PARSA MAJIDI

EMBEDDED SYSTEM ENGINEER

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OBJECTIVE

I am a disciplined, dedicated and enthusiastic Embedded System Engineer with a passion for continuous improvement. I work at Kynetics that offers a suite of Android and Linux operating systems (OS) for embedded systems, while also pursuing an M.Sc. in Telecommunication Engineering. I am committed to learning and advancing daily, aiming to contribute effectively to innovative projects in the dynamic world of technology.

SKILLS

Android Bsp, Linux Bsp, Yocto, C/C++

Verilog/VHDL, FPGA

Microcontroller (e.g. AVR, STM32)

Git, Jira, Bit-Bucket

GNU-GCC, JTAG, ADB

Shell, Basic Python

I2C, UART, SPI, CAN, Ethernet

LANGUAGES

Persian | Native

English | Advanced

Italian | Elementary

EXPERIENCE

Embedded System Engineer Sep 2023 — Present

Kynetics — Padua, Italy

- Reasearch and Development on Porting Android, Verdin iMX8MP, Nitrogen8MP, TI AM62
- Porting, testing applications on Emulator and debugging through ADB Debugger
- Research and Development on kernel support for enabling hibernation (suspend to disk) on Android for SOMs based on i.MX8MM and i.MX8MP SoCs
- Contributing to open-source Android clients
- Emulator/Debugging with log and core dump files of image flash to debug on target
- Kernel cross compilation firmware boot loader and UImage for different ARM HW

Research Training Aug 2024 — Present

University of Padova — Padua, Italy

- Exploring the use of the AI engines present in the last generation of Versal adaptive SoCs for implementing quantum machine learning predictors for ultra-low latency applications

EDUCATION

Bachelor's degree - Electrical Engineering - 3.66/4 Oct 2018 — Jul 2022

University of Mazandaran — Babolsar - Iran

Theseis: driver drowsiness detection system using OpenCV and Python on Raspberry Pi. Gained expertise in image processing and proficiency in working with Tensorflow Lite on Raspberry Pi. Developed understanding of machine learning and deep learning techniques, including SVM and Neural Networks.

Master's degree - ICT for Internet and Multimedia Oct 2022 — Present

University of Padova — Padua, Italy

PROJECTS

- **Research and Development on porting Android 14 with kernel 6.6 on Verdin iMX8MP**

This porting was meant to provide a platform to test hibernation on Android 14 and kernel 6.6. This involved adapting the latest Android OS to run smoothly on the NXP i.MX 8M Plus processor, ensuring compatibility with the hardware features and optimizing performance. The process required customizing the kernel to support specific drivers and peripherals, fine-tuning the bootloader, and ensuring seamless integration with the Android framework.

- **Neural Network implementation on FPGA Aritx A7**

Implemented a Keras neural network on an Artix-7 FPGA using the HLS4ML programming flow
Instantiated the Neural Network with a UART module

Utilized Vivado HLS to generate an IP and also HDL Codes ready for instantiation in a VHDL file