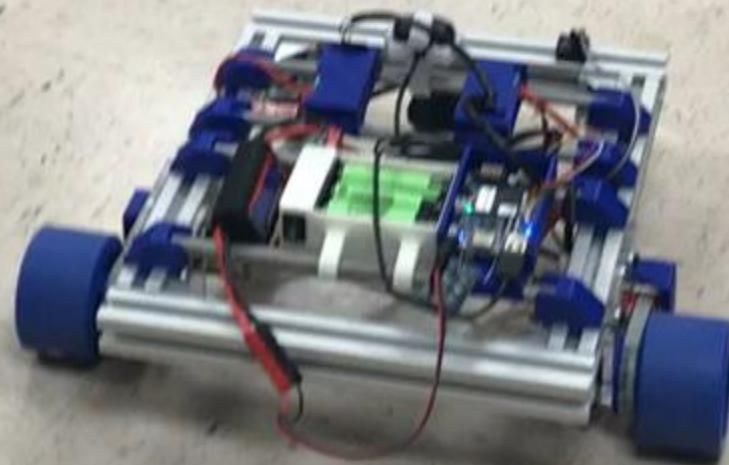


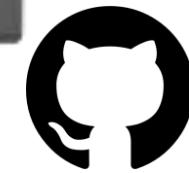
Buy/ build



#18

SCUTTLE





Buy/ build



#19

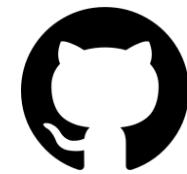
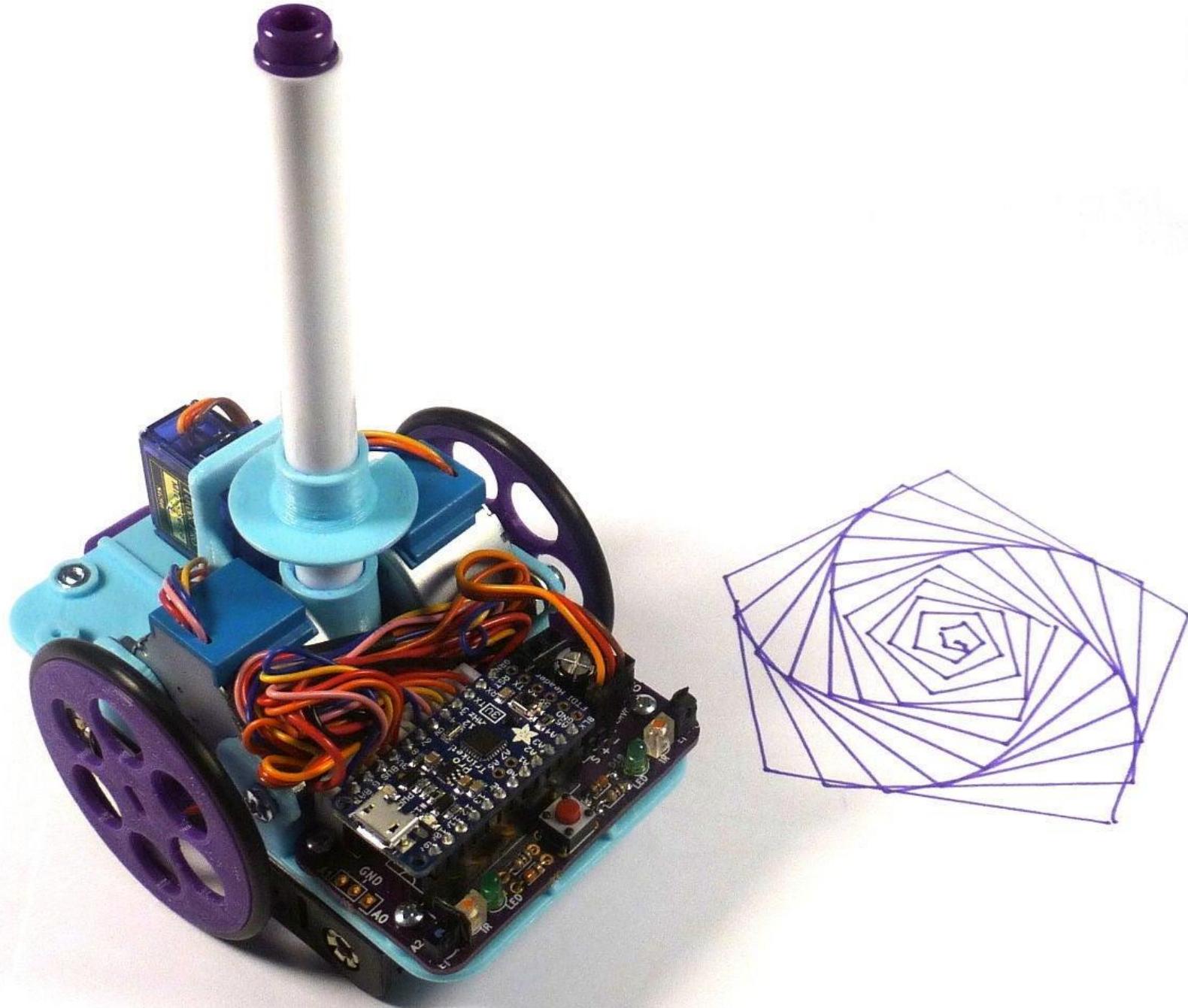


Buy/ build

#20

OSTR



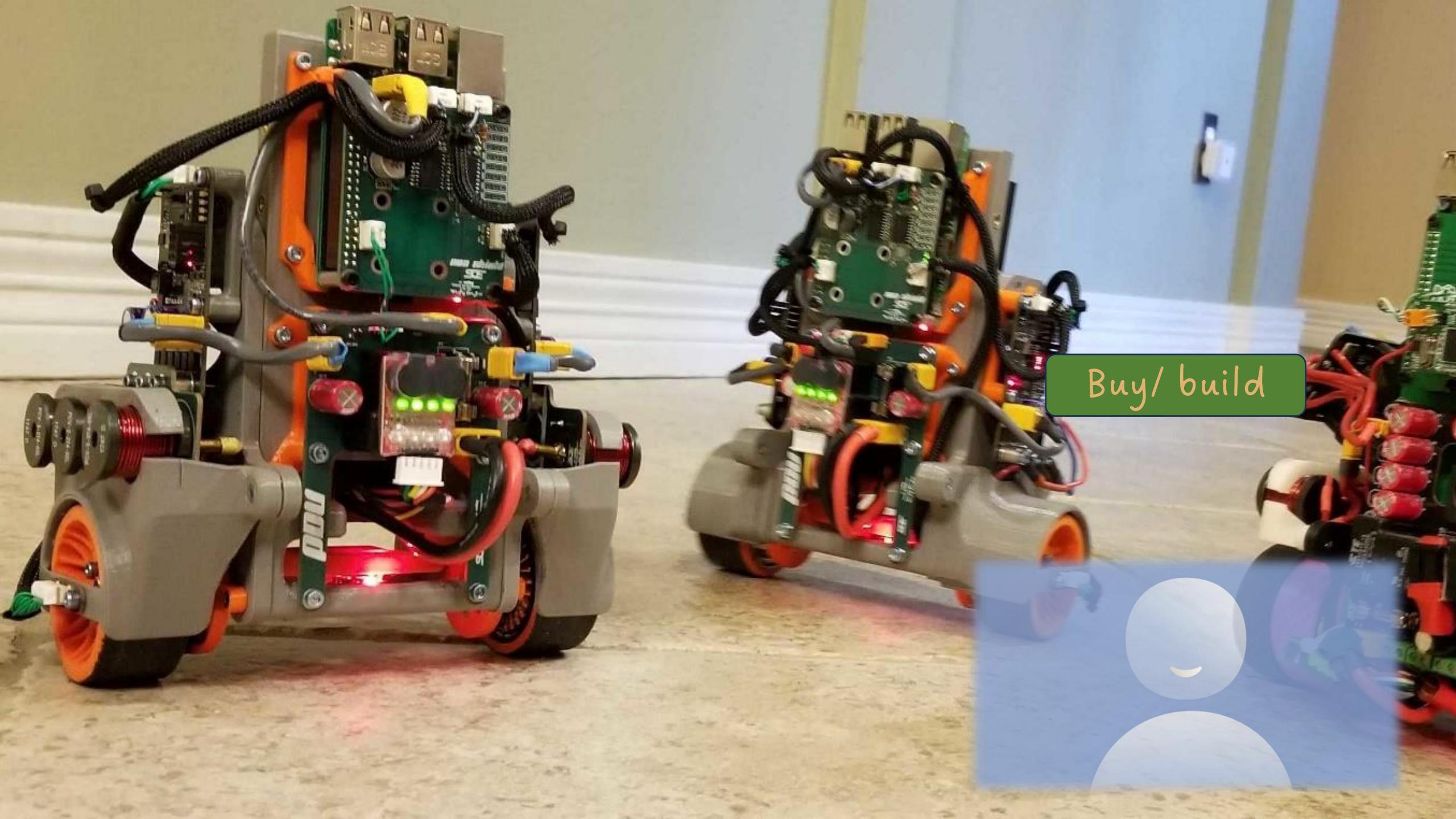


Buy/ build

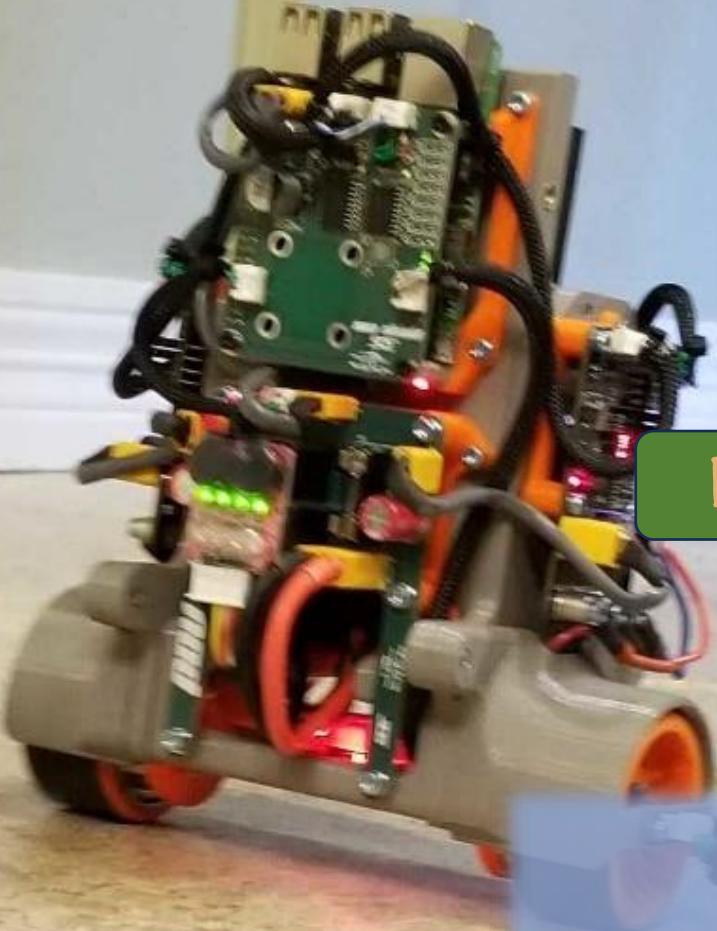
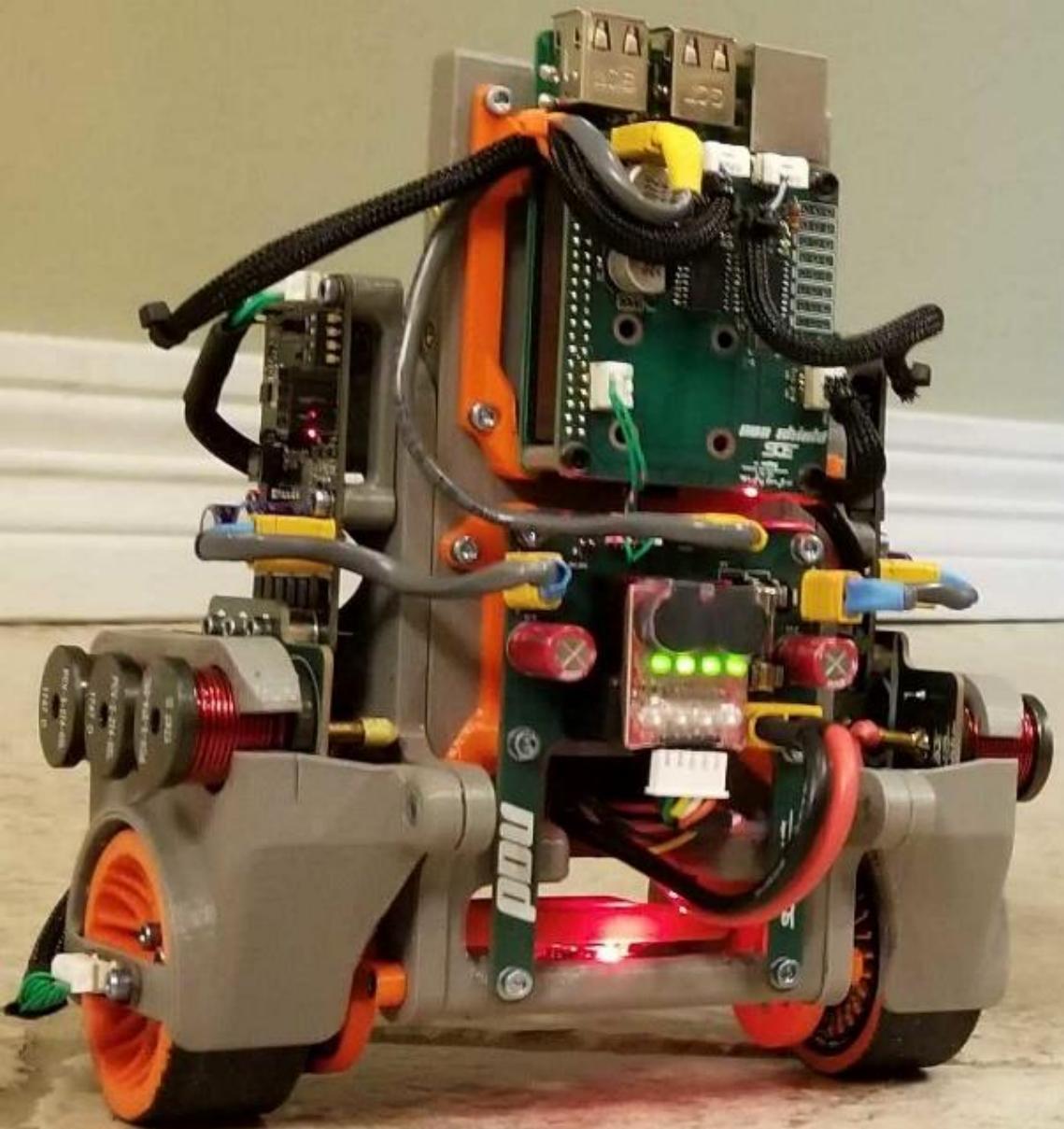


#21

BobbleBot

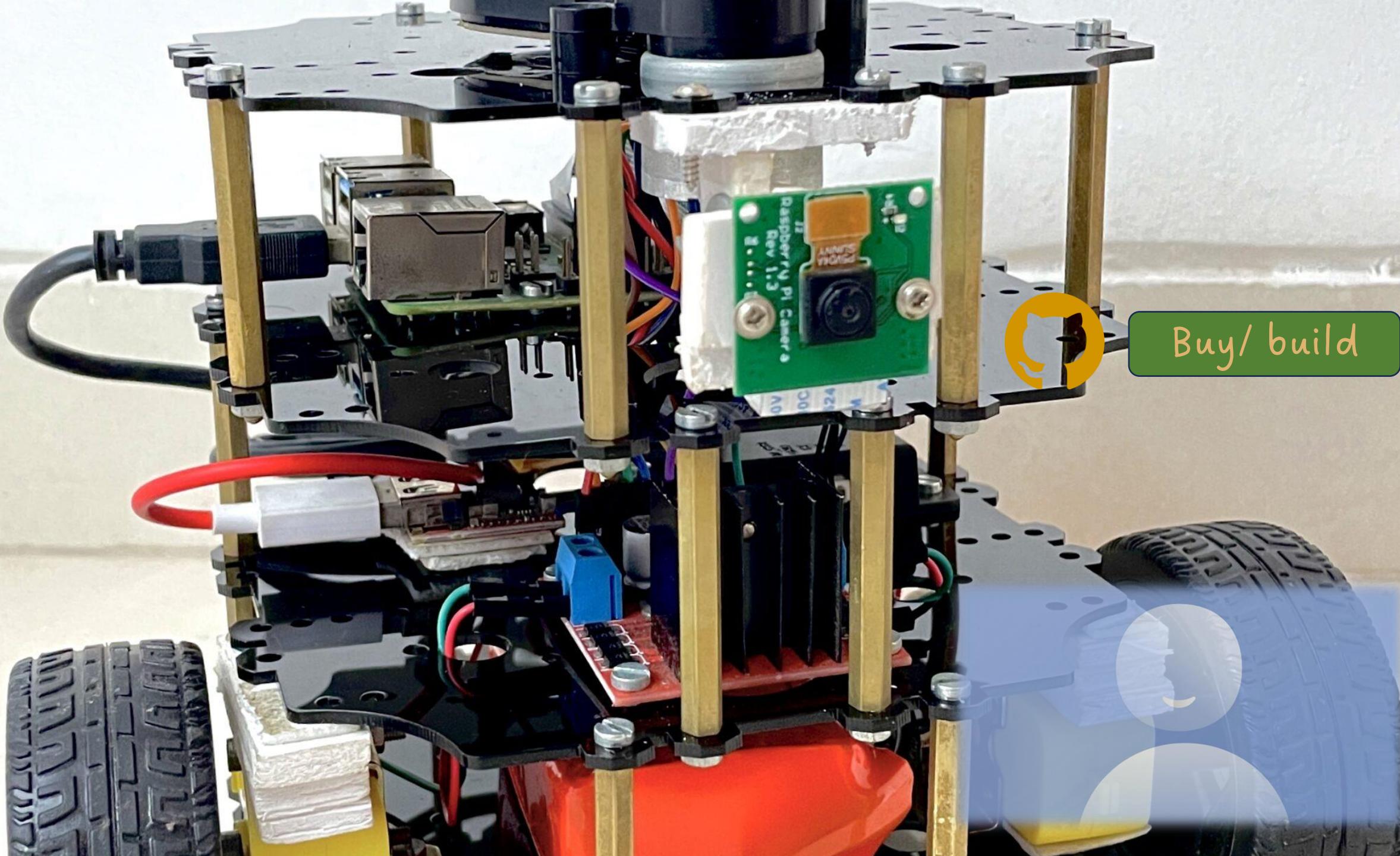


Buy/ build



#22

TortoiseBot



Buy/ build



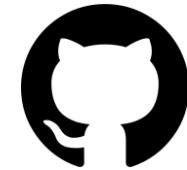
#23



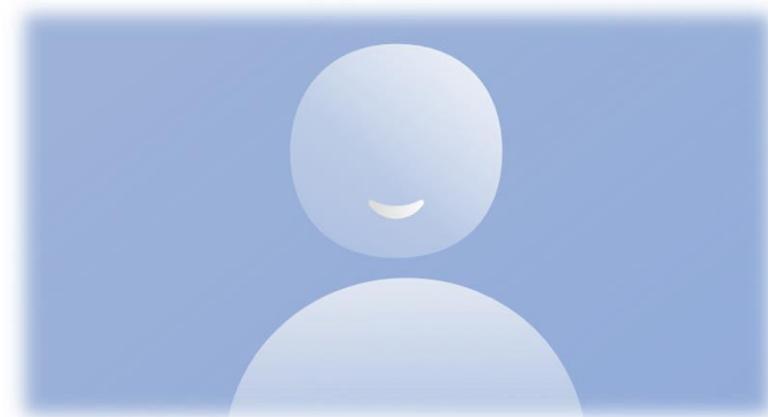
AWS DeepRacer



~\$150

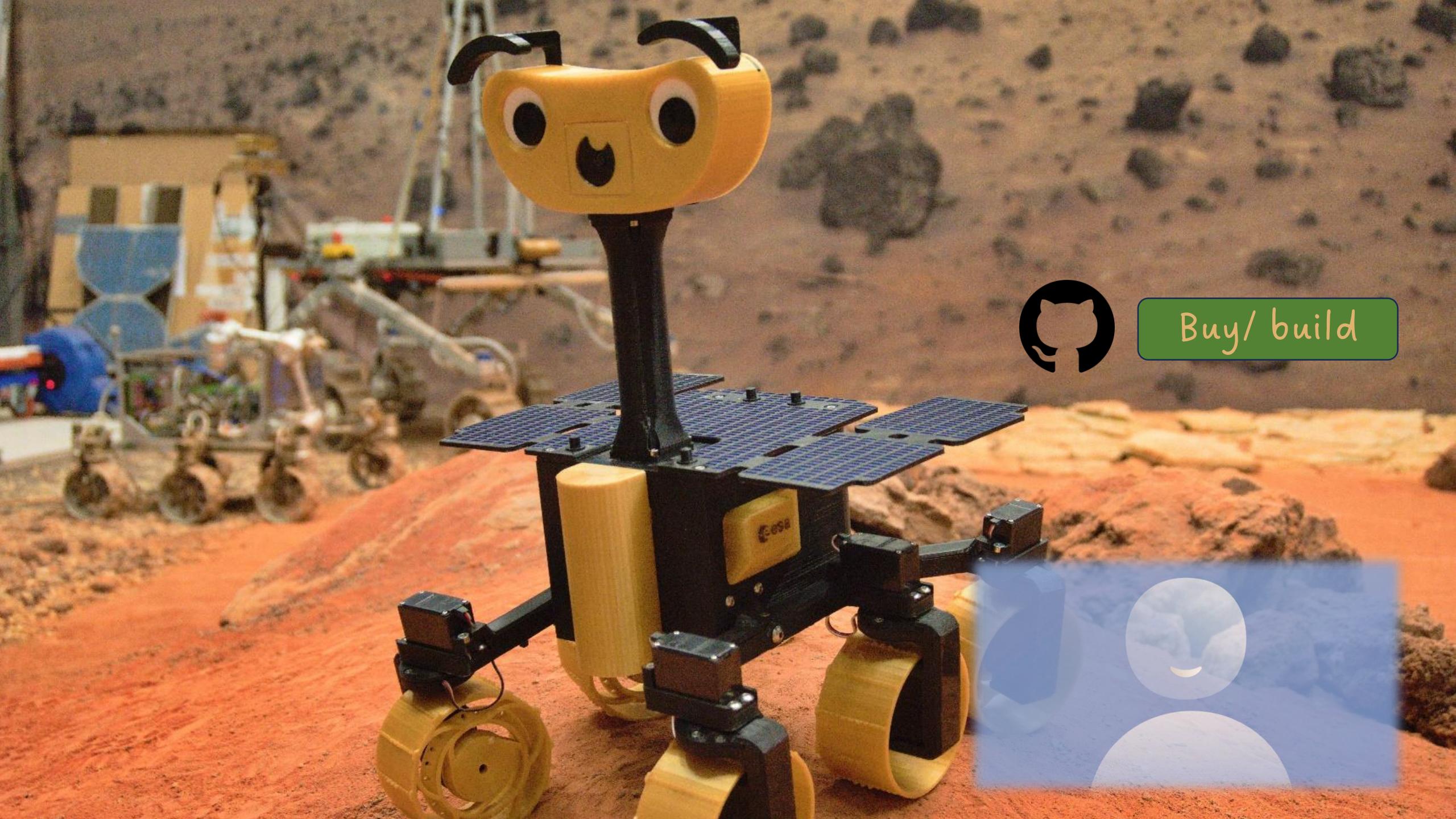


Buy/ build



#24

ExoMy



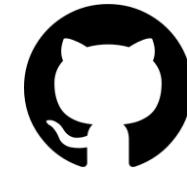
Buy/ build

QUADRUPEDS

#25

Welcome to re:MARS





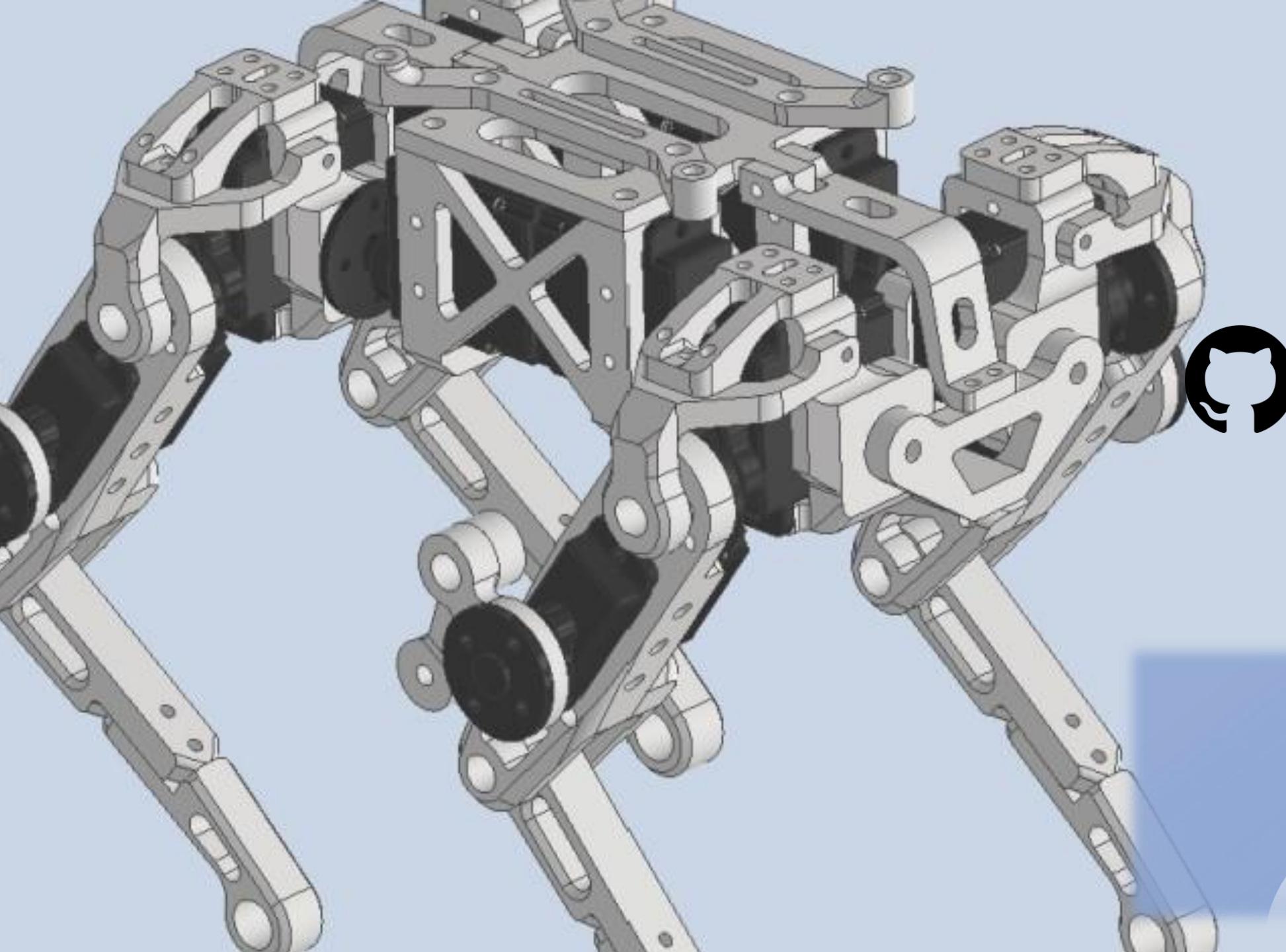
Buy/ build



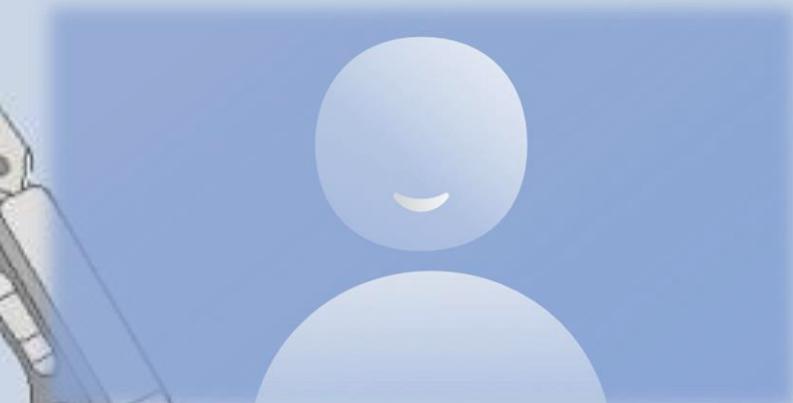
#26

QUADRUPED BAI
SERVO





Buy/ build



#27



SPOT MICRO AI



Buy/ build

#28

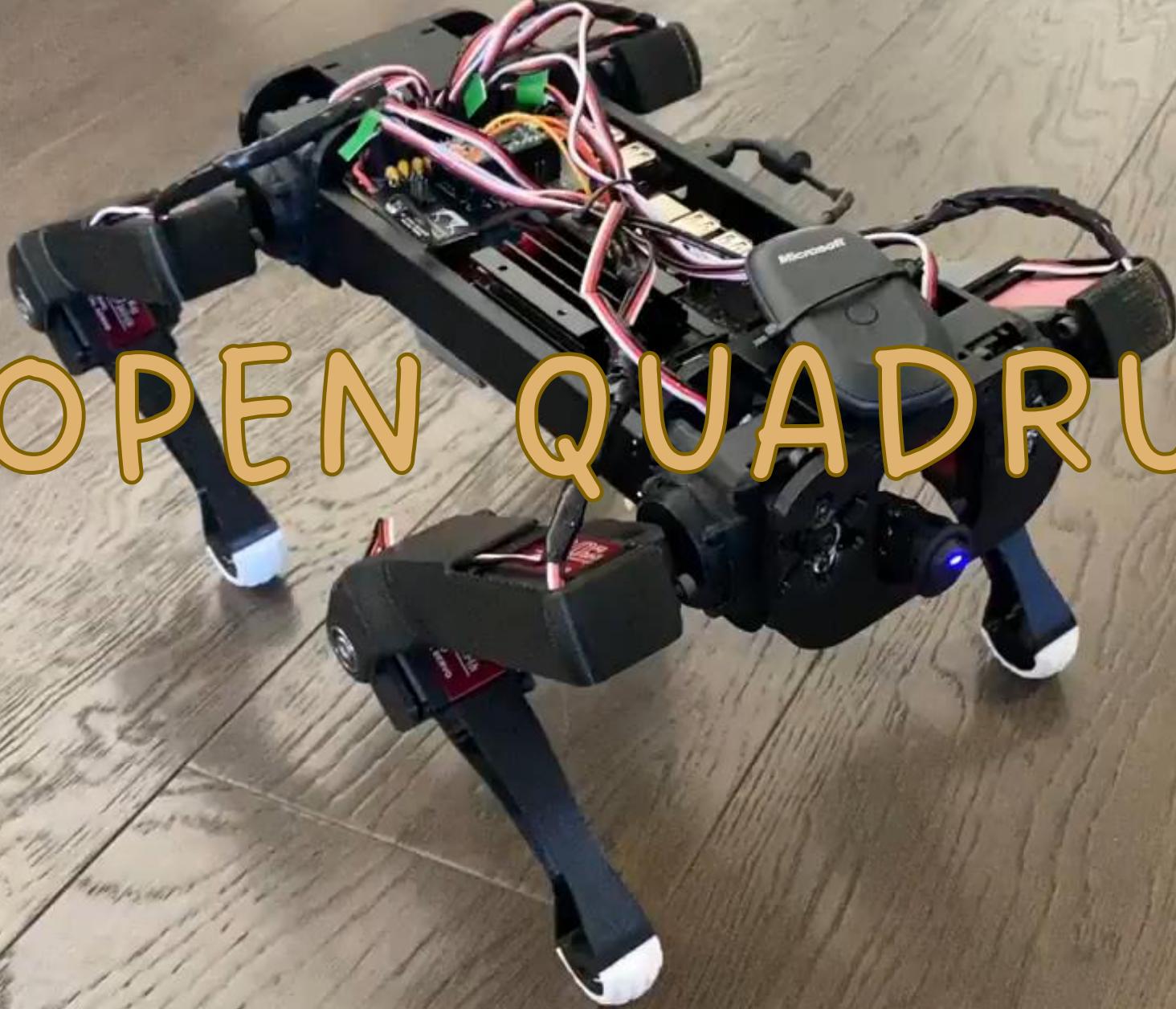


A white 3D-printed humanoid robot stands on a grassy field. It has a simple, geometric design with large cylindrical joints at the shoulders, elbows, wrists, and hips. The torso is a long cylinder, and the head is a cube with circular cutouts for eyes and a smaller circular cutout for a mouth. The robot's arms are slightly bent, and its legs are apart.

Buy/ build



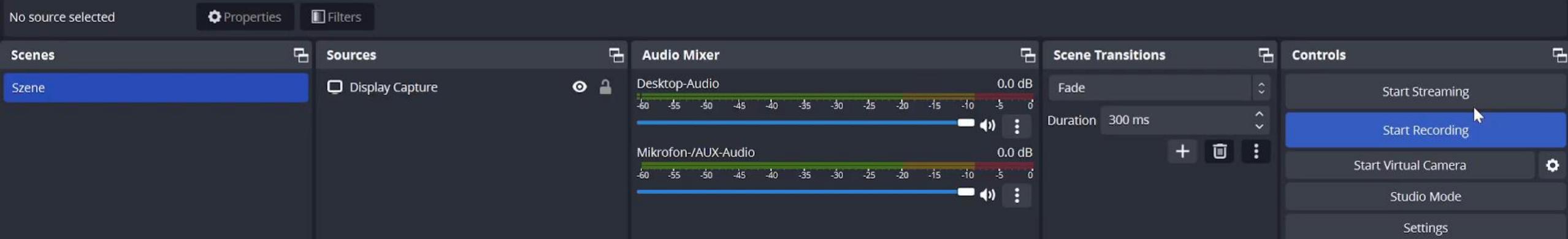
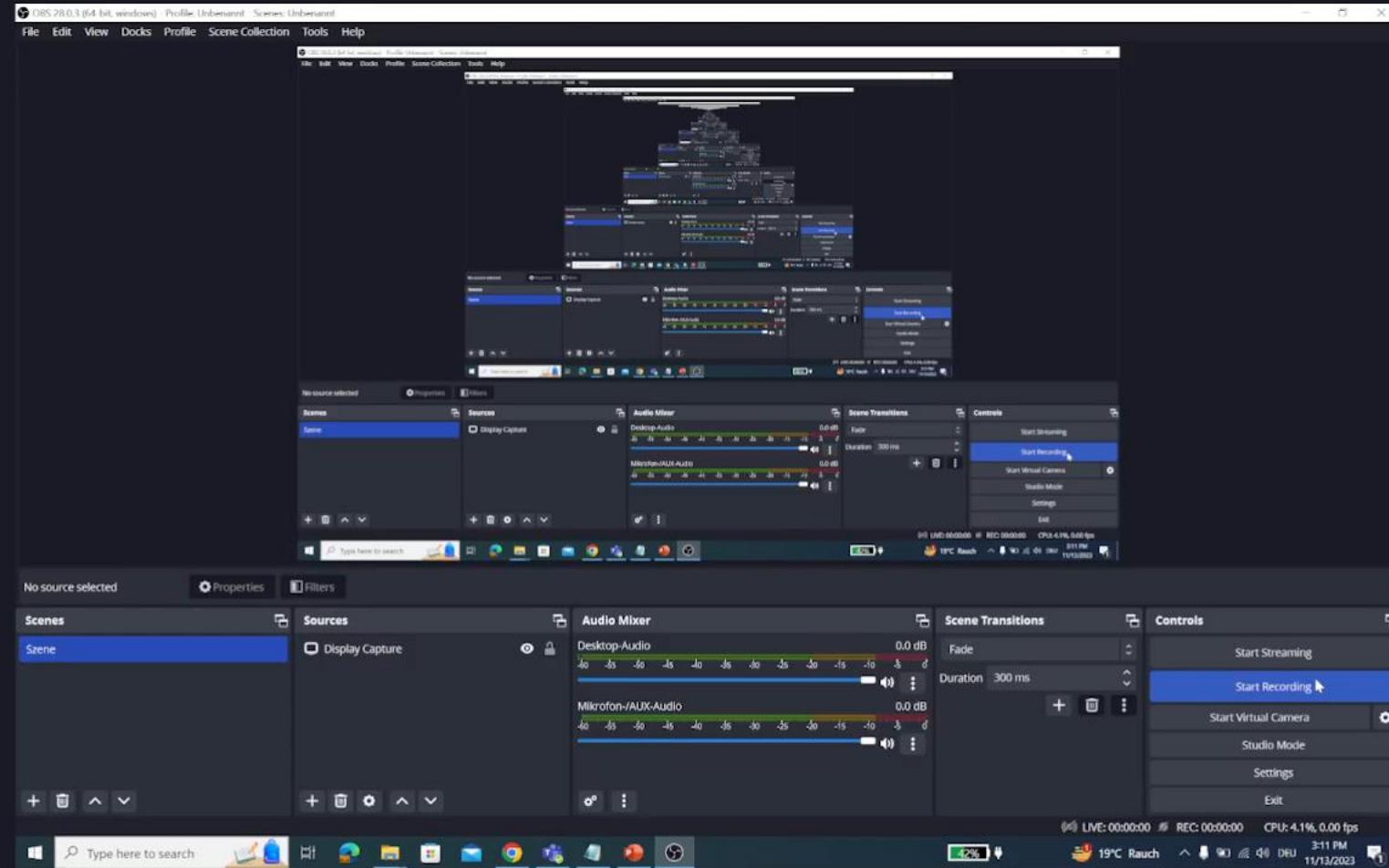
#29

A black quadruped robot, resembling a dog or cat, is walking on a light-colored wooden floor. The robot has four legs with white-tipped paws. Its body is dark with some internal components and wires visible. A Microsoft Xbox controller is attached to its back. The robot is moving towards the right.

OPEN QUADRUPED



#30





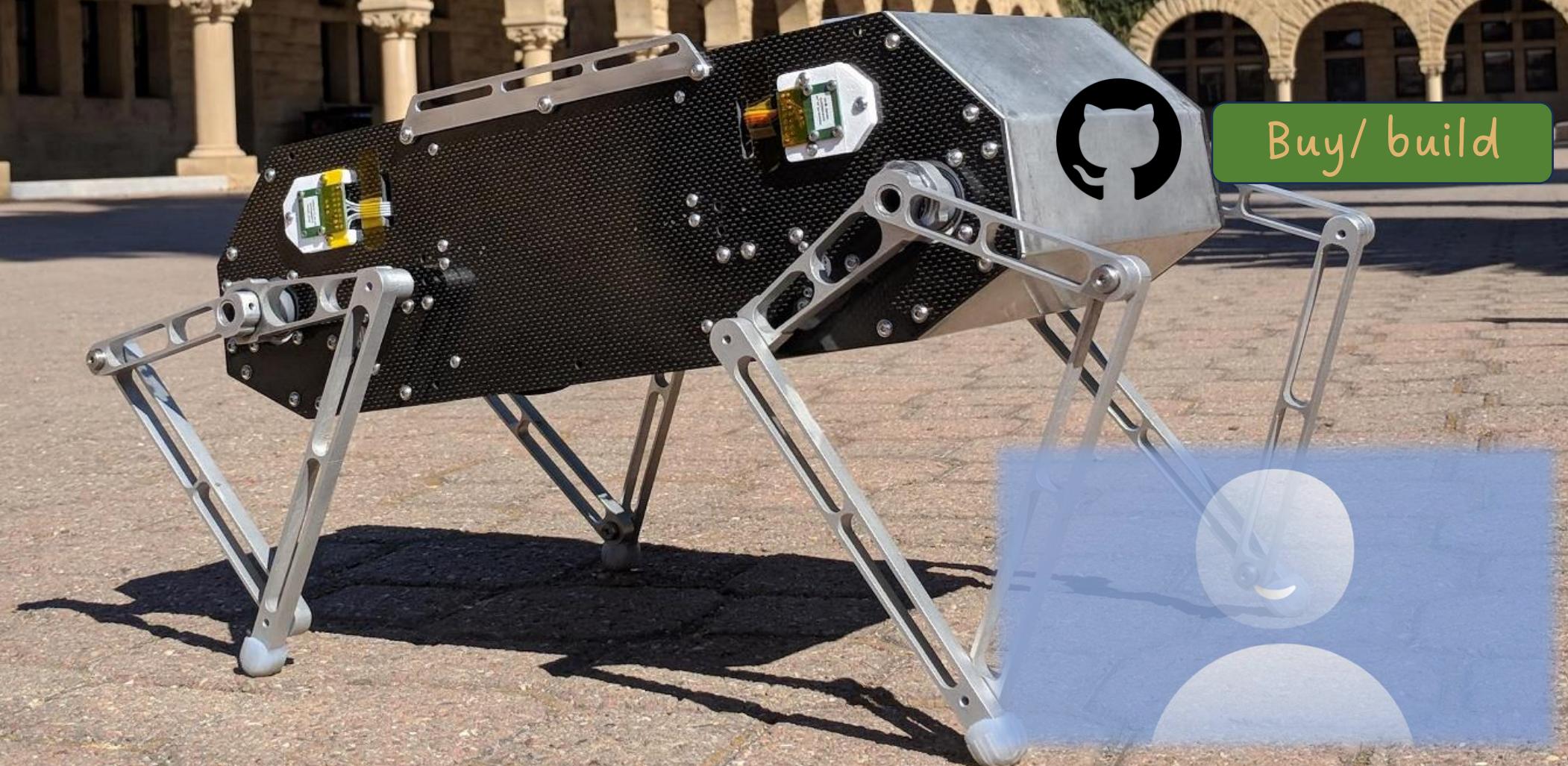
Buy/ build



#31

STANFORD DOGGO





Buy/ build

#32

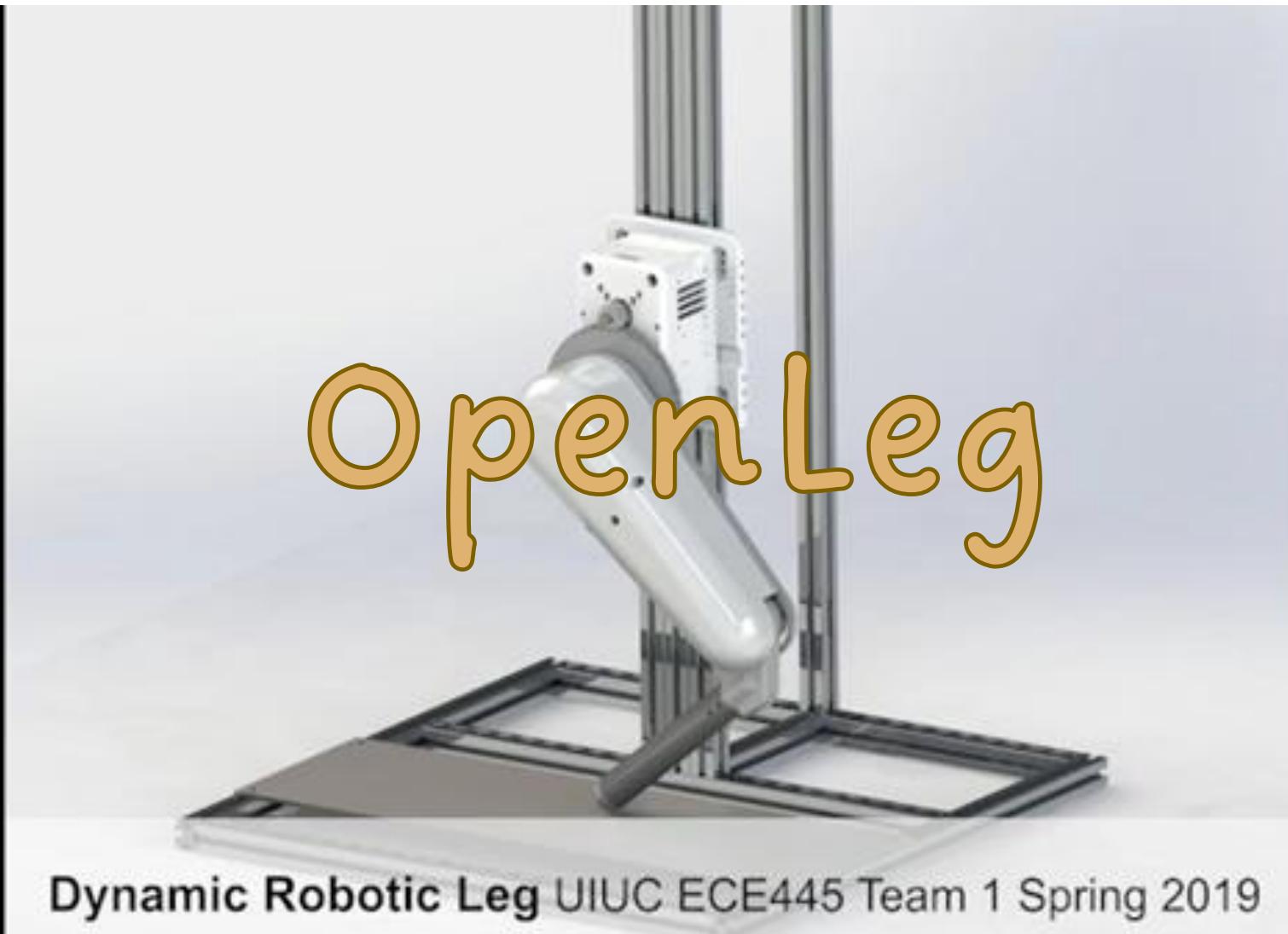
METABOT



Buy/ build



#33

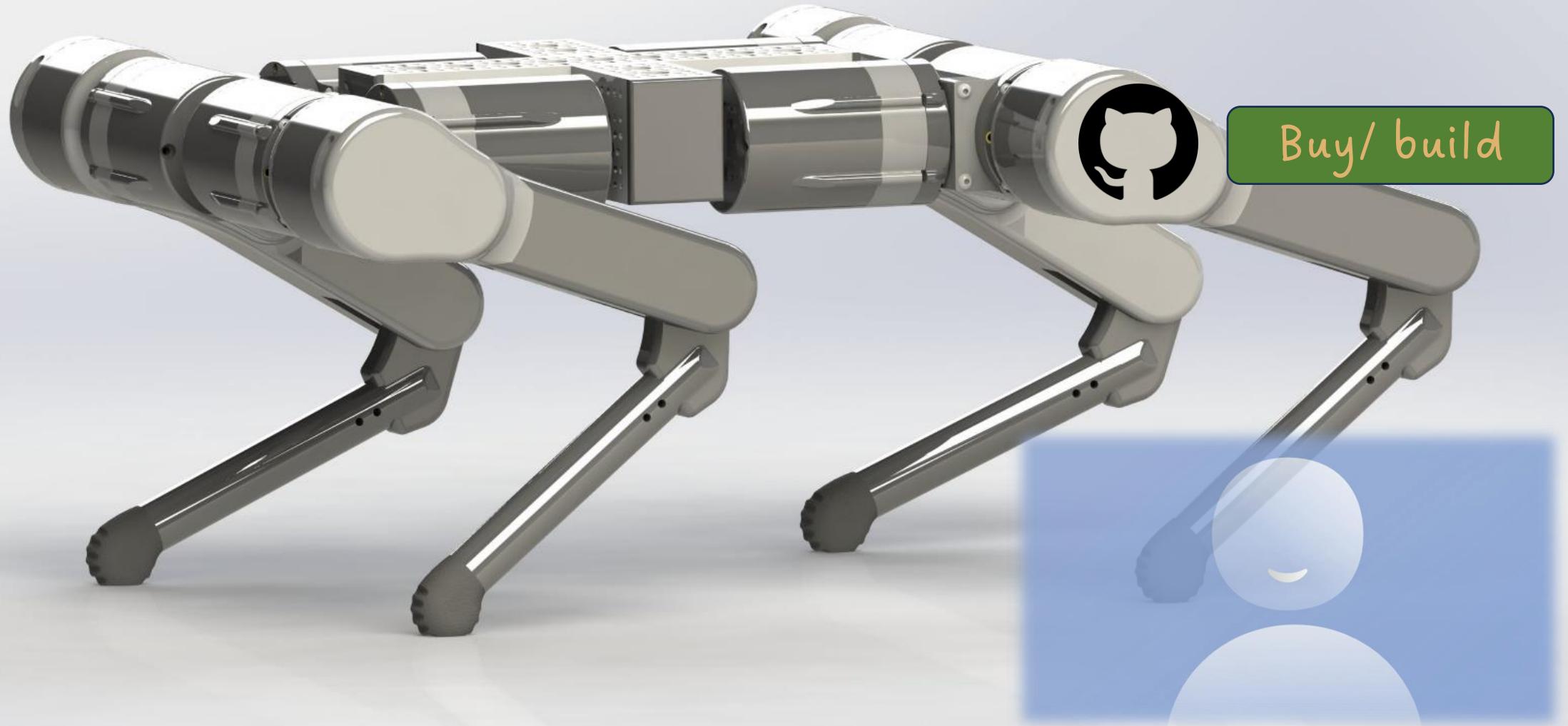


OpenLeg

Dynamic Robotic Leg UIUC ECE445 Team 1 Spring 2019

OpenLeg Quadruped

Design By Joey Byrnes
(Work In Progress)



#34

Nybble

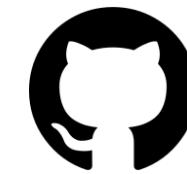


Buy/ build

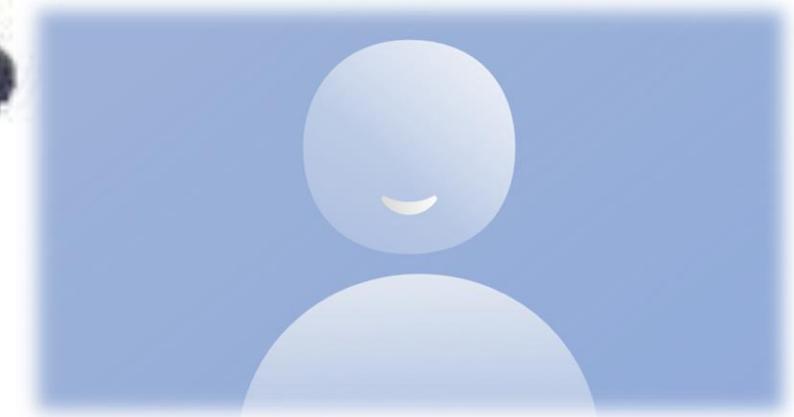


#35

Bittle



Buy/ build



#36

An Open Torque-Controlled Modular Robot Architecture for Legged Locomotion Research

Felix Grimminger¹, Avadesh Meduri^{1,2}, Majid Khadiv¹, Julian Viereck^{1,2}, Manuel Wüthrich¹, Maximilien Naveau¹, Vincent Berenz¹, Steve Heim¹, Felix Widmaier¹, Thomas Flayols³, Jonathan Fiene¹, Alexander Badri-Spröwitz¹ and Ludovic Righetti^{1,2}

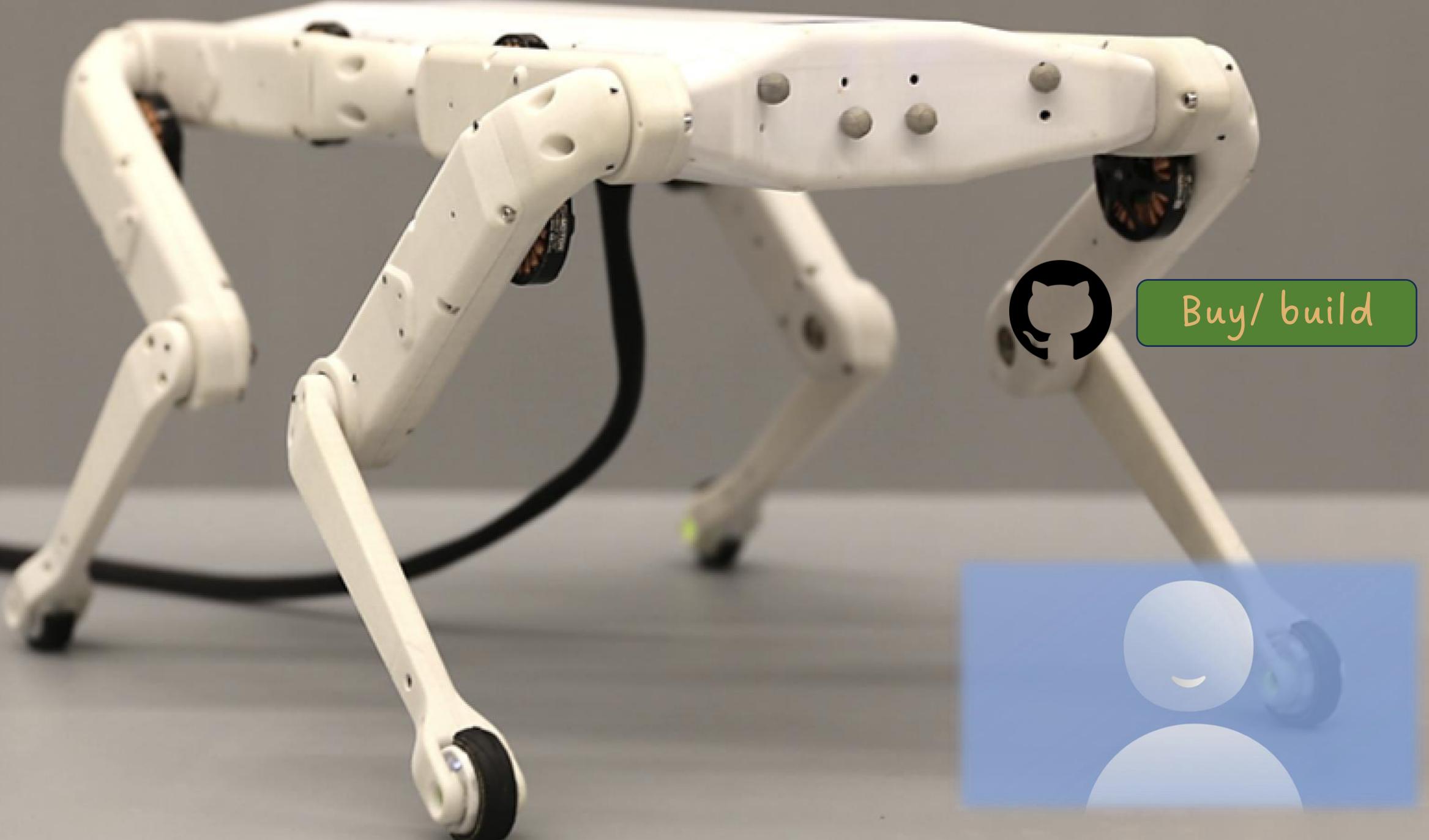


¹Max-Planck Institute for Intelligent Systems, Germany

²Tandon School of Engineering, New-York University, USA

³Central National pour la Recherche Scientifique, France





Buy/ build

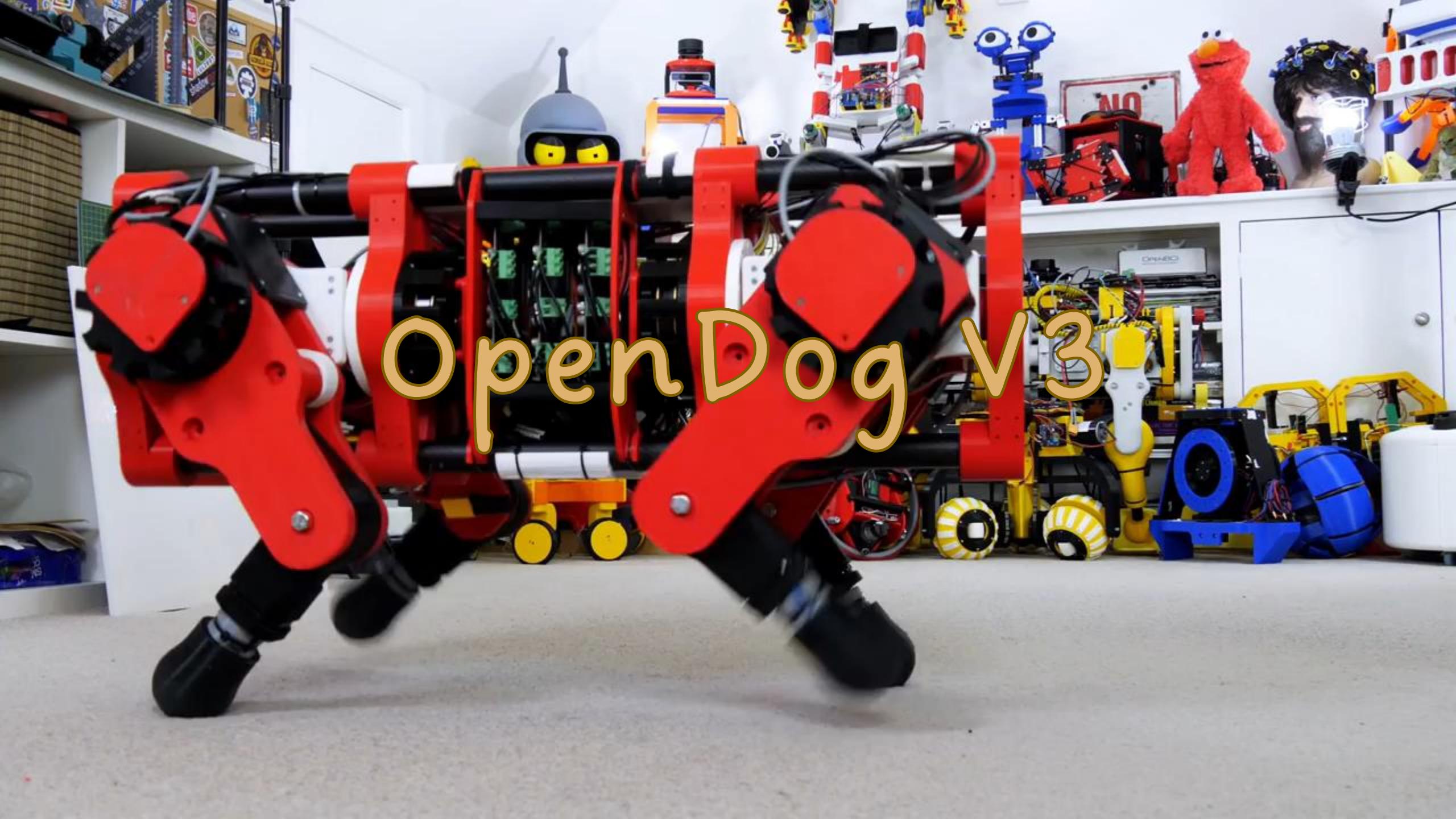
#37

Dingo Quadruped



Buy/ build

#38



OpenDog V3

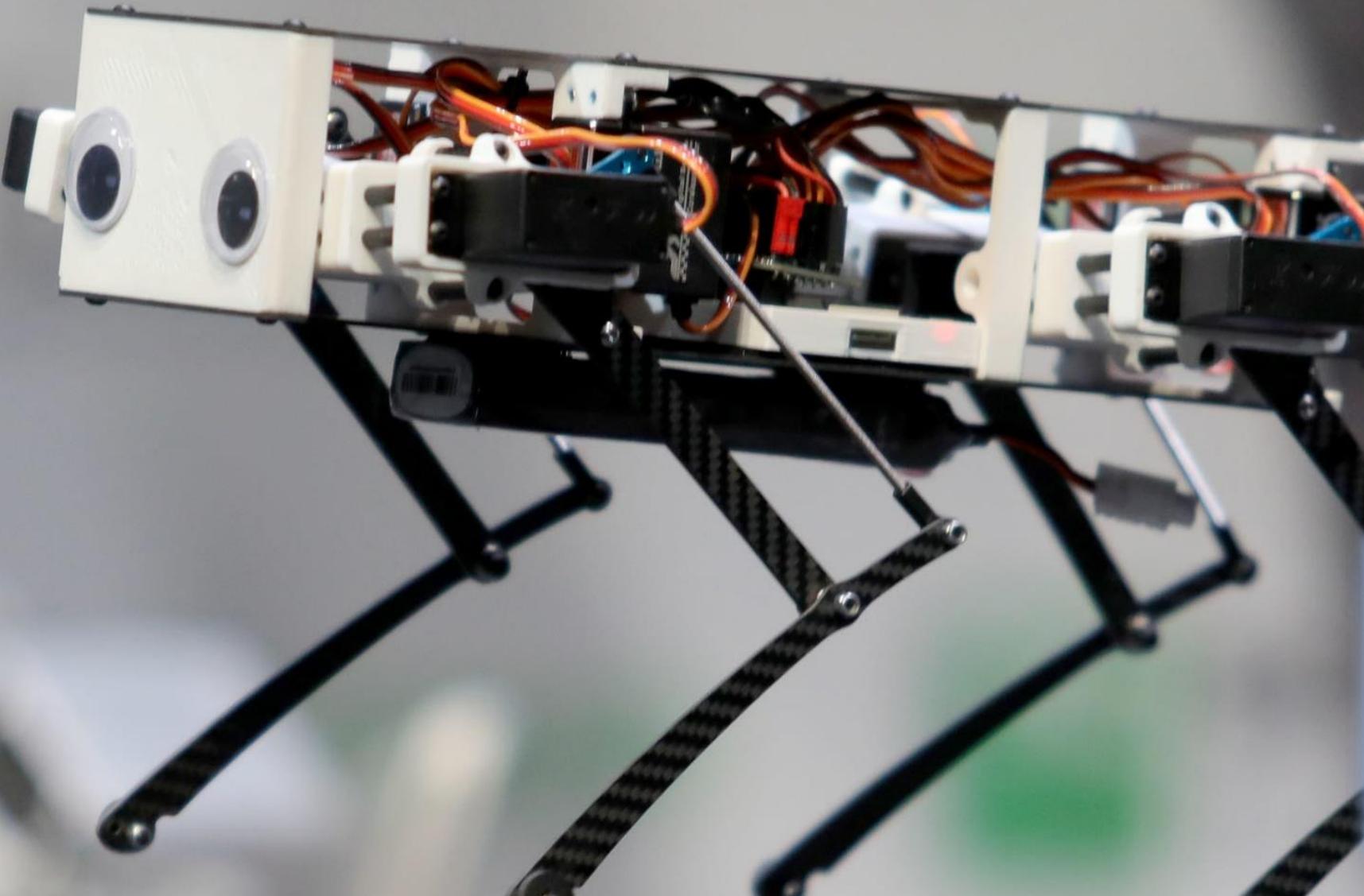


Buy/ build



#39

Stanford Quadruped



Buy/ build



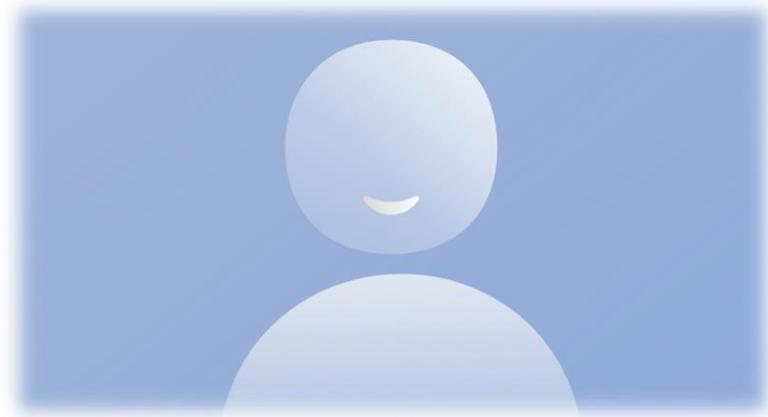
MANIPULATORS
AND
ROBOT HANDS

#40

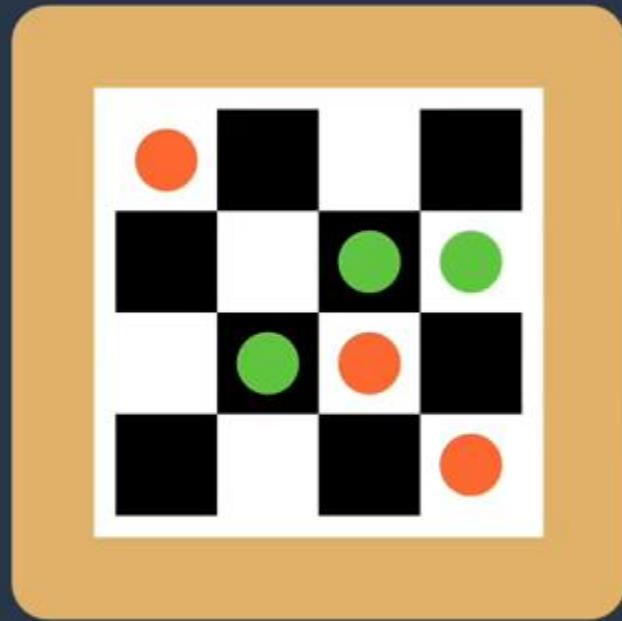




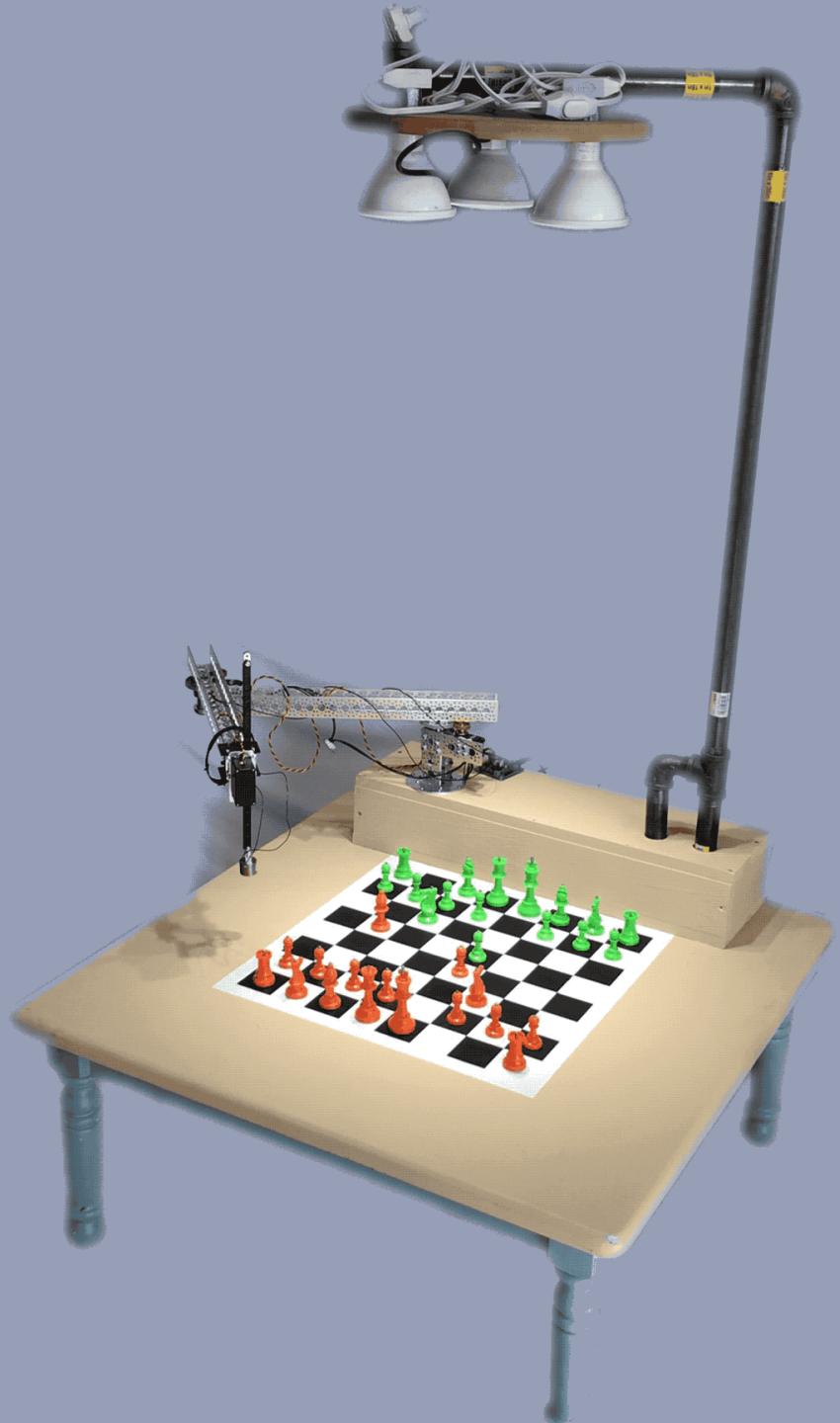
Buy/ build



#41



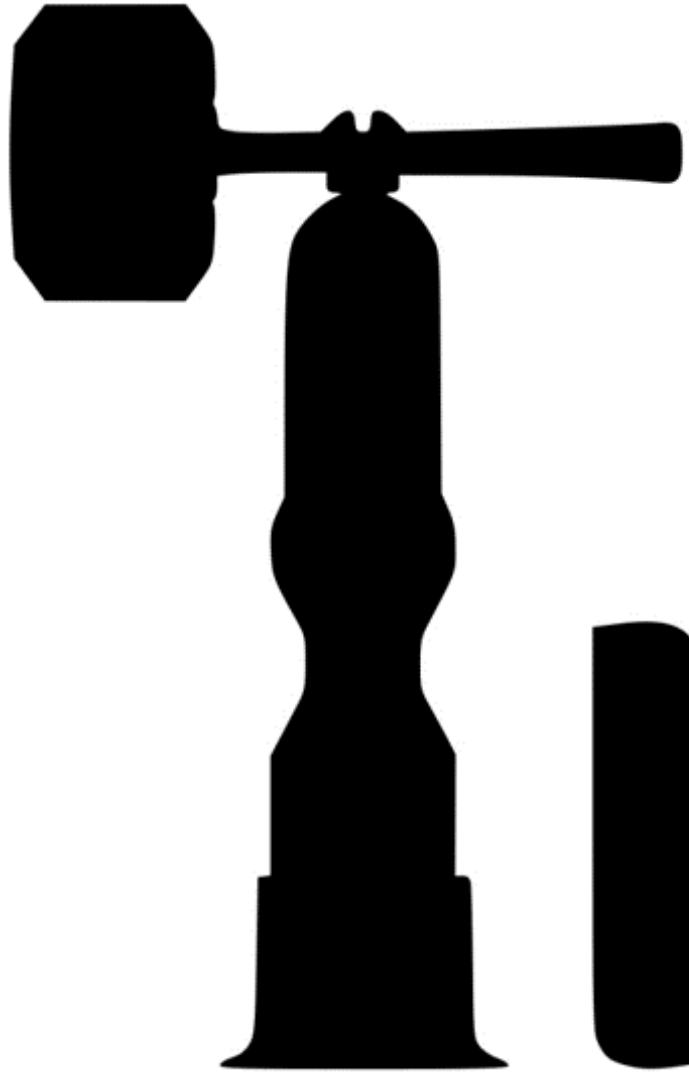
Raspberry Turk



Buy/ build



#42



Thor
HOR

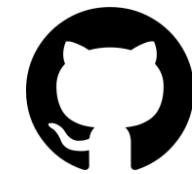
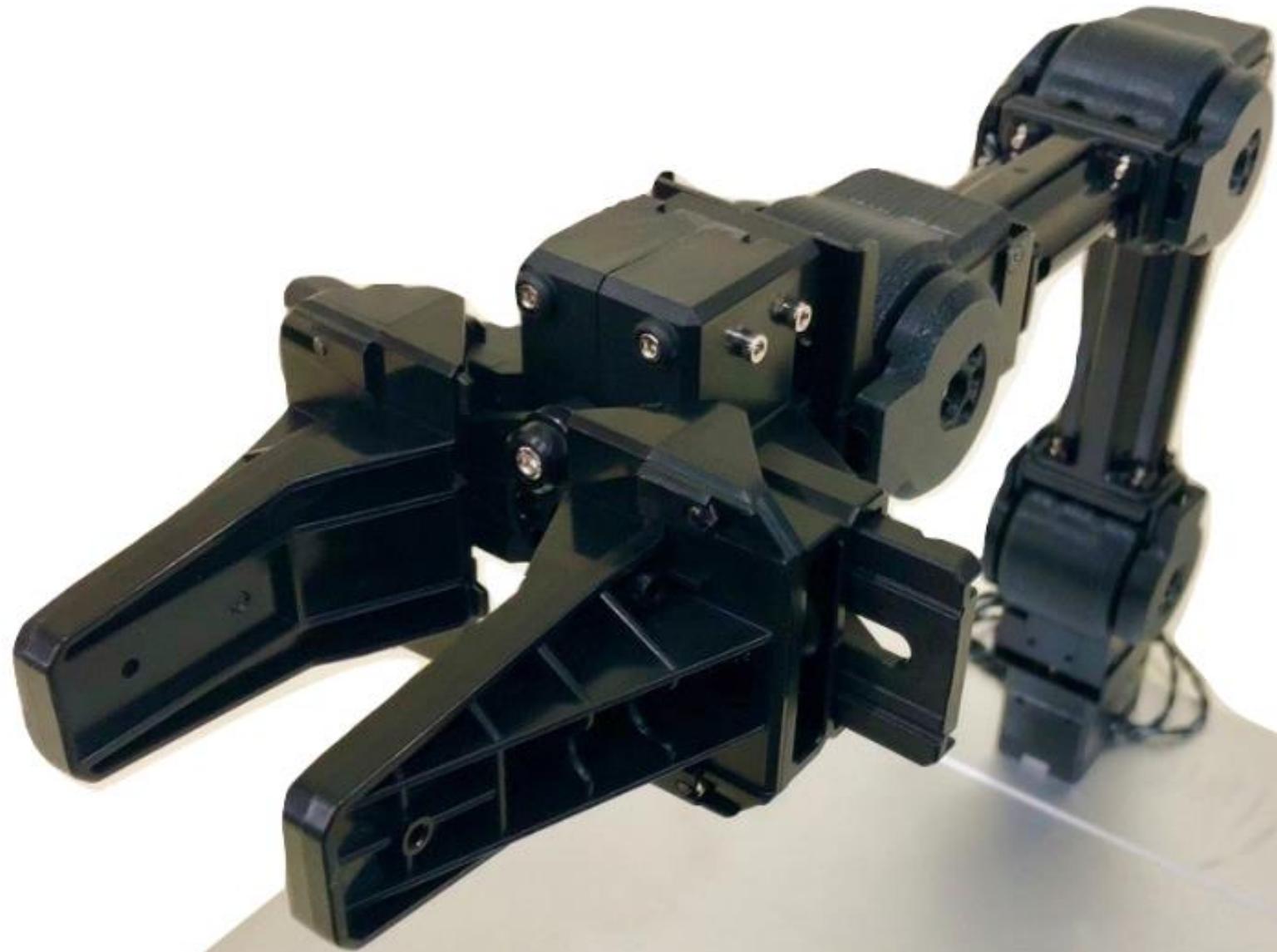


Buy/ build

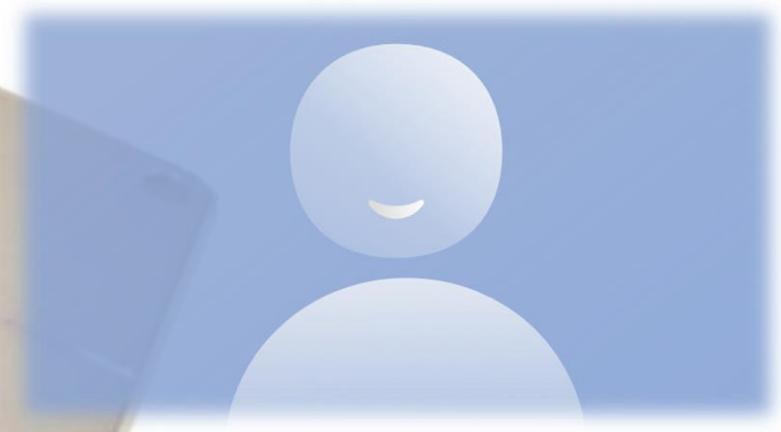


#43

OpenManipulatorX



Buy/ build



#44

SmallRobotArm





Buy/ build



#45

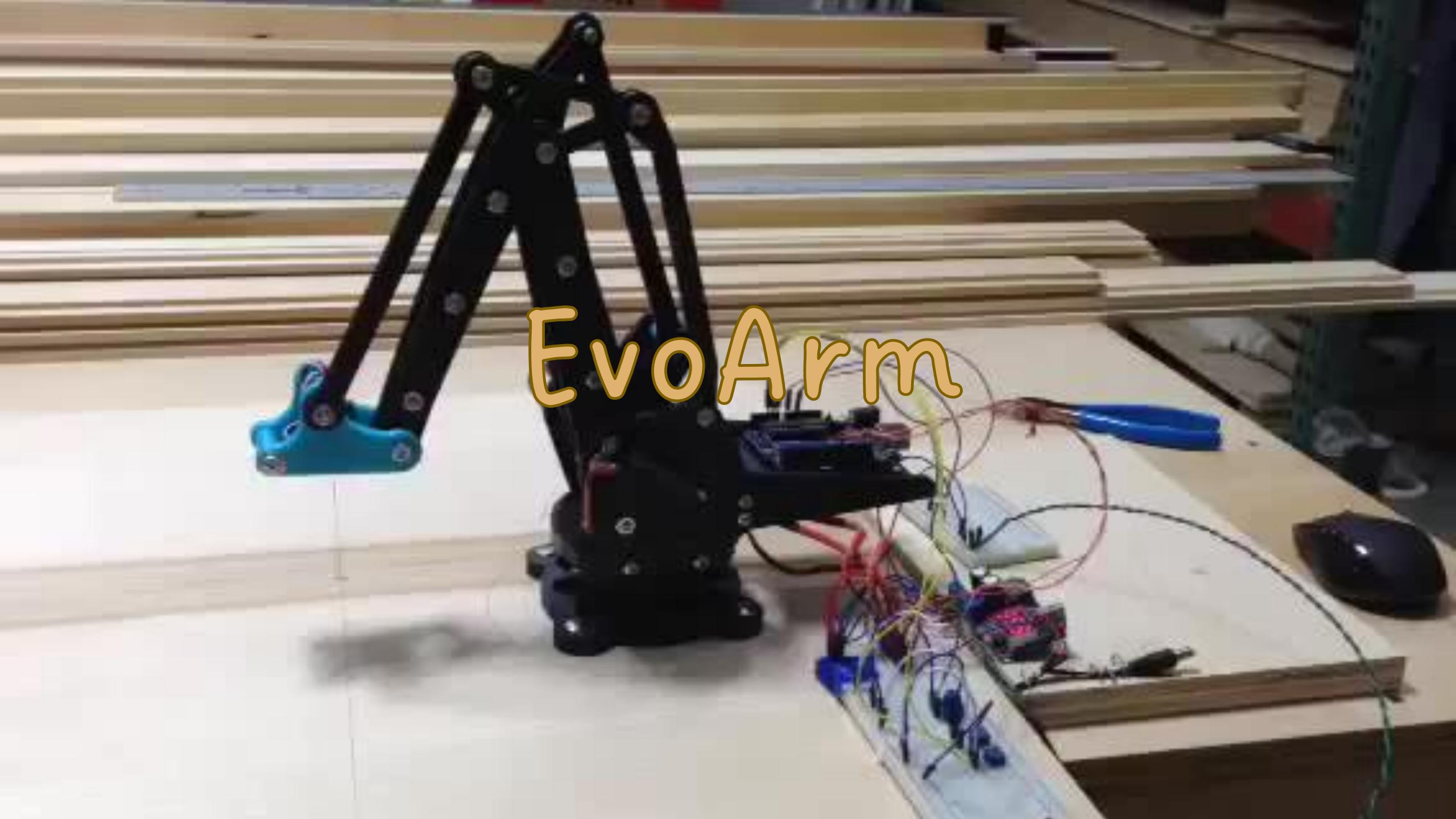
Dummy



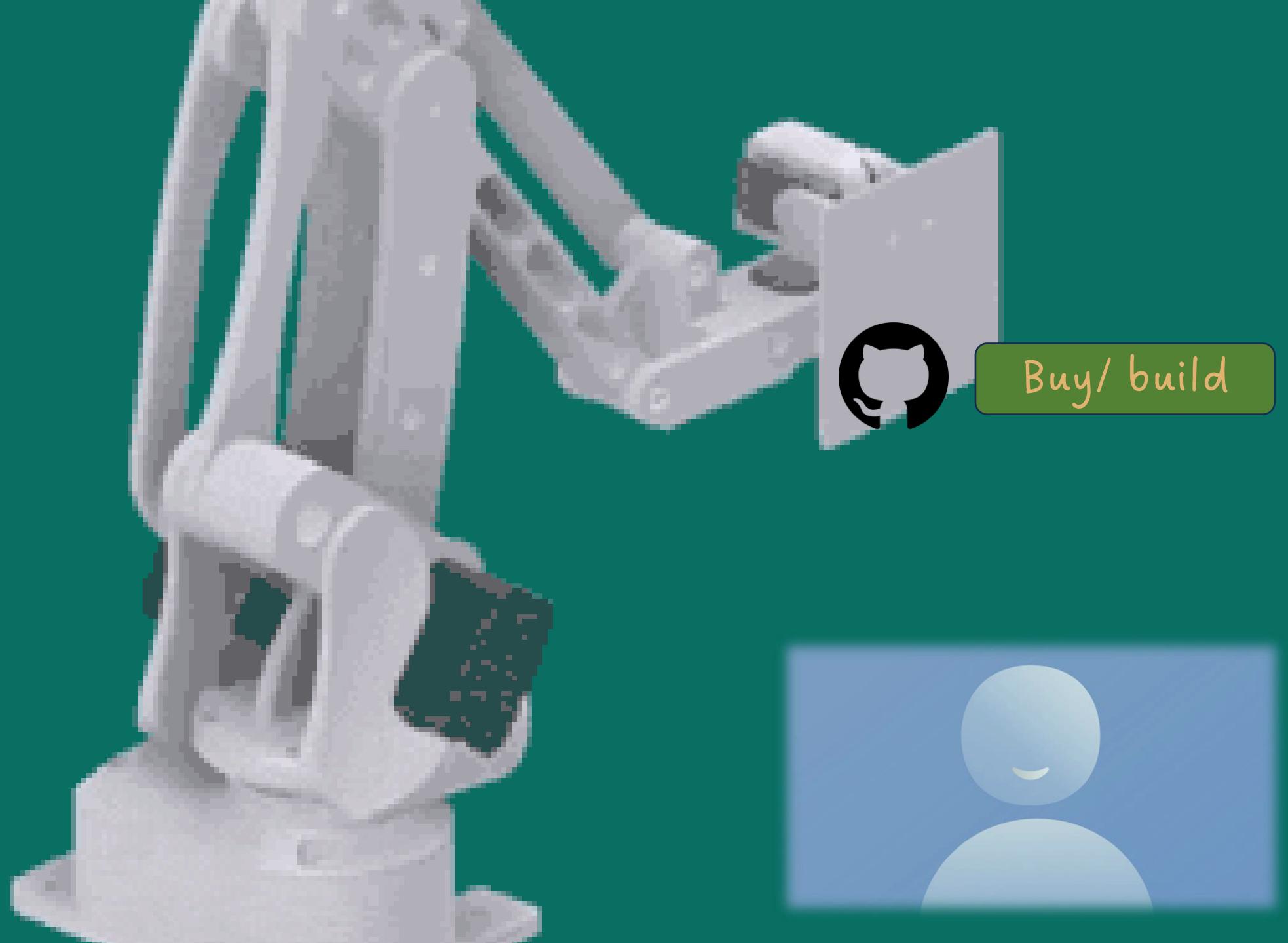


Buy/ build

#46



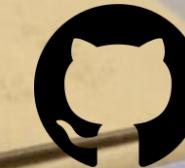
EvoArm



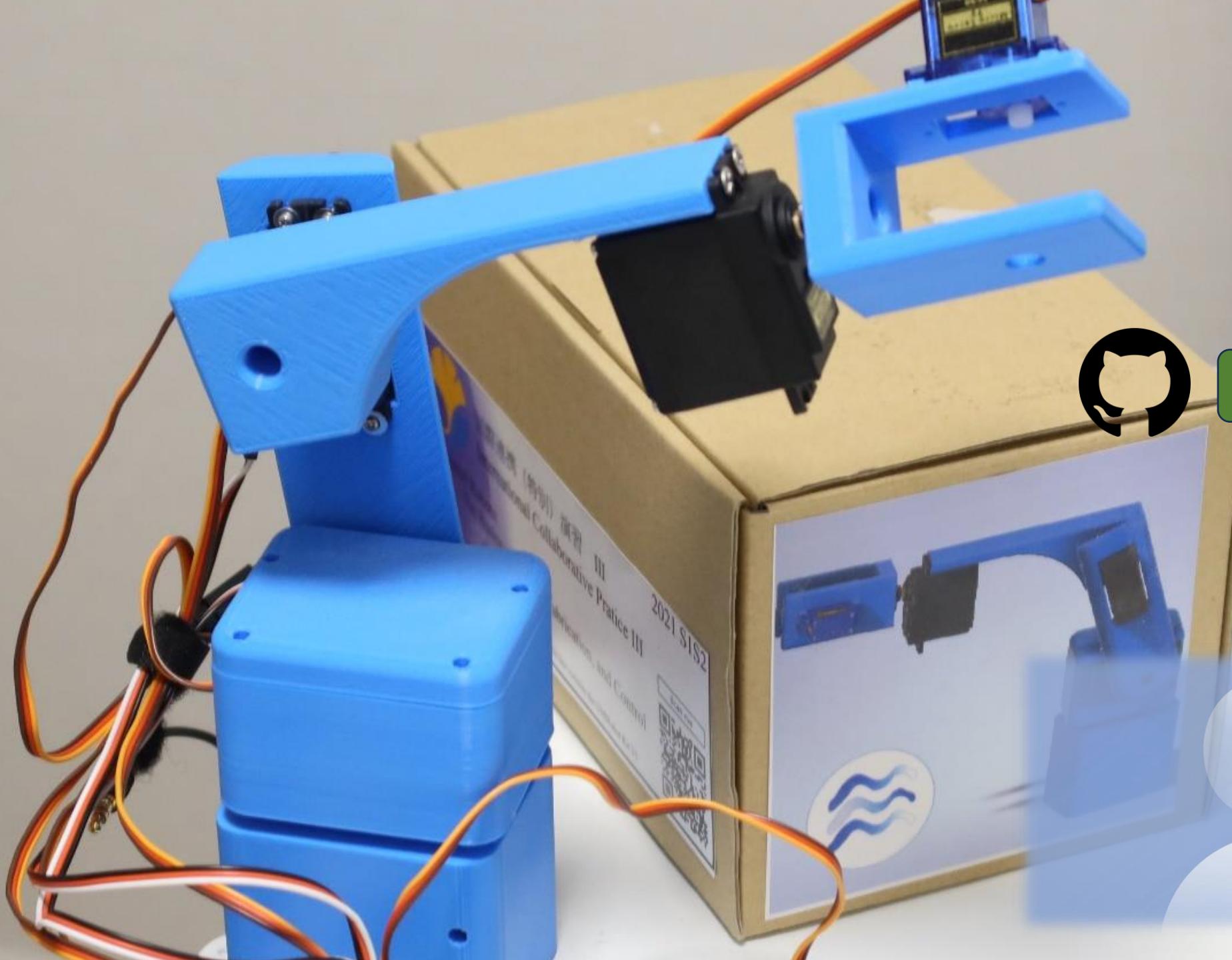
Buy/ build

#47

UMIRobot



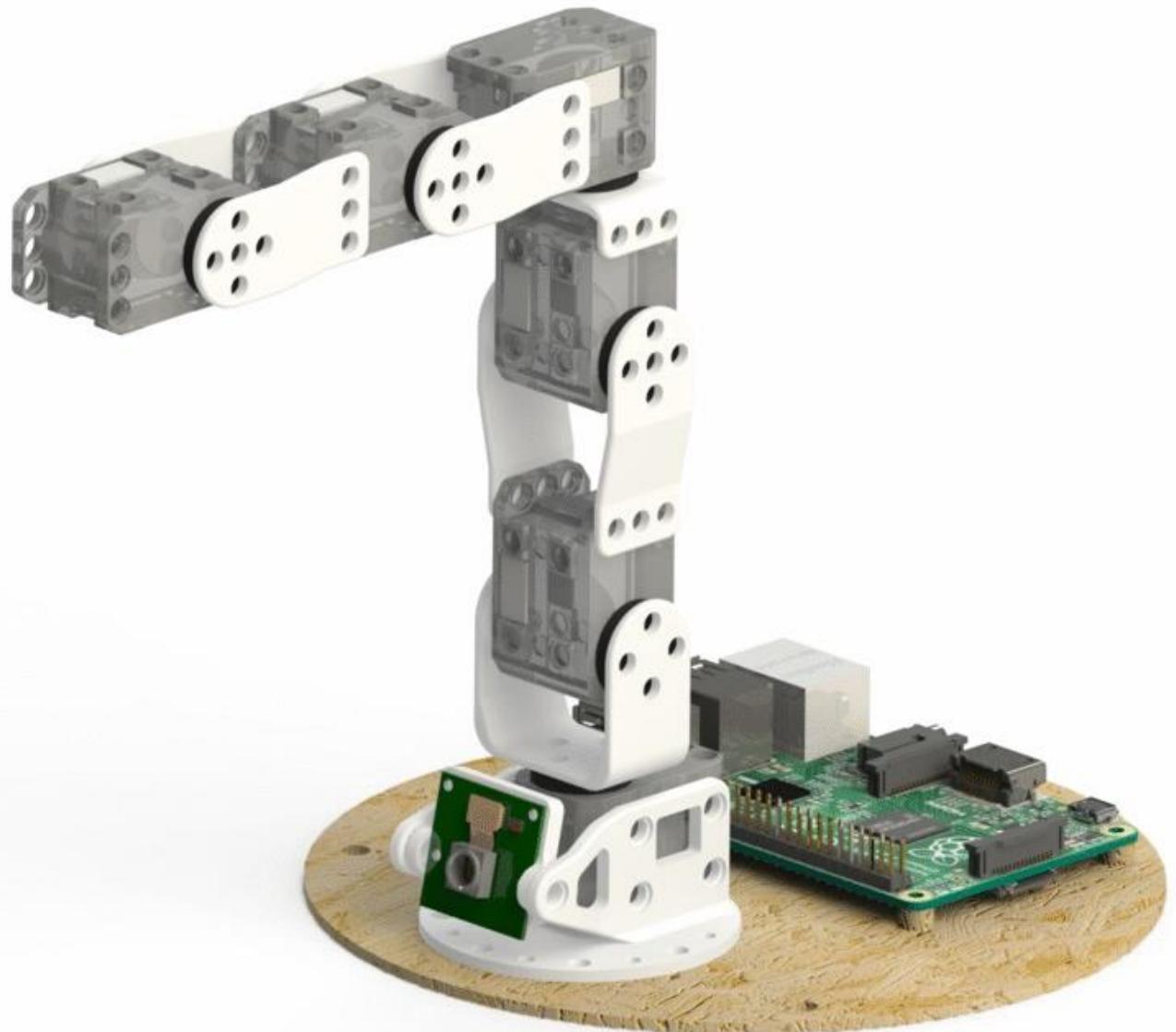
Buy/ build



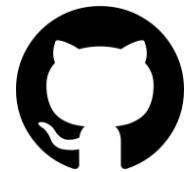
#48

Poppy Ergo Jr





~\$350



Buy/ build

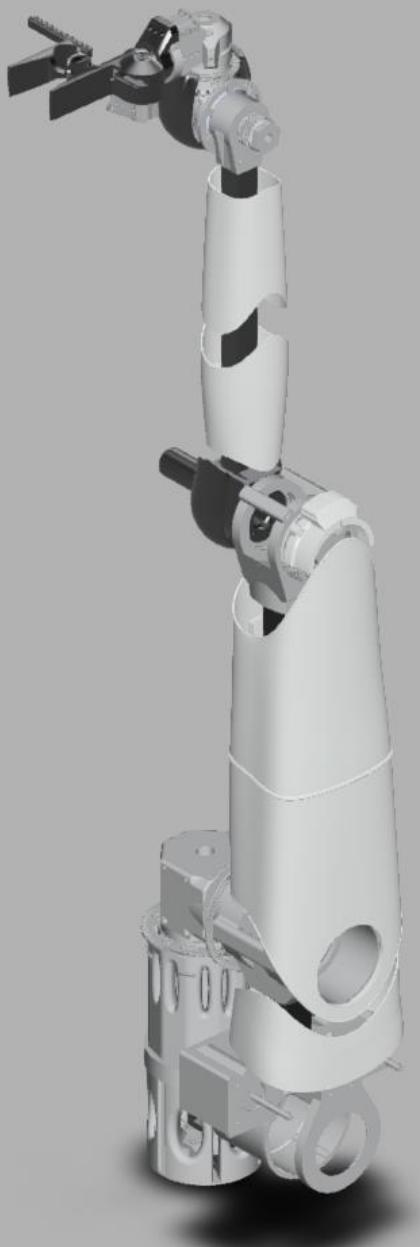


#49

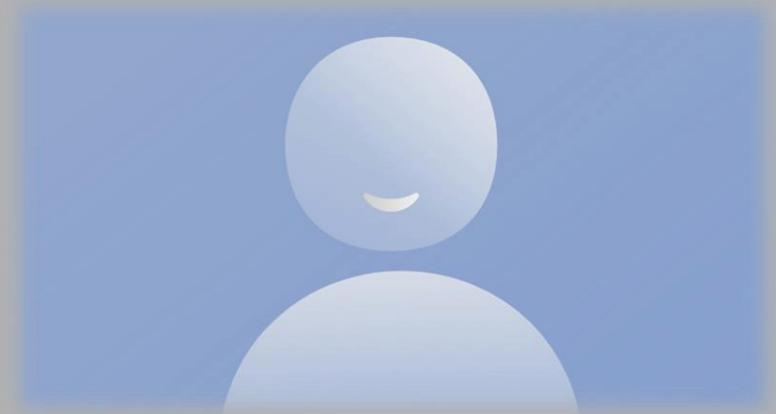


Dexter

HADDINGTON
DYNAMICS

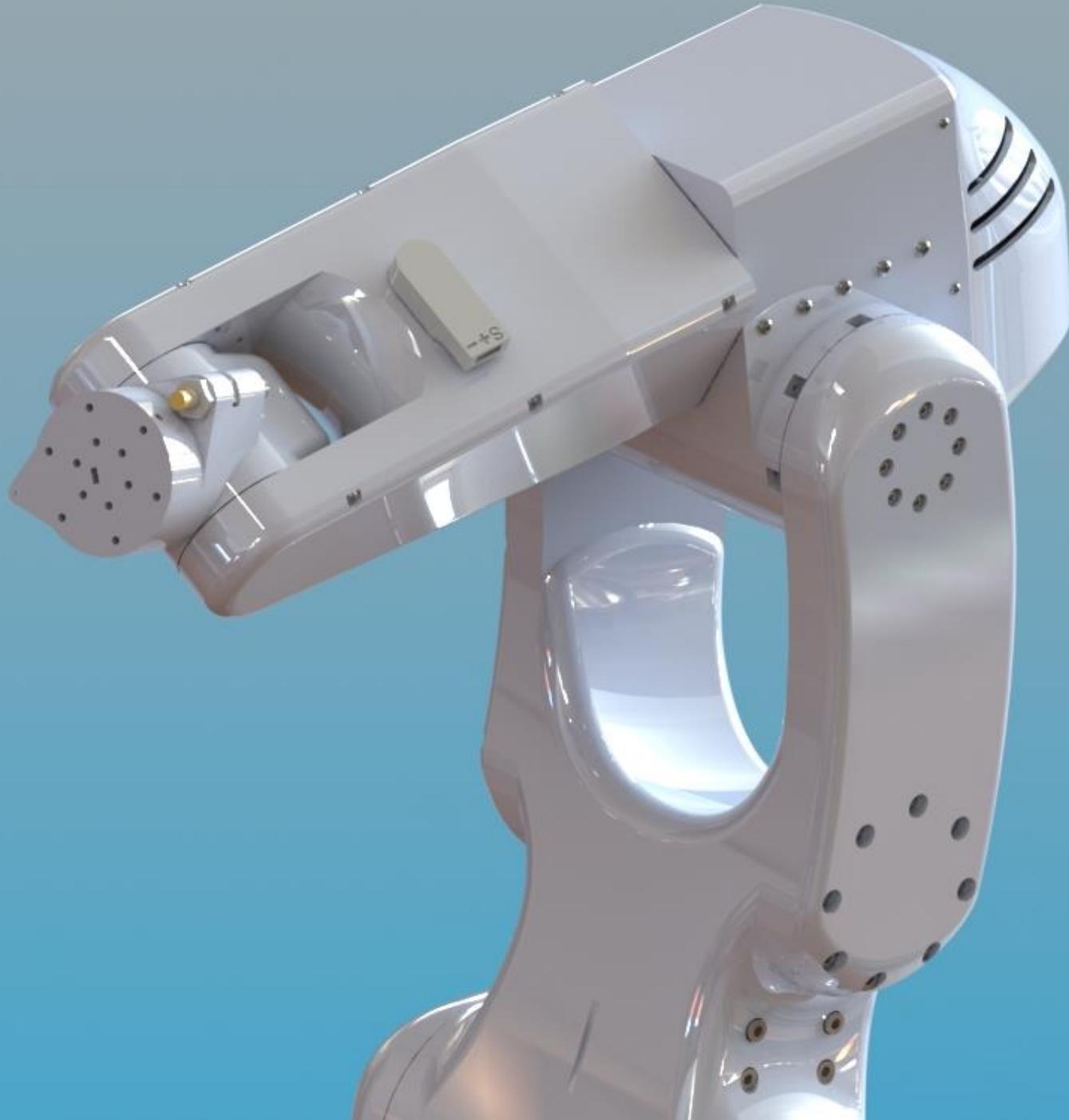


Buy/ build

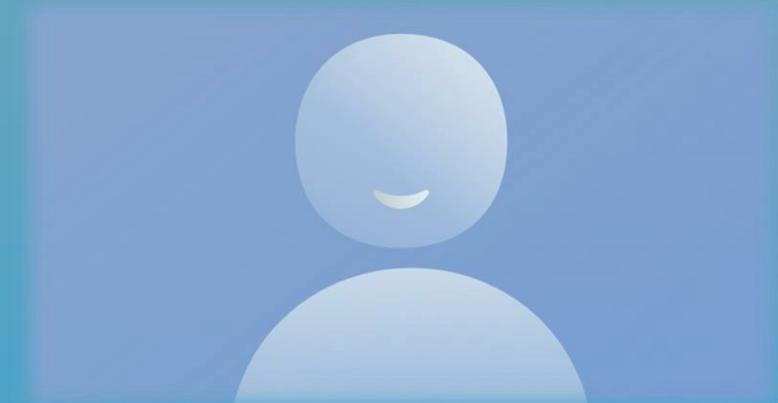


#50

Faze4



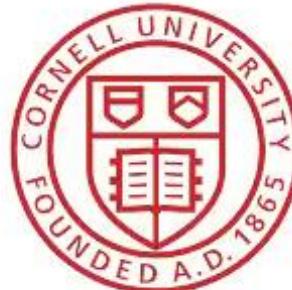
Buy/ build



#51



Yale



Open-Source, Anthropomorphic, Underactuated Robot Hands
with a Selectively Lockable Differential Mechanism:
Towards Affordable Prostheses

OpenBionics Robot Hands

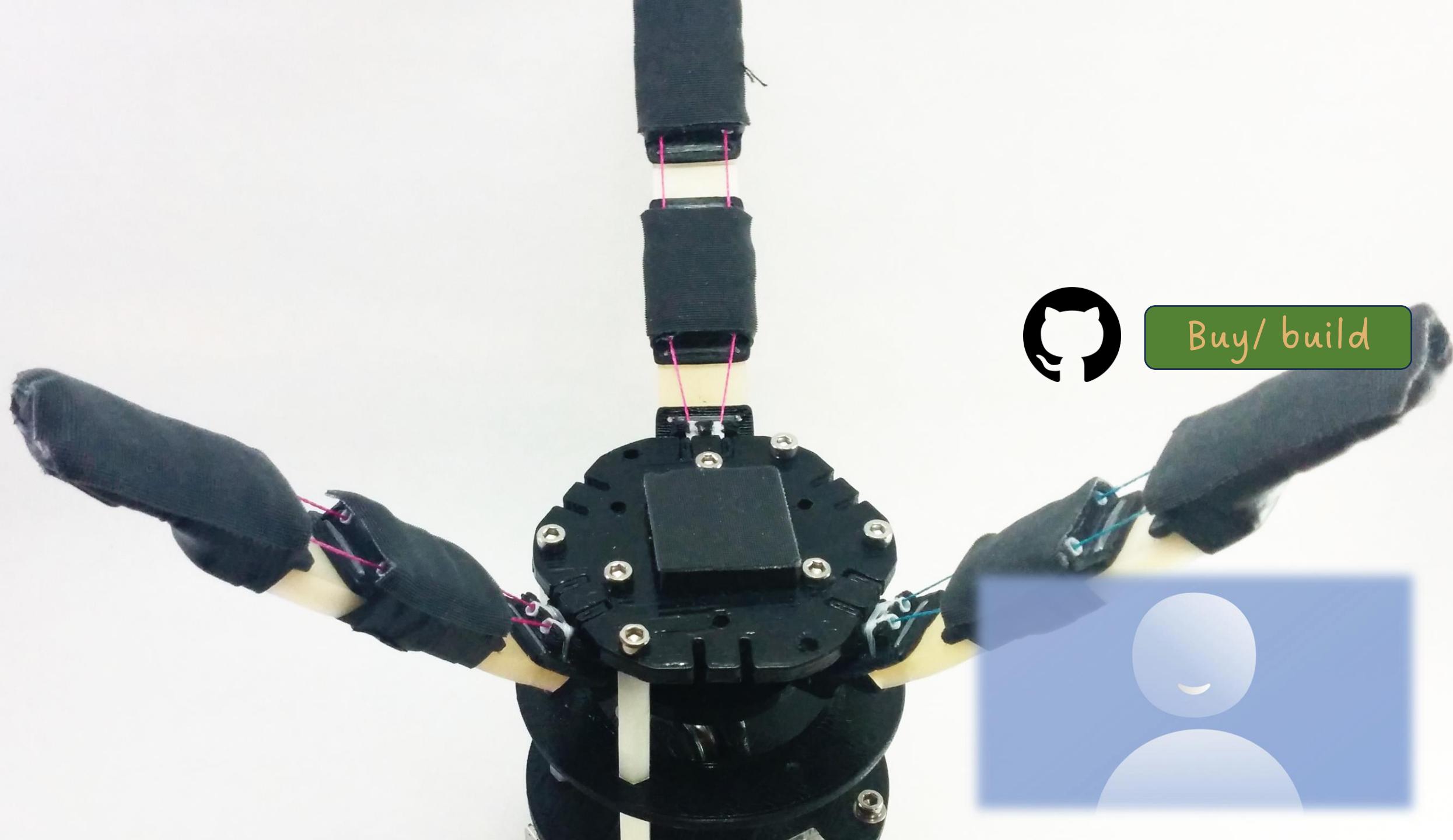
*George H. Kontosidis, Maria V. Lianikapsis, Agisilos S. Zisiatis,

^^Christoforos I. Mavrogiannis and *Kostas J. Kyriakopoulos

*National Technical University of Athens, Greece | ^Yale University, USA | ^^Cornell University, USA



Buy/ build

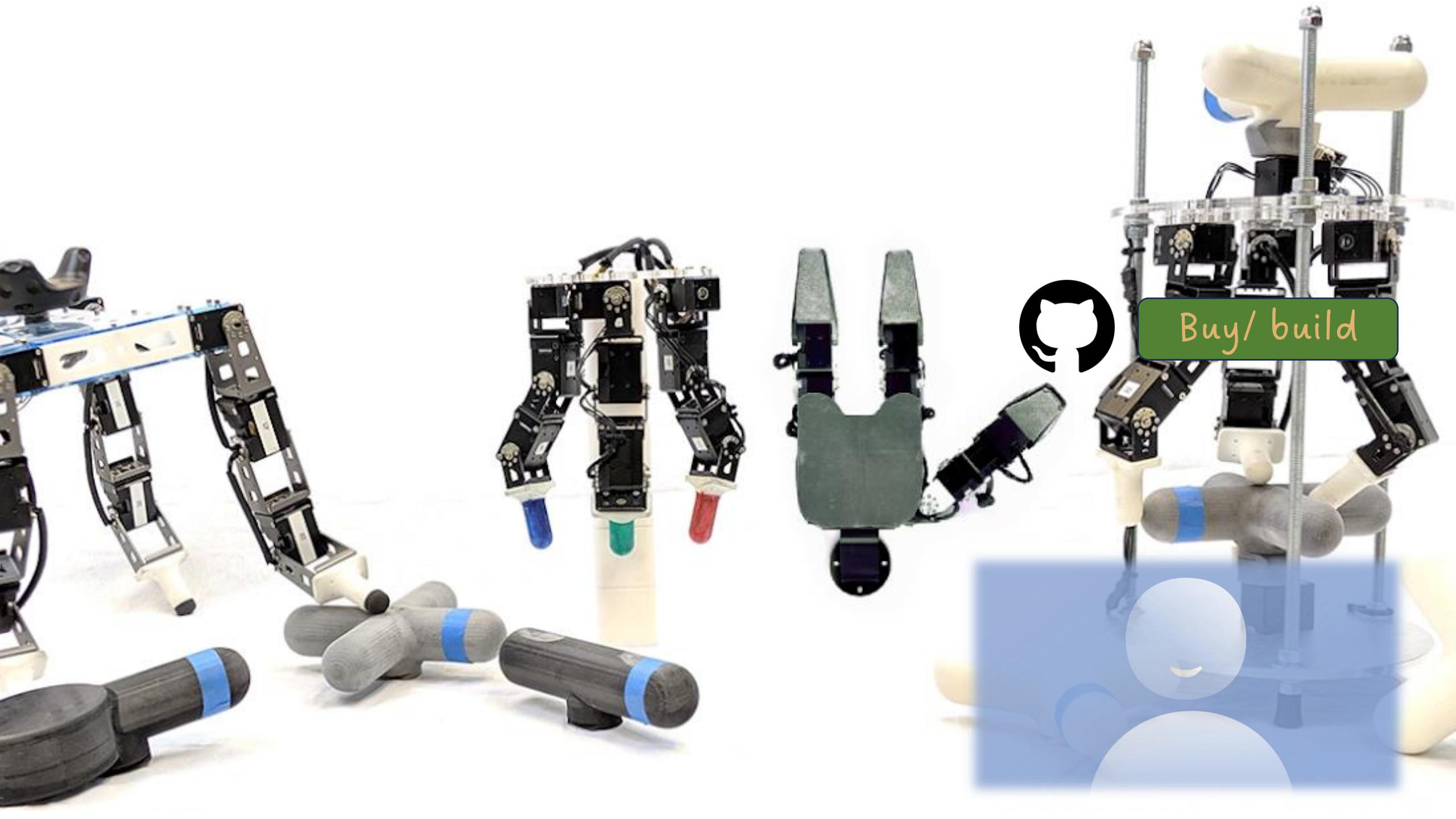


#52

Dexterous Manipulation with
Deep Reinforcement Learning:

Robel





Buy/ build



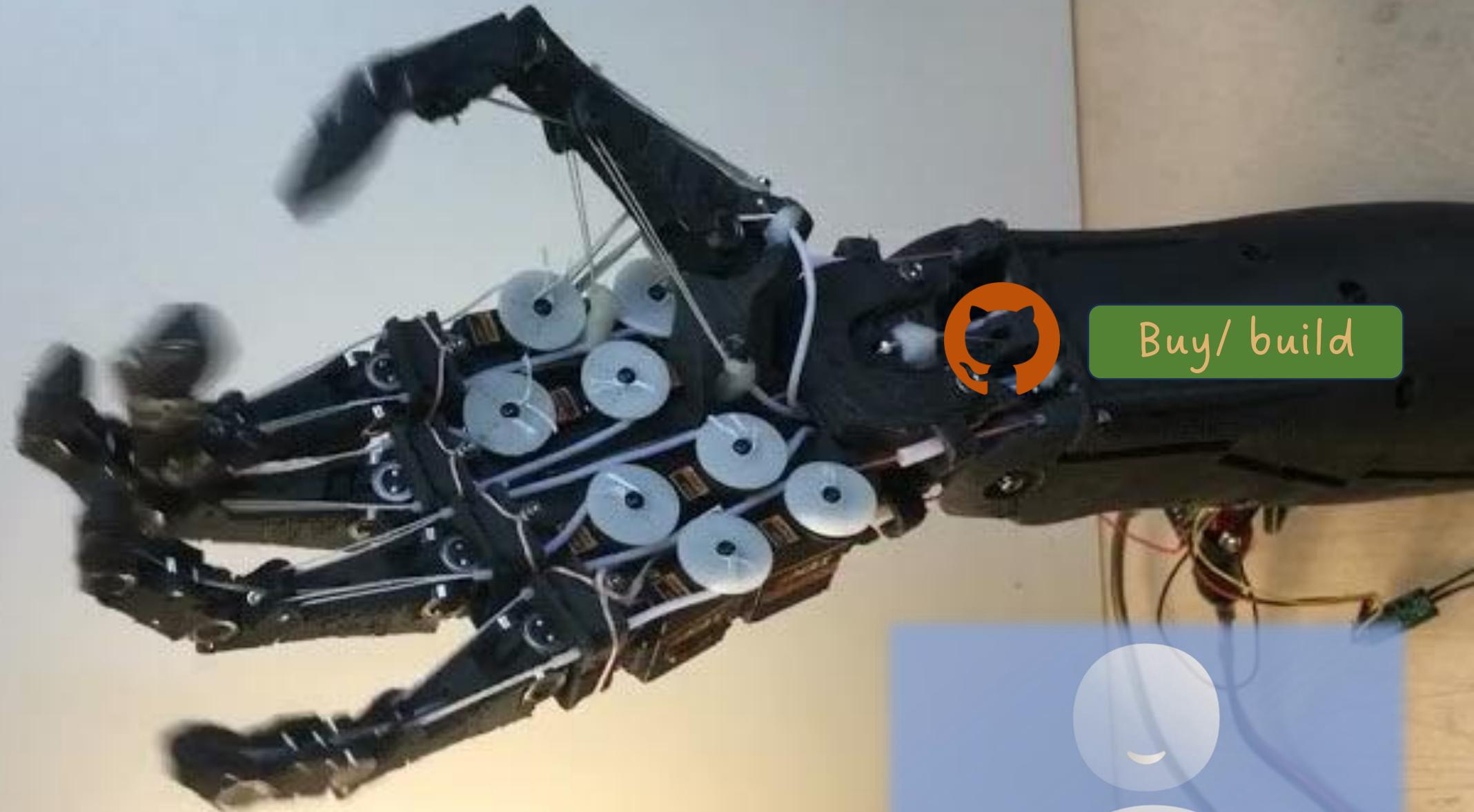
#53



DexHand



Buy/ build

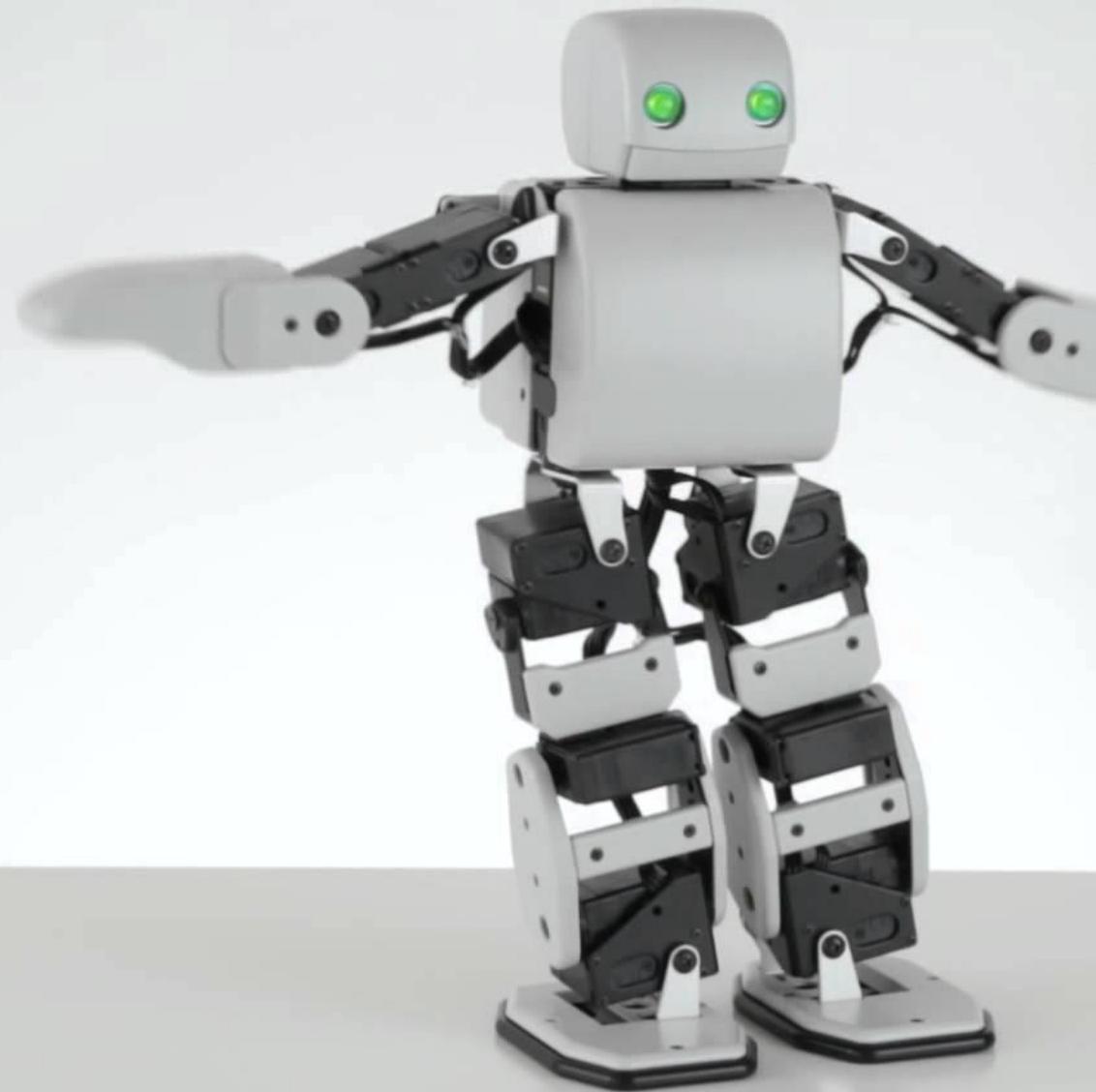


HUMANOID
ROBOTS

#54

PIEN2
PLEN2
mirror robot





Buy/ build



#55



EVEZOR



ez
jor

Open Source
Robotic Manufacturing

Buy/ build

#56

SALVIUS

an



SALVIUS

THE TIMES



Buy/ build

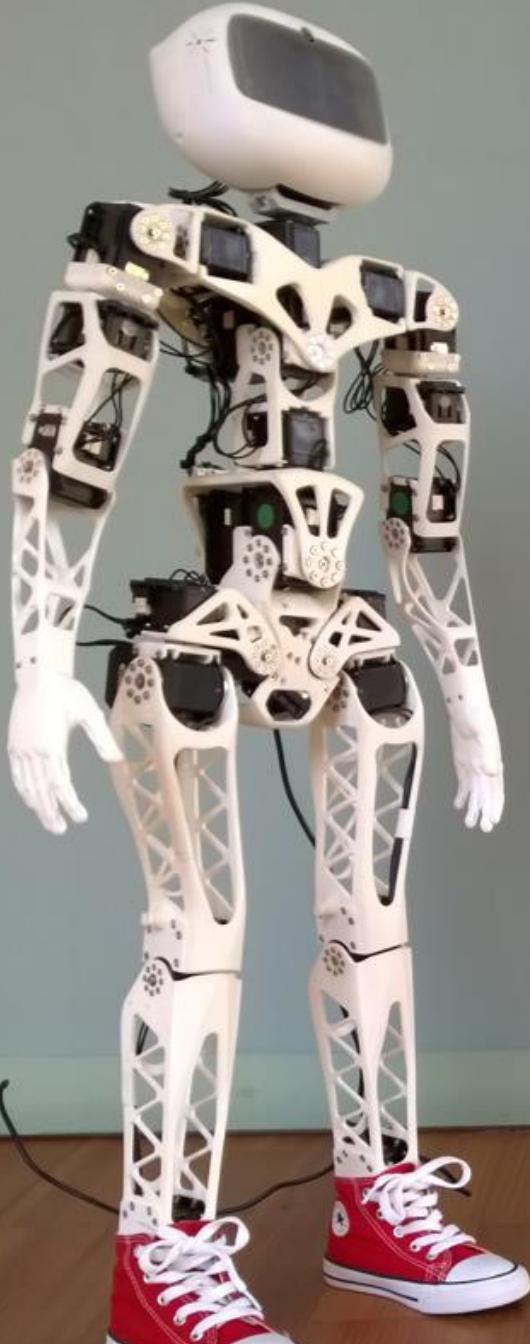


ISENBERG MBA
YOUR WAY

U

#57

POPPY HUMANOID



poppy

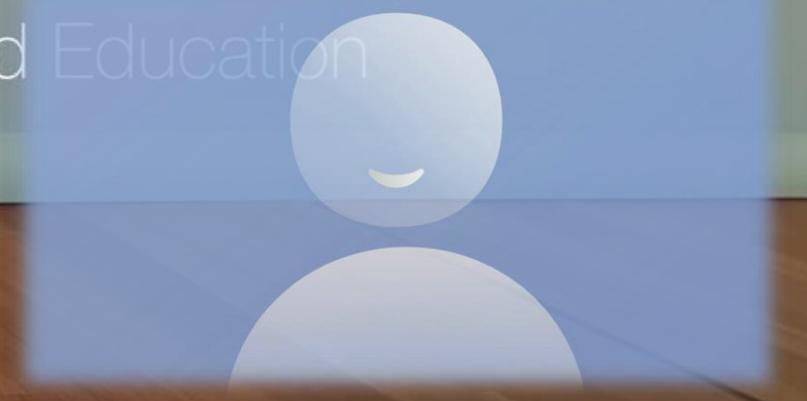
Poppy Humanoid

Version 1.0



Buy/ build

3D printed, open source
and **fully-modular** humanoid robot
for Research, Art and Education

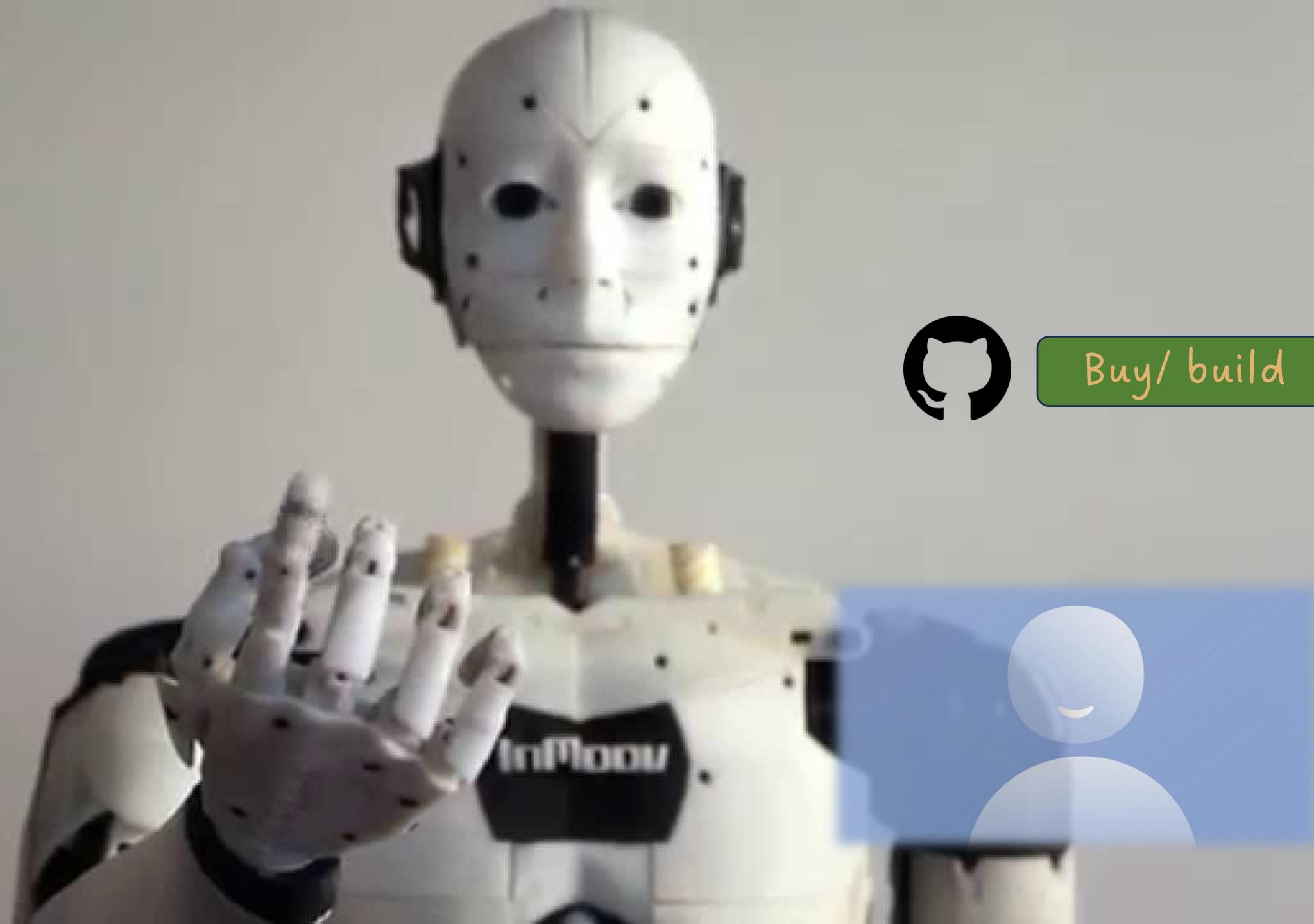


#58

InMoov

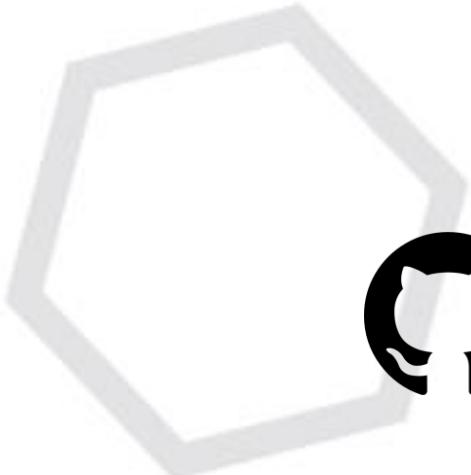


Buy/ build



#59

ROBOTIS OP3



Buy/ build



#60



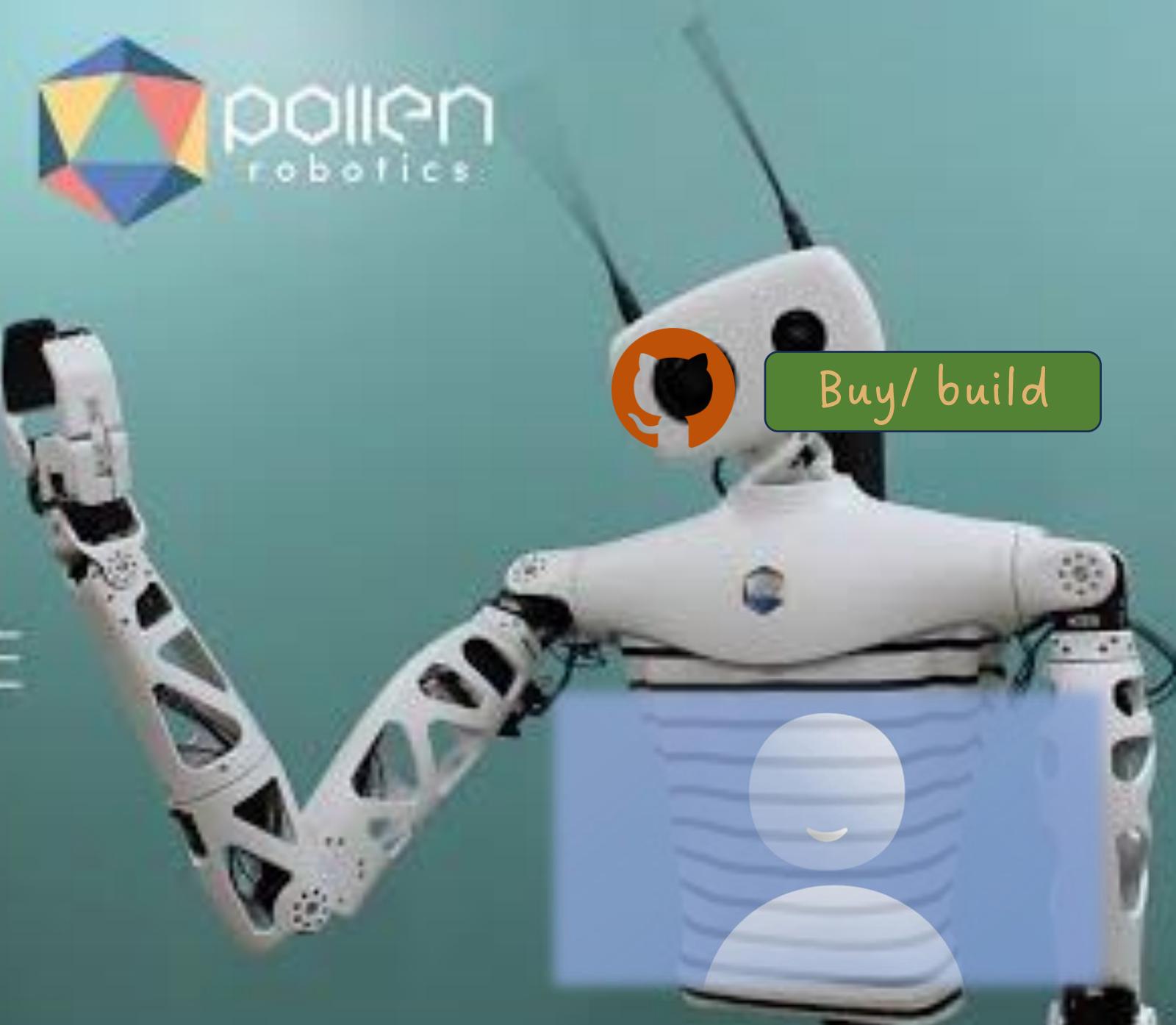
REACHY





Hello I'm Reachy!

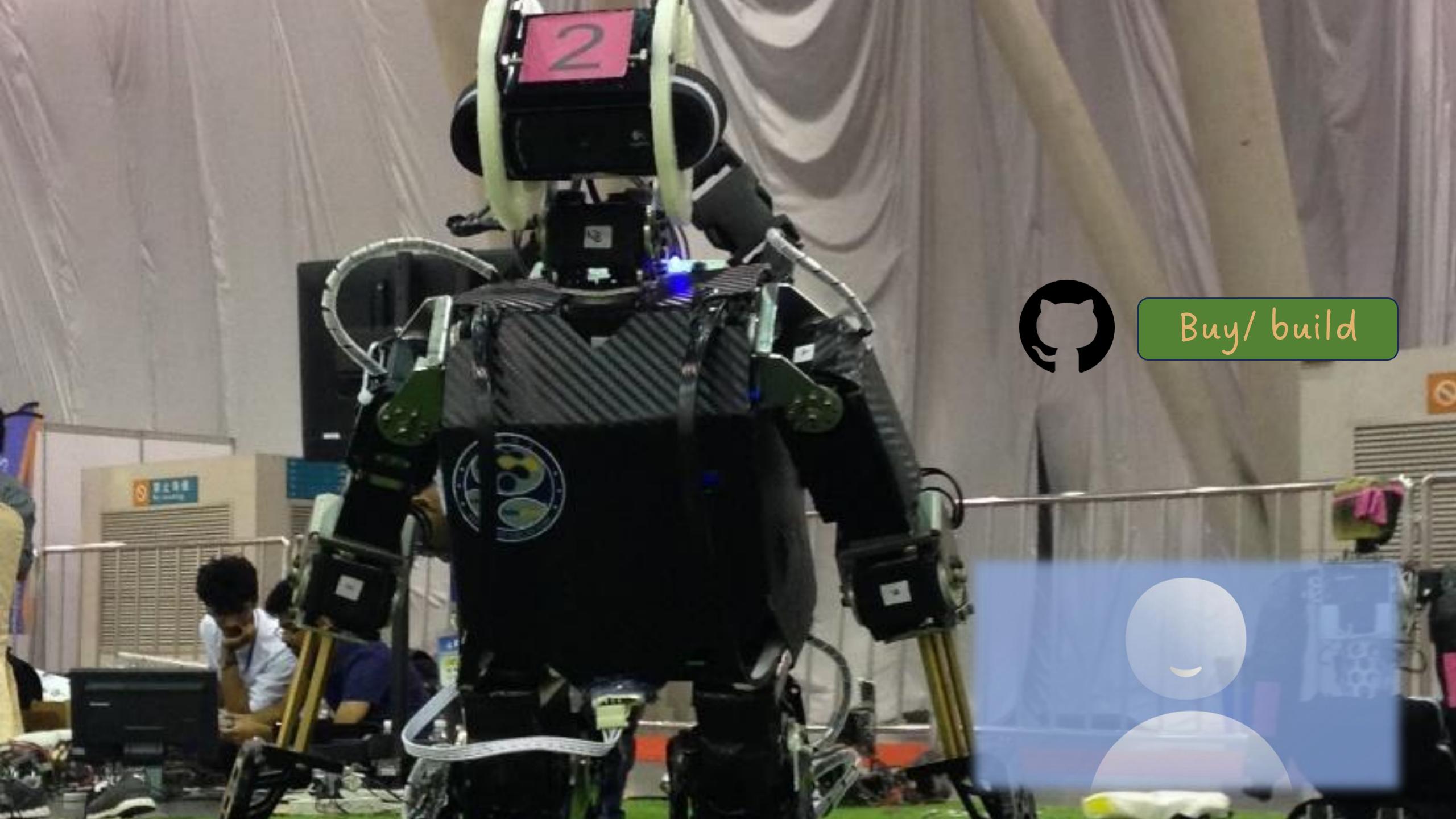
OPEN SOURCE
INTERACTIVE
ROBOT



Buy/ build

#61

EROS



Buy/ build

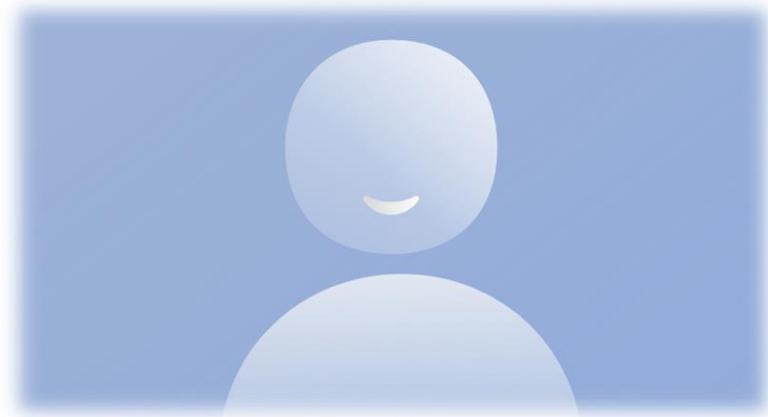
QUADROTOR

#62

CrazyFlie

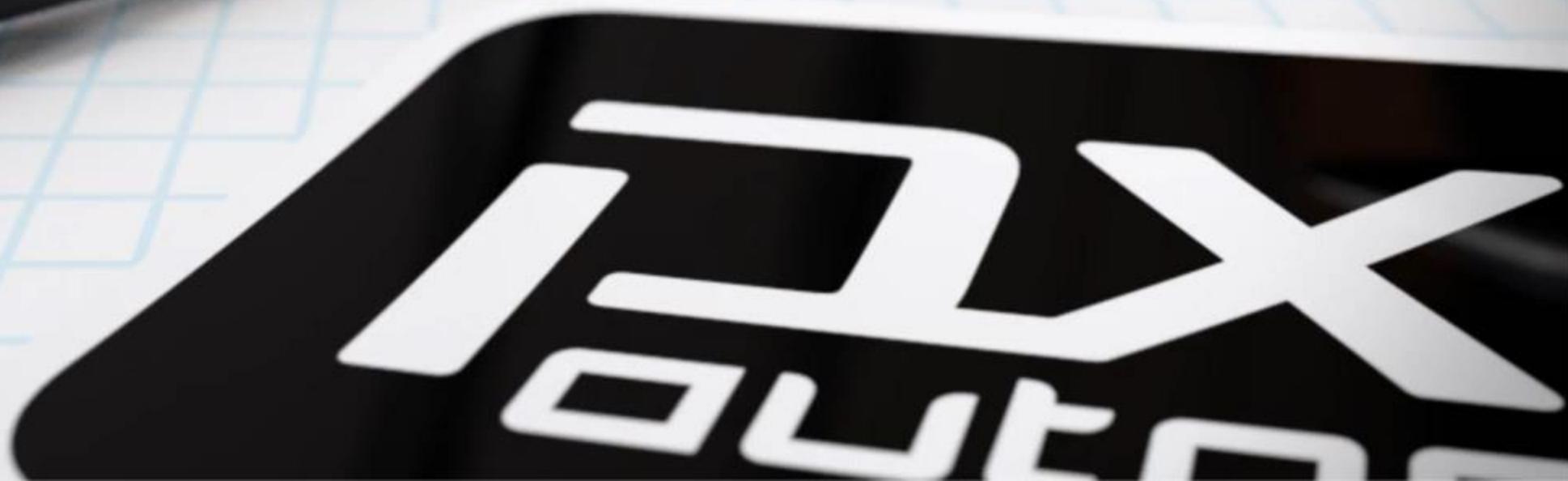


Buy/ build



#63

PX4



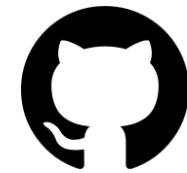


Buy/ build

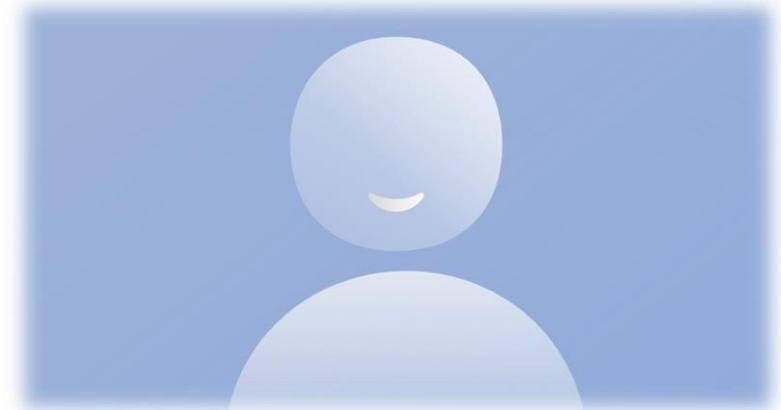
#64

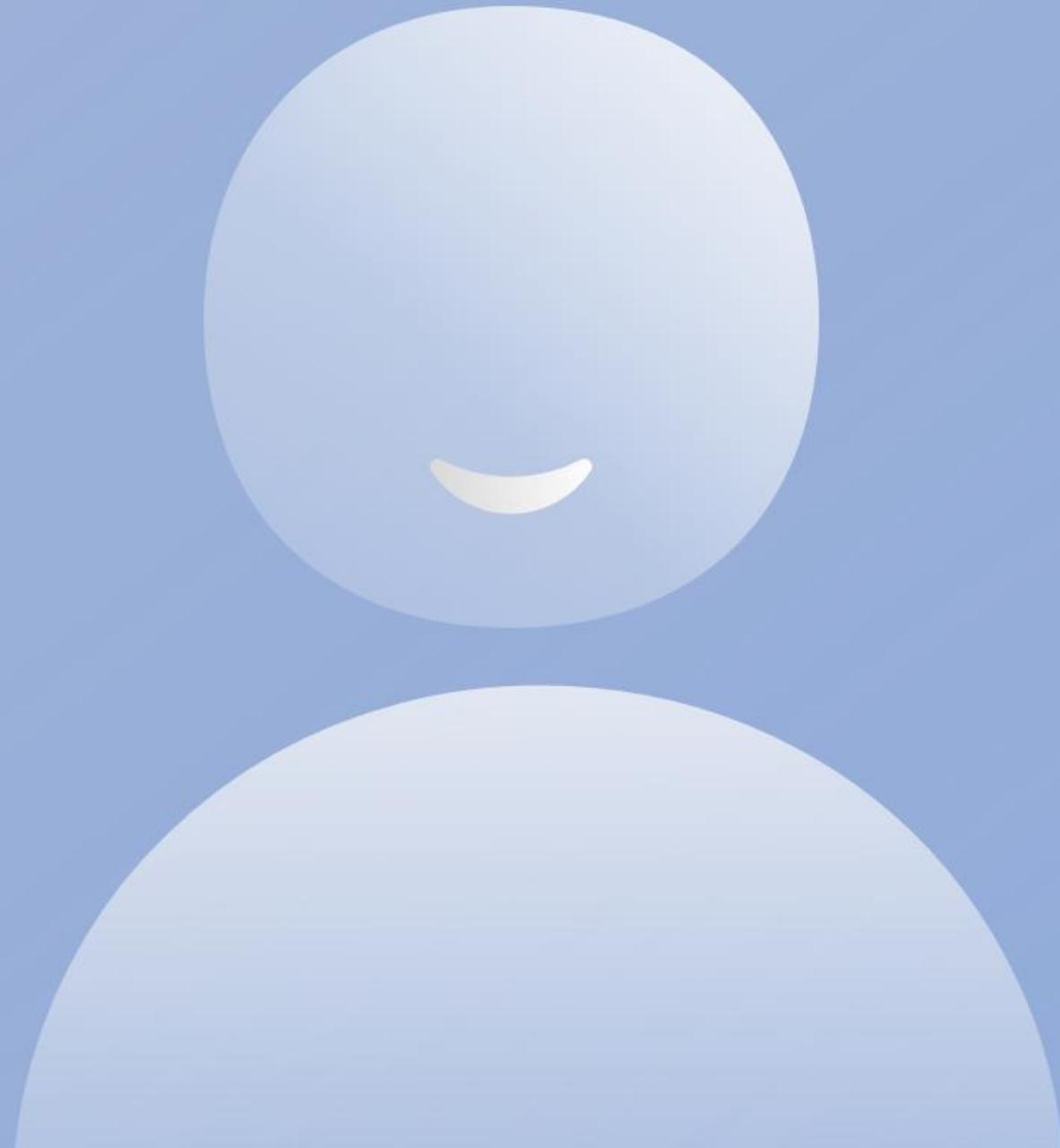
DJIPixHawk





Buy/ build





Good luck!

