Hello, Jetbot

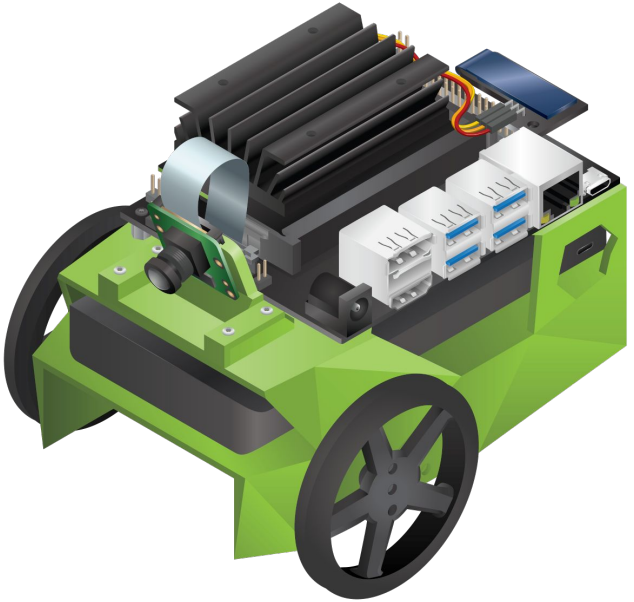
On the Table Project

Project Goal

- In 10 weeks
- Building up Jetbot
- Focusing on Software, not Hardware
- With Jetbot Sample Source to ROS Migration

- USE JetBot Expansion Board

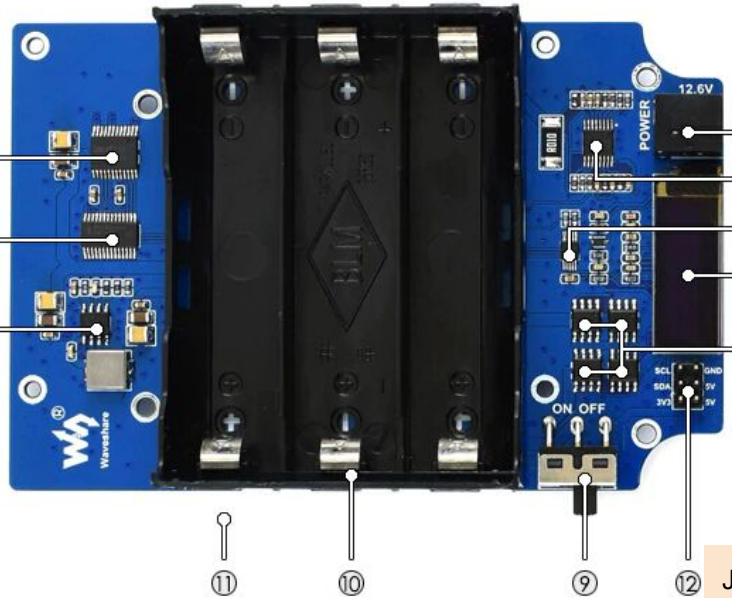
  “No Messy Wiring, Simple Assembly”




Less Effort on Hardware

JetBot Expansion Board

BMS | MOTOR | JETSON



⑥ TB6612FNG: dual motor driver

⑤ PCA9685: PWM controller

④ APW7313:: 5V power regulator

⑧ Battery charger input

① S-8254AA: lithium battery protector

② ADS1115: 16-bit AD monitoring the battery

⑦ 0.91inch OLED: SSD1306

③ AO4407A:: protection circuit

⑪ ⑩ ⑨ Power switch

⑫ Jetson Nano communication header

Development Plan (Phase I :: Remote Controlled)

#	week	SW	Task List	HW
1	8/09	get ready	· Ubuntu + Jetpack + Jetbot Install · Jupyter Notebook	
2	8/16	lcd node	· Displays Jetbot's status (Connection, IP, etc…) · Migration to ROS Node	
3	8/23	camera node	· Bring up camera · Image Preprocessing · Migration to Camera Node	
4	8/30	motor node	· Bring up motors · Controll Directions	
5	9/6	remote control	· Controll Jetbot with Blynk	

Development Plan (Phase II :: Autonomous on the table)

#	week	SW	SW Task List	HW
6	9/13	Data Collecting	・	
7	9/20	Image Training		
8	9/27	Image Training		
9	10/4	Integration		
10	10/11	Demo	・Demo	・Demo

Wanted

Camera, Motor, LCD BSP Developers

Computer Vision Engineers

Android App / Server Developers

Links

- Jetbot Github https://github.com/NVIDIA-AI-IOT/jetbot
- Jetbot Install https://github.com/NVIDIA-AI-IOT/jetbot/wiki/software-setup
- Jetbot HW Parts https://github.com/NVIDIA-AI-IOT/jetbot/wiki/bill-of-materials
- Collision Avoidance Demo https://www.youtube.com/watch?feature=youtu.be&v=U3VJCSDqdG4&app=desktop#menu
- Codes https://github.com/NVIDIA-AI-IOT/jetbot/tree/master/notebooks/collision_avoidance