**Roosbeh ALMASI** *Embedded Software Engineer*

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Work experience in Industry

**Embedded Software Engineer, Concurrent Technologies Plc, Essex** *(March 2018 to Nov 2019)*

I have been working and cooperating as an embedded software engineer with a large multidisciplinary team of engineers, lab technicians, managers and production floor staff locally and remotely. I have been involved in agile project workflows and well familiar with daily scrum meetings. We have been using **Trello Platform** for the agile projects.

* Ported multiple C code projects form **NXP** micro into **ST** micro.
* Have been developing Intelligent Platform Management Interface (**IPMI**) C software for Cortex M Micro running **FreeRTOS** in line with **Intel VITA46.11** standards and specifications for various commercial rugged single board computers. Due to the nature of the product, **Doxygen** commenting and **MISRA** standard is part of the software requirement.
* Have developed strong debugging techniques to tackle any random customer issues that may occur on the field. Very comfortable with electronic lab equipment such as Oscilloscope. .
* Able to analyse complex hardware schematics and PCB layouts.
* Assisted in the development of automated testing and supporting code as necessary.
* Have been using **GIT** Version Control System on daily basis for code archiving and tracking changes in the source code.
* Have been involved in full **Software Development Life Cycle** like requirement analysis, designing, coding, code reviews, testing, releasing, maintenance and documentation at each stage.

**Embedded Software Engineer**, **Metasphere Ltd (R&D), London** *(March 2017 to March 2018)*

Kicked off, my commercial software development career in a very talented small team of multidisciplinary engineers. Worked on multiple battery-powered Remote Telemetry Units projects and developed tremendous technical skills from the first day.

* Developed solid and robust low-level drivers such as **UART**, **SPI**, **I2C**, **ADC** and etc, for **Cortex M4** microcontrollers.
* Converted a purely bare-metal complex C code (which was running into timing issues) into multitask driven software running **MQX FreeRTOS**.
* Developed C software for **PIC** microcontroller working in parallel with a cortex M4.
* Implemented **Low power Mode** software blocks down to **5uA** for battery-powered devices.
* Occasionally debugged hardware in the absence of hardware engineer.
* Used **SVN** version control system for code archiving and tacking changes in the source code.
* Used **JIRA** for bug and issues tracking.
* The project framework was scrum and we had daily stand up.

**Junior Electronic Engineer**, **Tyco Fire Products/Johnson Controls Plc (R&D), London** *(Mar 2016 to March 2017)*

Started my first commercial experience with a very diverse multidisciplinary team of engineers, Lab technicians and project managers at a high profile R&D centre.

* Read and analysed complex technical documents such as project specifications, technical reports and devices/components datasheets.
* Developed testing and debugging techniques for electronic hardware while spending 50% of my time using various test equipment on electronic workbenches. Analysed the results to remove the faults and improve the design and provided formal reports.
* Had hands-on SMT soldering and chip replacement and using ALTIUM Designer to investigate PCB layouts.
* Responsible for component selections and raising order to external and internal suppliers.
* Involved in EMC tests at third party approval facilities such as BRE and Intertek and wrote formal reports in line with standards.
* Gained real experience of Agile project workflow.

Engineering Qualifications

Electrical & Electronic Engineering-MEng, IET Accredited, Swansea University, UK *(Sept 2011 – Aug 2015)*

Grade achieved, 2:1

Notable Modules

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| * Software Engineering * Programming in C/C++ * Microcontrollers | * Embedded Systems * Electronic Design * Power Electronics | * IC Design * Digital Design * Microwave and RF |

ARM Accredited Microcontroller Engineering *(June 2015 - Dec 2015)*

* ARM Cortex M architectures and its assembly language.
* Robust and efficient software development with CMSIS for Cortex M platforms
* FreeRTOS

Academic based Projects

**FPGA & VHDL (Swansea University, UK)** *(Jun 2015 – Feb 2016)*

Worked around an enhanced microprocessor and modified/Designed it to a new version and implemented it on a **Cyclone V FPGASoC** development board using VHDL language.

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| * Comb/RTL Technique (VHDL) * Nios II | * SystemVelrilog and UVM ( Very basic) * TestBench/verification by ModelSim |

**SMPS applications and Power electronic (Swansea University, UK)** *(Group project level M, 2014-2015)*

Designed, simulated and built **switch mode power supply** devices such as **DC/DC** boost and buck converters suitable for Photo photovoltaic applications. Used **dsPIC33F Microcontroller**to control the**switching**operation**.**

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| * Analogue design * LT Spice, MATLAB & Simulink | * PCB Design * PIC Microcontroller |

**Software Development and Testing Techniques (Swansea University)** *(Sept 2013- Jan 2014)*

Worked on numerous software development projects using **C** and **C++** programming languages. Dynamic memory allocation and creating nested functions and structures within multiple classes and files for solving multidimensional matrices were part of the work.

* Manual/Automated testing

**Fibre Lasers (Swansea University)** *(Sept 2013- May 2014)*

Designed, modelled and simulated a mid-infrared fibre laser using **MATLAB**software package. A suitable model for remote sensing and spectroscopy applications.

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| * Laser Concept | * MATLAB & Simulink |

**Robotic Project (Swansea University)** *(Sept 2013- May 2014)*

Participated in a robotic team as a software engineer. We designed, prototyped and built a Micromouse robot with advance features such as obstacle avoidance, combat mode and etc.

* 8 bit Freescale Microcontroller, C programming and DC motor control

Additional Information

* Full UK driving licence
* I am a dual national, Iranian – British
* Available from 15 October 2019
* I am willing to relocate