NGUYEN VIET Y

Embedded Linux Engineer

Date of birth: Dec 27, 2000
Gender: Male
Phone: (+84) 976 967 581
Email: nguyenviety2000@gmail.com
Address: 79 Tang Nhon Phu, Phuoc Long B Ward, Thu Duc City, Ho Chi Minh City.

SUMMARY

Throughout my academic journey and internship experiences in electronic communications companies, I have delved into and cultivated embedded systems for various applications such as device control, monitoring systems, and the Internet of Things (IoT). Through my work, I have acquired foundational knowledge in C/C++ programming languages, various communication protocols, and other soft skills to address challenges, ensuring the stability and reliability of the products.

EDUCATION AND TRAINING

HCMC Nong Lam University (2018-2023)

Specialization : Mechatronics Engineering
Degree : Engineer
GPA : 3.02/4.0
B2 : 600
Curriculum :

- C/C++ programming
- Analyze block diagrams and comprehend the principles of basic electrical circuit operation.
- MCU programming: ATmega328P (Arduino Uno R3).

FPT Telecom - IOT LAB (Intership) *09/2023 - 01/2024*

- Learn data structures and algorithms, practiced solving problems on platforms like Codeforces, SPOJ, UVA, Hackerrank.
- Explore and approach architectures designed for embedded systems (Event-Driven, U-boot, Linux kernel).
- Experience with the GNU/Linux Ubuntu operating system and command-line interface.

SKILLS

Technical Skills

- **Programming Language** C/C++, Makefile for build automation.
- **Development** STM32, Arduino, Raspberry Pi.
- **Protocols & Peripheral** GPIO, UART, SPI, I2C, Interrupt, Timer.
- **Tools** STM32 CubeMX, Visual Studio Code, Git, Proteus, Putty, Minicom.
- **Operating Systems** Linux OS and command-line interface, Windows.
- **Platform & Framework** Busybox, Das-Uboot, OpenCV, Keras, Google Colab.

Soft Skills

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

Teamwork Skills

- Ability to work effectively in a team environment.
- Listening and communication and collaboration.
- Sharing knowledge and expertise with team members.

PROJECTS

FPT Camera Platform

Description:

Developing video/audio stream features through P2P connection, supporting integration with Web/App devices using WebRTC model.

Contribution:

Firmware development:

- Researching and testing APIs (video and audio streaming) from the Realtek SDK for integration into the system.
- Developing the capability to record H.264 and G.711 ALAW samples to an SD Card, catering to the playback process.
- Developed control features by handling JSON message requests from clients through the data channel, including functionalities for Pan-Tilt, Playlist querying, and downloading records from the SD Card.
- Build kernel, rootfs using Realtek SDK (base on Buildroot platform) and deploy it on camera board.

Tech Stack:

- Programming language: C/C++, Makefile.
- Tool: Git, Wireshark.
- Protocol: Telnet, NFS.

PROJECTS

Fire Alarm System

Description:

Retrieve images from the scene, parser to detect fires and send information to users.

Contribution:

Firmware development:

- Researching and testing AT commands for the SIM800a module.
- Researching and exploring the YOLOv6 model.
- Utilized the OpenCV Library to capture images from the camera.
- Training YOLOv6 model to detect smoke and fire for notifying users via messages and emails.

Tech Stack:

- Programming language: Python.
- Tool: Google Colab, Putty, Advanced IP Scanner, VNC Viewer.

Self-Driving Car

Description:

Designing and developing a self-driving vehicle capable of staying within lanes and recognizing traffic signs.

Contribution:

Firmware development:

- Studying and implementing image processing algorithms to detect road lanes and calculate the curvature of the lane.
- Researching and implementing the PID control algorithm for steering control in a vehicle to keep it within the lane.
- Training a CNN model to detect traffic signs.

Tech Stack:

- Programming language: Python.
- Tool: Pycharm, Putty, Advanced IP Scanner, VNC Viewer.
- Framework: OpenCV, Keras, RPi.GPIO

REFERENCE


LinkedIn

Personal WebPage

Github