Thanh-Duong Tu

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RESEARCH INTERESTS

My research interests include the areas of Embedded Automotive and Computer Vision. I am passionate working on the embedded systems in cars. My dream is to dedicate myself to the development of Vietnam.

EDUCATION

University of Information Technology (UIT - VNUHCM) Ho Chi Minh City
Engineer of Computer Engineering (AUN-QA) *Aug. 2018 – now*

PUBLICATIONS

kitaro.fun | *Personal blog about programming [Visit my blog]* Jan 2022

- kitaro.fun is my personal blog about programming. This blog is the way I store and track of the Embedded Software knowledge that I have learned over time. With this blog I can easily find and refer to my documents later and also can share them to other people easily. By writing articles on my blog I also improve my programming skills and knowledge very much.

PROJECTS

Smart Pulpit | *C++ (Qt5, NCNN), NodeJs (ExpressJS), Javascript (QML, Jquery) [View demo]* May 2021

- Design a device smart pulpit has features such as log in with the face of the teacher, controlling some device electrics in the classroom as lamp, tracking device electrics working, and notifying if the device is damaged or disconnected.
- I trained model MobileFaceNets on Pytorch then I implement reference this model with C++ based on the NCNN library for login with face task and include this into Qt to use as a dynamic library. For task control tracking devices, I deployed RabbitMQ on AWS EC2 as MQTT Broker and I wrote a Back-end using ExpressJS & MongoDB to manage the device, user, and signal control in the room. With Front-end I just build one UI basic with HTML/CSS/JS for user view status device and send signal control. I used to QtWebEngine for embed the web font-end into Qt App. Finally, I combine all in Qt App and deploy it run on kit Maaxboard (Debian 10).

Simulator Automotive Dashboard | *C++ (Qt5), MCU (STM32F429i), QML [View demo]* Aug 2021

- Creating Automobile dashboard UI with QML, write back-end C++ to receive the signal from STM32F429i via COM port using QSerialPort after processing logic and send signal control to QML to re-render UI
- Write program C on STM32F429i read ADC from Axis Joystick and send data to Qt App via USART protocol. I developed this program based on the STM32Cube platform and using HAL Library.

TECHNICAL SKILLS

Programming Languages:	C/C++ (proficient), NodeJs, Python
Frameworks:	Qt5, ExpressJs, MCU(STM32F429i), Pytorch
Platforms:	Linux, Window
Developer Tools:	Git, VS Code, STM32Cube, Qt Creator
Other:	OpenCV, NCNN, MongoDB(mongoose)
Language:	English (Toeic LR: 500)

CERTIFICATE AND AWARD

The Second prize contest Innovative Startup Ideas of UIT 2019 [View]

Certificate completed Business Administration course at IDR-UEH [View]

Certificate completed Agile & Scrum Training course at DEK Technologies Vietnam [View]

Certificate TOEIC Listening & Reading at IIG Viet Nam [View]