



PHAN QUOC BUU

EMBEDDED SOFTWARE ENGINEER

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Male

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127 Tang Nhon Phu, Phuoc Long B, District 9, Ho Chi Minh City

Education

Control and Automation Engineering

08/2019 - 06/2023

Industrial University of Ho Chi Minh City

Degree: Engineer

GPA: 3.33/4.00

Achievement/ Awards:

- Scholarships: Throughout my 4 years of study, I received 3 scholarships covering 50% of the tuition fees and 1 scholarship covering 100% of the tuition fees during 4 out of 8 semesters.
- Scientific Research:
 - Participated in the INNO GREEN life 2023 competition and achieved a place in the top 10 for outstanding ideas.
 - Took part in the Euréka 2023 technology competition and received an encouragement award.

Work experience

Embedded Software Intern

06/2023 - Present

FPT Telecom - IoT LAB

Skills and training:

- Familiarized myself with various microprocessors commonly used in commercial settings, particularly STM.
- Worked with large, well-structured source code repositories and utilized automated builds.
- Received additional guidance from experienced professionals to acquire new knowledge about operating systems and software, with a focus on Ubuntu operating system.
- Practiced and honed my skills in C and C++ programming languages. Applied problem-solving techniques to solve coding challenges on platforms like Learn Code Online, covering topics such as pointers, arrays, JSON, data filtering.

Activities

Construction and control of autonomous robots in a warehouse

(Graduation thesis)

10/2022 - 07/2023

Position: Team Leader and software development

Description:

- Create an automatic robot capable of automatically scanning and controlling the operating area. Robot is programmed to automatically transport heavy loads at specific locations in the operating area.

Contribution:

- Developing firmware for MCU (Arduino Mega 2560) to control hardware, receive control commands from the ROS(Robot Operating System) middleware, and receive manual control commands via Bluetooth.
- Collecting environmental data from Lidar, storing and analyzing map data, and adjusting robot parameters.- Designing the external structure and mechanical principles using AutoCAD.

Tech Stack:

- Programming language: C/C++, Makefile, Python.
- Tools: Autocad, SolidWorks, Visual Studio Code, Rviz, Bluetooth control.

Modbus Wireless 2.4Ghz

(FPT Telecom - IoT LAB)

8/2023 - 11/2023

Position: Firmware development and Tester

Description:

- The Modbus Wireless 2.4GHz project involves converting the industrial communication protocol Modbus RS485 into a wireless RF24 signal using the nRF24L01 module. This project aims to facilitate data collection from RS485 sensors without the need for direct physical connections.

Contribution:

- Developing firmware for MCU (STM32L151) to control module nRF24L01, enabling the collection of data from RS485 sensors and transmitting it wirelessly.
- Create options for channel and baudrate communication.

Tech Stack:

- Programming language: C/C++, Makefile.
- Tools: Visual Studio Code, pulseView.

Fcam

12/2023 - Present

Position: Firmware development

Description:

- FPT's New Camera Project.

Contribution:

- Developing firmware for Camera.

Honors & Awards

7/2023 The INNO GREEN life 2023 - Top 10 for outstanding ideas

9/2023 The Euréka 2023 technology competition - Encouragement award

Interest

Passion for Hardware and Embedded Software Technology:

- Closely follow the latest trends and innovations in the field of embedded systems.
- Enjoy exploring hardware and software solutions to optimize the performance and functionality of embedded systems.

Enthusiasm for Emerging Technologies:

- Eager to explore and learn about new technologies in the field, such as IoT, AI/ML, and automation.
- Experiment with and apply novel technologies to personal projects.

Skills

Technical skills:

- Programming languages: C/C++, Shell script, Make files for build automation.
- Microcontroller and Microprocessor Familiarity: ARM, STM32, PIC, Arduino.
- Embedded Operating Systems: Linux.
- Platform and Framework: ESP-IDF, STM32CubeIDE, Visual Studio, Qt.
- Communication Protocols: UART, SPI, I2C, Modbus.
- Network Protocols: MQTT, RF24, Wifi, Modbus, Zigbee.
- Knowledge of Firmware OTA.

Office Software Skills:

- Proficient in using Word, Excel, Power Point tools.

Soft skills:

- Logic analysis for debugging and testing.
- Schematic analysis and technical documents.
- Ability to work independently, research to solve issues during project execution.

Certifications

05/2024 - Toeic 420

Objective

Expand technical expertise in embedded systems