Huan Nguyen-Duy

Embedded / Automotive

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OBJECTIVE

Taking advantage of Embedded System Development and Object-Oriented Programming skills & understanding to become a Fresher and bring a lot in the automotive industry and another.

EDUCATION

HCMC University of Technology and Education Oct 2019 - May 2023

Bachelor of Computer Engineering

GPA: 3.22 / 4

Academic transcript

https://github.com/Winxkin/Personal_DHN/blob/6545e1a157884fc28ed96d17a50f262ca0c0b9f4/University/Academic%20transcript.pdf

WORK EXPERIENCE

HCMC University of Technology and Education September 2019 - June 2023

Projects in university

- Experience with microcontroller 8 bit (8051)

Description: Have basic knowledge about MCU 8051 (GPIO, interrupt, UART). Communicate with another peripheral (led, segment 7 led, matrix led, button, matrix button, etc).

-Experience with microcontroller 32 bit (STM32F1)

Description: Have basic knowledge about MCU STM32. Communicate with another peripheral (led, segment 7 led, matrix led, button, matrix button, etc).

YouTube: https://www.youtube.com/watch?v=WwInWE8xIr0

GitHub: https://github.com/Winxkin/STM32_LCD_menulist.git

-Design basic digital electronic elements using Cadence Virtuoso

Grade: 10.00

Creating and simulating a digital circuit for some basic digital elements such as logic gates, Flip Flop, and counter using Cadence Virtuoso tools based on Samsung 90nm process. Evaluating timing and gain to config ratio W/L of CMOS/NMOS for best performance.

GitHub: https://github.com/Winxkin/VLSI_Lab

YouTube: https://www.youtube.com/watch?v=8D4A5gXhkC0&;list=PL4wGMuTv9qqntMptkogEned6zjGu4eYeo

-Project: Library manager application (Using QT framework)

Grade: 9.00

Programming: C++

Using C++ programming based on style Object-oriented programming (OOP) combines QT framework to build the UI app.

Appling tool DB Browser for SQLite to build databases locally.

YouTube :

https://www.youtube.com/watch?v=QobJnvS4IBI&;list=PL4wGMuTv9qqlfitPr_mp0eeJJlGMDo30z&index=6

GitHub: https://github.com/Winxkin/libManager

-Develop Bluetooth low energy (Beacon device) using module BLE NRF51822 and gateway using ESP32

Grade: 10.00
Microcontroller: SoC chip NRF51822, ESP32 module
Programming: C, C++
Finding direction to connect chip SOC nrf51822 with J-link debugger to build the code into the chip (KeliC5 tool).
Using C programming to build BLE protocol based on a Nordic semiconductor company's SDK (Software Development Kit).
Combine Wi-Fi and Bluetooth library of IDE Arduino for Esp to change the protocol from Bluetooth to Wi-Fi.
Receiving the data from the BLE beacon device and sending this to the Firebase server.
Controlling the period of time the advertising of BLE device, data sent, name of the device,...
GitHub:
https://github.com/Winxkin/nRF5SDK110089a8197.git
https://github.com/Winxkin/ESP32_scanBLE_wifi
YouTube: https://www.youtube.com/watch?v=Auvf9YhzOnM

-Project monitor agriculture based on Lora protocol
Grade: 9.00
Microcontroller: STM32F1, ESP32
Programming: C, C++
Server: Firebase
The Node Lora (STM32) will gather the environment index and send the data through Lora.
The gateway (ESP32) will receive data from the node and relay to the server.
GitHub:
https://github.com/Winxkin/Lora_STM32
https://github.com/Winxkin/esp32_lorawan_gateway.git

-Design router five ports for application network on chip
Programming: Verilog
Description: Design router with five ports for network on chip. Enhance communication protocol between components in SOC chip.
GitHub: https://github.com/Winxkin/Noc_prj

-Project: Inventory detection based on CV (graduation thesis)
Grade: 8.30
Programming: Python
Framework: YOLO
Description: development system to monitor the shelf (detection out of stock and in stock shelf) in the supermarket base on CV and send data to the server. Investigate and improve the yolov4-tiny architecture. Knowledge about yolov4-tiny architecture and replace some modules in yolov4-tiny architecture to improve accuracy.
GitHub:
https://github.com/Winxkin/cv_detect_inventory.git
https://github.com/Winxkin/pyqt5_inventory.git
Youtube: https://www.youtube.com/watch?v=zMn6YRYxsWE
Thesis: https://github.com/Winxkin/Huan.Nguyen-Duy_thesis.git

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Ban Vien Corporation June 2022 - August 2022

Internship at Ban Vien Corporation

-Project vending machine (Embedded team)
Programming: C
-Developing the RFID sensor for vending machine based on STM32F103C8T6.

-QT application (Project vending machine)
Programming: C++
-Building API UART to connect with STM32 and build API to connect sever HCM of Ban Vien company.

Ban Vien Corporation August 2022 - Present

Employee at Ban Vien Corporation

-Training with SOC Embedded team.
Description: Training about embedded Linux.
-Building YOCTO Image for raspberry pi 3
-Developing device driver for module PCF8574 to expend GPIO

- ADAS hackathon.
Programming: C++, C
OS: Linux
-Integrating peripheral components into Jetson Nano (Linux BSP)
-Building YOCTO Image
-Integrating module CAN mcp2510 into Jetson nano by device tree
-Integrating module Raspberry camera (imx219) into Jetson nano by device tree
-Developing CAN service application (ROLE: developer)
-Developing DBUS service application (ROLE: developer)

-QEMU (Model Base Design team)
Training: System-C, system-level design, Renesas-platform SOC
Programming: C
The project describes: The project uses C language programming and the QMU library to emulate the operation of the system-on-chip to improve the emulation time.
Model: RS-CANFD.
Customer: Renesas Design Vietnam Co., Ltd., Ho Chi Minh City.

-RCAR (Model Base Design team)
Training: System-C, system-level design, TLM
Programming: C++
The project describes: The project uses C++ language programming and the System-C library to simulate the operation of the system-on-chip (RCAR product).
Model: Video Signal Processor (VSP2), SHIP-M_AES (Security Advanced Encryption Standard).
Customer: Renesas Design Vietnam Co., Ltd., Ho Chi Minh City.

CERTIFICATIONS

Toeic LR : 630	2023/05/14-2025/05/14
Toeic SW : 250	2023/08/06-2025/08/05

HONORS & AWARDS

Encourage academic scholarship at HCMC University of Technology and Education.	2019-2020
Encourage academic scholarship at HCMC University of Technology and Education.	2020-2021

SKILLS

Language	Vietnamese, English
Programming	C/C++, Python, Verilog
Computer	MS office

Operating system skill	Linux

REFEREES

Thien Huynh-The
Ho Chi Minh University of Technology and Education
Site: https://sites.google.com/site/thienhuynhthe/home
Google scholar: https://scholar.google.com/citations?user=_MLGtqEAAAAJ&;fbclid=IwAR08QAZBO_b35fdm1bM8v0fHEfl3-qivwMlnEFMarkt81gryNO2xrK8cubM
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Khoa Pham-Van
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