Ta Huy Dang

Senior Embedded Software Engineer

Ho Chi Minh, Viet Nam.
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SUMMARY

A senior embedded software engineer with 12 years of experience in embedded linux, MCU drivers(SPI, CAN, I2C), automotive systems. Expertise includes linux kernel, android kernel, AOSP, RTOS (QNX, FreeRTOS, AUTOSAR(Classic & Adaptive), MCAL communication protocols (ETH, CAN).

Proficient in C, Misra C, Cert C, C++, Python, Shell scripting, Java and Vector testing tools (CANoe, VT system, CAPL, K-Bench).
Strong understanding of functional safety (ISO 26262) and cybersecurity (ISO 21434).
Familiar with hardware reference manuals, schematics, interpreting datasheets for embedded driver development, Hands-on experience with debugging using logic analyzers, and emulators such Trace32, Segger.
Familiar with Waterfall, V-Model and Scrum/Agile. I am eager to learn new technologies and consistently focus on delivering results.

TECHNICAL SKILL

- **Programming:** C, C++ (11/14), MISRA C, CERT C, Python, Shell Script, Java (Core).
- **RTOS & OS:** FreeRTOS, QNX, Embedded Linux, Android OS(AOSP, HAL, Services).
- **Automotive:** AUTOSAR (Classic & Adaptive), TCU, UDS, OTA/FOTA, Bootloader, MCAL(CAN, ETH), ECU Integration.
- **Drivers:** MCU drivers(SPI, CAN, I2C, UART, DMA), Ethernet, EtherCAT, Linux drivers(I2C, USB, HAL)
- **Tools:** CANoe, CAPL, CANdela, EB Tresos, Git, Svn, Jenkins, GitLab CI, Cmake, SEGGER, GHS, Cross Compiler.
- **Hardware:** Renesas RA6M3, R-Car(RH850), STM32(ARM Cortex M3), TCU, K-Bench, Raspberry pi5, Vector VN.
- **Standards:** ISO 26262 (Functional Safety), ISO 21434 (Cybersecurity).
- **Languages:** Vietnamese (Native), English (Fluent), Japanese (Fluent).

PROFESSIONAL EXPERIENCE

Hitachi Digital Service | Nov 2022 – Present.

- Role: BrSE/Senior Embedded Software Engineer *(Ho Chi Minh, Viet Nam)*.

dGIC Group CO. LTD | Feb 2018 – Jul 2022.

- Role: Senior Embedded Software Engineer(Sapporo, Japan).

Hitachi Digital Service| Nov 2013 – Jul 2017.

- Role: Lead Embedded Engineer(Onsite at Boston, USA).
- Role: Embedded Software Engineer(Ho Chi Minh, Viet Nam).

PROJECT HIGHLIGHTS

Renesas Car | Hitachi Digital Service | Ho Chi Minh, Viet Nam.

Tech Stack: Linux, Android, Kernel, BSP, Android kernel, AOSP, Yocto, Cybersecurity, Functional safety, Google test, C/C++

- Worked as a Bridge software engineer between Japanese client and engineering team
- Worked as a team leader, performing team management, code reviews, test case evaluation, safety confirmation.

Renesas MCU drivers | Hitachi Digital Service | Ho Chi Minh, Viet Nam.

Tech Stack: Renesas FSP, Arm, SPI, CAN, I2C, UART, DMA, Ethernet, FreeRTOS, CI/CD Jenkins, UT, IT, Python, C, Shell script., Hardware reference manual, schematic, datasheets, trace32, Segger.

- Worked as a senior embedded engineer, led a team to develop flexible software packages(HAL, CAN, SPI, I2C, DMA, Ethernet) for evaluation board of Renesas.
- Built Jenkins CI/CD system to support automation test.

Toyota Telematics | dGIC Group CO. LTD | Sapporo, Japan

Tech Stack: Telematics, Android OS(Services), TCU, OTA, FOTA, Bootloader, UDS, DoIP, Misra C, Cert C, ISO26262 Functional safety, ISO 21434 Cybersecurity, GCP(Google Cloud), AWS, CANoe, CAPL, Vector testing tools.

- Worked as a senior embedded engineer, developed FOTA system, Improved OTA update reliability by implementing secure boot and firmware validation.
- Executed remote UDS diagnostic testing using CANoe/CAPL on TCU system.

MCAL | dGIC Group CO. LTD | Sapporo, Japan

Tech Stack: Classic autosar, MCAL, CAN, ETH, EB Tresos, GHS debugger and compiler, trace32, Misra C, ISO 26262.

- Worked as an automotive engineer, supported development of AUTOSAR MCAL drivers(CAN, ETH)
- Worked as a tester, executed MCAL module testing following ISO 26262 standard.

Proton Therapy | | Hitachi Digital Service | Onsite at Boston, USA.

Tech Stack: Linux, TCU, Magnets, Beam, TCS, Gtest, Integration test, C++, Python, Smart sockets, Design patterns.

- Worked as lead embedded engineer, developed a cancer treatment system, control beam delivery system, supported the delivery of renovated software components to the clinical system at Boston, United States.

Proton Therapy System| | Hitachi Digital Service | | Ho Chi Minh, Viet Nam.

Tech Stack: HP-Unix, SUSE-Linux, C, C++, Python, Shell script, C++STL, Google Unit test, Lua, Valgrind, Jenkins, Sockets

- Worked as an embedded engineer, ported and renovated the proton therapy system from HP to Linux.
- Built an automation test system using python, Jenkins CI/CD.

EDUCATION

Bachelor of Software Technology, Posts and Telecommunications Institute of Technology University | 2008 – 2013.