Tri B. Minh (More Technical Portfolio: https://triknight.github.io)

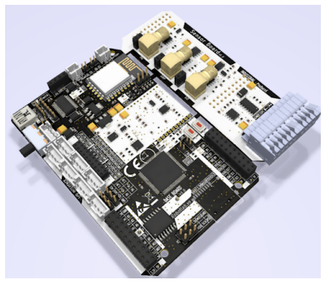
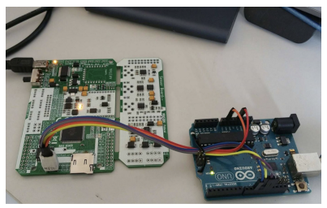
PCB Deign Portfolio 01 SEPTEMBER 2022

PCB 1. IoT Board for Shrimp farm

This project focus on creating the IoT board for shrimp farm by monitoring various water quality parameters: Dissolved Oxygen (DO), Temperature, and PH.

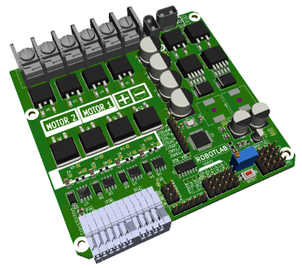
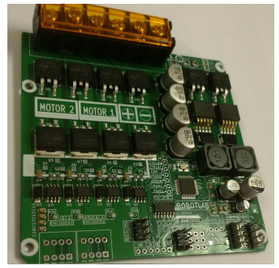
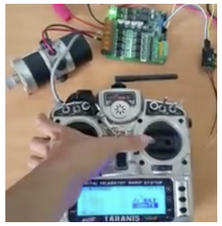
Function:

- Measuring water parameters: Dissolved Oxygen (DO), Temperature, PH.
- Connecting wirelessly via Lora connection
- Real-time clock and Deep Sleep function for saving energy
- Operating by using Solar power, charging for Li-on Battery
- Arduino Bootloader,
- Saving data offline on SD Card, and online on the server.
- Hardware communication interface: UART, I2C, SPI, Modbus, Analog, IO.

PCB 3D file	Bootloader to board	Field Test
		 

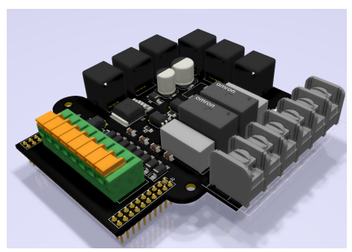
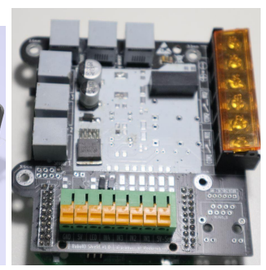
PCB 2. Motor Driver for Robot

This project makes the motor driver for the robot Double H-Bridge, which can control 2 DC motors with a maximum continuous current is 30A and an input voltage range from 12V-24V. It is controlled by the receiver RC signal from 1ms-2ms.

PCB 3D file and Layout	Manufactured PCB	Field Test
		 

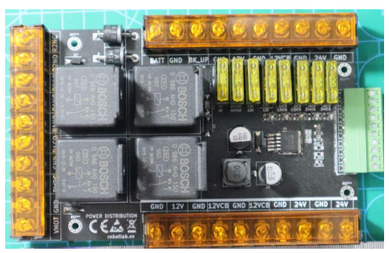
PCB 3. I/O Shield for robot

This shield uses for a robot with the main function being an interface with proximity sensors, ultrasonic sensors, input, and output signals.

PCB4. Power distribution board (PDB) for robot

This PCB using for distribution of the power to AMR (Autonomous Mobile Robot), power range from 5V-12V-24VDC, interface emergence stop button, fuses, and high current relay.



And More...

Sensor breadboard, mini motor driver,Jetson GPIO board, thrust stand..