Just1:
An Open-Source Autonomous Mecanum Wheel Robot

Nicolas Rodriguez

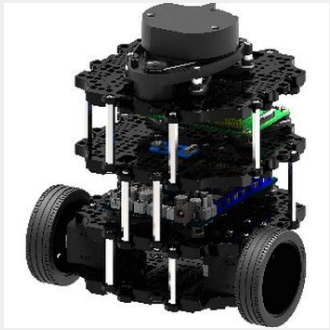
Breaking news: Open Source is cool

ROS 2™

GAZEBO

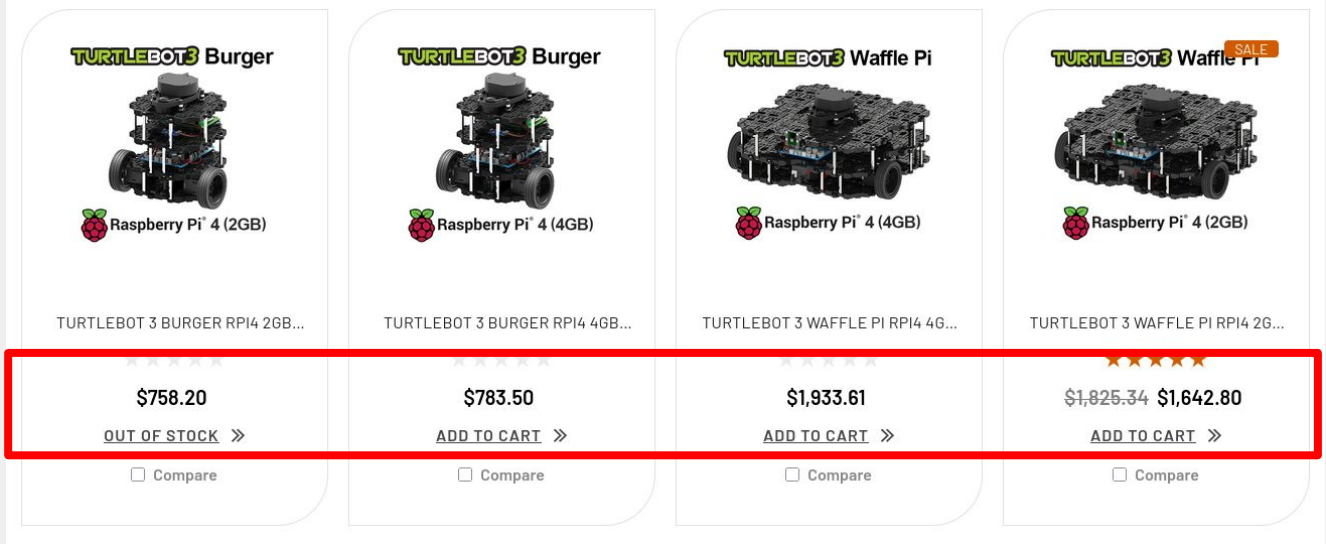
LeRobot

OpenCV



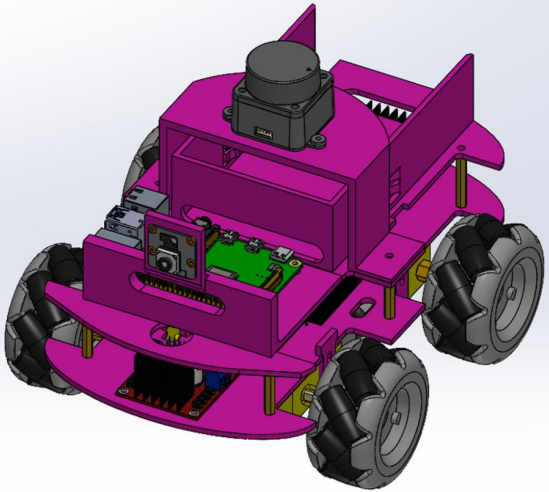
PX4 autopilot

But Hardware is expensive



Just1: Autonomous Mecanum Wheel Robot

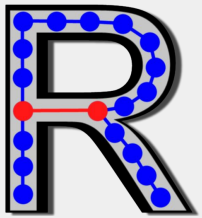
Raspberry Pi v4 8 Gb	$80
LD19 2D Lidar	$70
Pi Camera 3	$25
5V 3A Power Bank	$25
4 Wheel + TT motors	$15
2 L298N Drivers	$15
6 AA Batteries	$10
Micro SD Card	$5
IMU 6050	$5
New knowledge	Invaluable
Total	**$250**



Just1: Autonomous Mecanum Wheel Robot

FOXGLOVE

N A V 2



RTAB Map SLAM

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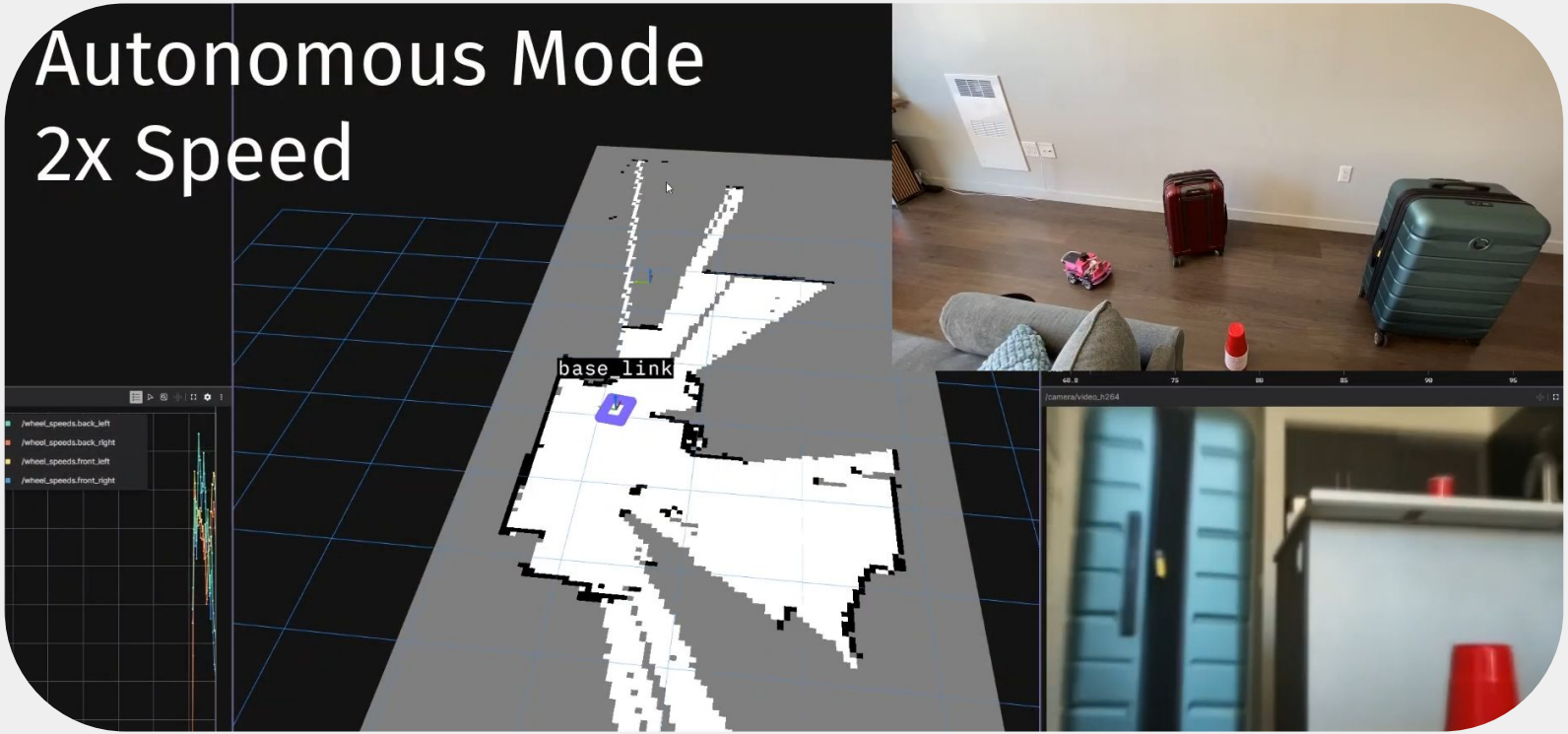

Just1: Next steps ideas

- Open CAD
- Open BoM
- Open Code
- Navigate manually or autonomously
- Omnidirectional movement

NRdrgz/Just1

- Docker image
- Add wheel encoders
- Camera + Lidar for SLAM
- Sim replica in Isaac Sim

NOW

ONE DAY?