**John O’Shea**

Experienced Engineer and goal oriented self learner with a demonstrated history of working in the high tech industry. Strong engineering professional skills in Embedded Software, Device Drivers, C, C++, Verilog, FPGAs, Python. Also have knowledge in computer vision, AI, and Robotics. Five Patents Granted: (7987229, 8156220, 8090789, 8645623, 7631128)

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**LinkedIn:** <https://www.linkedin.com/in/john-oshea>

**Github:** <https://github.com/jfoshea>

**Education:**

University of Limerick (Ireland) 1997-2001 (part time)

* MEng Computer Systems Engineering.

Dublin Institute of Technology (Ireland) / British Computer Society 1992-1996 (part-time)

* Degree in Computer Science

Cork Institute of Technology (Ireland) 1988-1991

* Associates Degree in Electronic Engineering

**Skills:** C/C++, Embedded Firmware, Linux application/kernel/device driver development, U-boot, Buildroot, ASIC/FPGA design, Verilog, CPU Knowledge (ARM, ARM64, X86, Tensilica), Python, Networking, UEFI development, Git, Svn, BASH scripting, Matlab

**Awards:** 5 Patents Granted. Granted Patent Numbers (7987229, 8156220, 8090789, 8645623, 7631128 ).

**Work Experience:**

**Jaguar Land Rover** , November 2018 – Present: Senior SW Engineer.

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* Developing C++ code for vehicle motion controllers for use on Level 4 capable self-driving software stack.
* Software Architecture for next-gen electrical vehicle architecture platform.

**Dell EMC**, Hopkinton, MA. October 2016 – Present: **Principal SW Engineer.**

* Developing C and Python code for a number of embedded Linux applications for server & storage enclosure management.
* Contributing to in house custom BMC firmware stack. Developed platform specific adaptations in u-boot, Linux applications, kernel, drivers for various for different server and storage products.
* Porting BMC (U-boot/Linux kernel) to new hardware platforms.
* Porting / Developing code for ARM, ARM64, X86 platforms.

**EMC Corporation**, Hopkinton, MA.

**January 2014– October 2016**: **Principal SW Engineer.**

* Developing C and Python code for a number of embedded Linux applications for server & storage enclosure management.
* Contributing to in house custom BMC firmware stack. Developed platform specific adaptations in u-boot, Linux applications, kernel, drivers for various for different server and storage products.
* Porting BMC (U-boot/Linux kernel) to new hardware platforms.
* Porting / Developing code for ARM, ARM64, X86 platforms.
* Port Network OS to ARM64 platform.

**January 2012– January 2014**: **Principal SW Engineer.**

* Developed C++ Embedded Firmware on various IA platforms and SOC protocol ASICs.
* Developed C++ UEFI Applications Device Drivers.
* Collaborated with 3rd party vendors for UEFI Device driver development.

**June 2010 – December 2011: Principal HW/FW Engineer.**

* Developed InfiniBand Exerciser for VMAX Data Storage product.
* Influenced the design and direction of the project.
* Developed a python framework and embedded C code for the project.

**January 2006 – June 2010: Principal HW/FW Engineer.**

* Developed a family of custom ASICs targeted to the Symmetrix Data Storage products.
* Led architecture and design of custom Tensilica embedded processors and firmware development.
* Acted as Technical Leader on the Firmware architecture and development.
* Developed C code to run on embedded Tensilica processors.
* Developed hardware design using Verilog and Cadence tools.
* Responsible for co-design of hardware vs firmware tradeoffs and optimizations.

**January 2001 – December 2005: Senior HW Engineer.**

* Developed a family of FPGAs targeted to Symmetrix Data Storage products.
* Developed hardware design using Verilog and Cadence tools.

**January 2000 – December 2000: Senior Engineer.**

* Responsible for Engineering Design Support Vendor selection and qualification.

**EMC Ireland** June 1993 – December 2000: **Test Engineer**.

* Started an internal environmental test department.
* Responsible for setting up specialized test equipment, developing the test strategy and training.
* Responsible for both test and board/component level debug.
* Responsible for ASIC/FPGA vendor qualification.

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**AMDAHL Corporation**, Dublin Ireland. June 1992 - June 1993: **Test Engineer**.

* Assigned to Test Engineer role for the Amdahl 5995M mainframe.
* Responsible for board level test and debug of various elements within the mainframe.

**Cork Institute of Technology**, Cork Ireland. February 1992-June 1992: **Research Assistant.**

* Designed & Implemented a “Talking Multi-meter”.
* Responsible for the design of an 8051 Embedded Microcontroller and a TI speech synthesis chip for taking electrical measurements as input and used synthetic speech to output the result of the measurement.
* The project included both hardware design & software development using the 8051 assembly language.