Truong Minh Triet

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Summary: Experienced Embedded Hardware and Firmware Student with a passion for innovation. Actively engaged in various competitions focused on embedded systems, showcasing technical proficiency and problem-solving skills. Completed an Internship at Taiwan CGU, gaining hands-on experience in firmware development and collaborating within a dynamic team environment. I am eager to apply academic knowledge and practical skills to contribute effectively as an Intern in Embedded Firmware.

Experience

Nucode LTE Ho Chi Minh
Junior Embedded Software Start Year 2024 – End Year 2025
Hands on developing smart farm IoT project with Nucode board using NRF52840 microcontroller and Zephyr RTOS driver.
- Use Zephyr RTOS to program nRF52840 microcontroller to read ADC signals an use PWM to control pumping system for plant watering. Using RTOS feature of Zephyr to schedule tasks with a senior engineer to push data to company's platform via MQTT
- Nucode board is a custom board belongs to Nucode LTE company. I writing a document to help client understand the board feature, such as how to use it with Zephyr driver and how to upload bootloader into the board

Bosch Global Software Technologies Company Ho Chi Minh
Embedded firmware Engineer Start Year 2023 – End Year 2023
Responsible for developing and designing MCAL, BSW, RTE and ASW layer based on AUTOSAR standard.
- Enable the peripheral such as GPIO, SPI, CAN bus for TC275 microchip.
- Controlling actuator and reading sensor in car applications
- Interact with FOTA using Raspberry Pi as a gateway to upload software from microchip to Jetson Orin

Personal Thesis Ho Chi Minh
Bionic arm control using EMG sensor Start Year 2022 – End Year 2022
- Research and design a Bionic arm for disabled individual using EMG sensor and control with Servo motor
- Design an EMG circuit and using Atmega328P to read EMG's data
- Use Atmega328P to control servo motor map with EMG data

Summer Internship at Chang Gung University Taoyuan/Taipei
Internship and graduation thesis Start Year 2024 – End Year 2024
Design a Lazer-light cueing shoe for Parkinson Diseases Individual
- Design hardware using STM32F446RE microchip communicates with ICM20948 IMU via SPI protocol to capture foot motion, NRF24L01 to synchronize the data from both shoes and BLE to upload data from shoes to computer and FOTA applications.
- Design firmware for reading data from IMU, NRF24L01, JDY-18 BLE and FSR sensor. Control the Lazer-light cueing and vibrator to stimulate patients' foot to help patients get out FoG symptom.
- Design Software to receive BLE data using Qt creator and design GUI for Ble application on Windows and Android.

Activities and Projects

Teaching Assistant Arduino programming (2020)

- Teaching Assistant at Teky for high school students learning Arduino using C++.

Participate Kambria Hackathon (2021)

- Building medical support robot using ROS to measure SPO2, Blood pressure and Heart rate.
- Using Arduino to read sensor data and transfer the data into the embedded computer inside Ohmni robot which is given by the host.
- Using ROS to navigate the robot and control robot's movement.

Participate Student Scientific Competition (2023)

- Build an autonomous drone using STM32F4 as a main microcontroller.
- Using Kalman filter algorithm and PID controller for drone stability.
- Using MQTT to broadcast the data read from the drone to NodeRed server via UART between STM32 and ESP32

Building custom STM32F4 BareMetal HAL layer (2024)

- Building a custom STM32F4 HAL layer to understand the microcontroller structure.
- Using C and CMake built the project.

Unmanned Aerial Vehicles research and design (2024)

- Build a manual and automatic drone for dropping balls to targets

Education

Ton Duc Thang University, Bachelor, Automation and Control Engineering, 2019

- A 4-year, full-time degree program

Skills

- Programming languages: C/C++, Python, Rust
- Hardware design: Altium, KiCad
- Frameworks: Qt creator, Pytorch, ROS2
- Operating Systems: Ubuntu, Windows
- Languages: English (Ielts 6.0)