TRUONG QUANG BAO KHANH

EMBEDDED SOFTWARE ENGINEER

Career goals

Fullstack software embedded system, proficient in C/C++ programming for MCU, ECU.

Project

Trainee ｜ Hitachi Digital Services VietNam
26/02/2024 - 25/05/2024

Task: FSP Training with **Renesas RA6M3 MCU** Group.

- Read HW User reference manual, datasheet.
- Create/import and configure a project using GPIO, UART, PWM, ADC, SPI, USB.
- Understanding how FSP works, HAL.
- Develop **SPI, DMA, I/O Port, ICU** driver for RA6M3.
- Understanding Unit Test, Gtest Framework.
- C/C++, **Device Driver**, FSP, RA6M3, Gitlab, Jira.

Leader ｜ PID INCUBATION SYSTEM - STM32(UTH)
15/05/2023 - 30/06/2023

Task: Program the whole system, design 2-layer PCB circuit.
SPI communication with **MAX31865 and PT100** sensors to read ambient temperature, using 0 point detection circuit, Triac excitation circuit incorporates **PID** algorithm for temperature control, monitoring and installation by LCD. Using **STM32F103** microcontrollers.

Leader ｜ GREENHOUSE PLANT IOT SYSTEM - ESP32(UTH)
01/2022 - 07/2022

Task: Programming the whole system, designing electronic circuits.
Program the **MQTT protocol** to transmit and receive data using WiFi, using MQTT Broker Mosquitto. **Programming PID** controllers to control the temperature in the greenhouse, programming **PWM** to control soil moisture. Monitoring and control via **node-red** dashboard.

Leader ｜ ROBOT SUMO - ARDUINO(IUH)
01/2023 - 18/03/2023

Task: Brushed motor control programming, mechanical design and electronic circuitry.
Design and program SUMO robot algorithm, communication and voltage stabilizer for **5 Laser sensors**, mechanical design and electronic circuit design for Robot weighs only about 1.4kg but can push weight up to 40Kg.

Contact

- 09/11/2002
- khanh.truongquangbao@hitachids.com
- 363/29/12/35 Binh Tri Dong, P.BTDA, Binh Tan District.
- 0774681876

Skill

1. A software developer with nearly 1 year in Embedded System.
2. Experienced with MCU (STM32, AVR, ESP, PIC). Be knowledgeable about **ARM Cortex** architecture.
3. Driver programming for STM32, RA6M3 peripherals such as GPIO, SPI, DMA etc. Understanding **Git Bash, Gitlab**.
4. Understanding of communication standards such as UART, I2C, SPI, MQTT, Bluetooth.
5. Have basic knowledge in analyzing requirement, software design, coding, debugging. Able to learn and apply new technologies quickly, with high team-work spirit.

Certificate

Basic informatics certificate *(28/09/2022)*
Basic knowledge of Word, Excel, Powerpoint.

Language

English
TOEIC 770

Education

Industrial Automation 2020 – 2024 **GPA: 3.22**	Ho Chi Minh City University of Transport

References

Hoang Đuc Quy

Master

☎ 0763533135

✉ quyhd@ut.edu.vn

Honours & Awards.

5th Robot Arena Competition   *(18/03/2023)*
FIRST PRIZE

The Ho Chi Minh People's Delegation of Ho Chi Minh City University of Industry in cooperation with the Faculty of Electronics Technology organized.

1st Science - Innovation - Technology Competition   *(29/8/2023)*
FIRST PRIZE

Faculty of Information Technology, Ho Chi Minh City University of Transport HCM organizes.

Sumo Robot Auto Robo Design Competition 2023 *(18/3/2023)*
CONSOLATION PRIZE

Organized by Ho Chi Minh City Student Cultural House.