John O'Shea

An enthusiastic and goal orientated self learner. Always learning new skills and techniques in Embedded Systems, Linux, Software engineering, AI, Computer Vision, and Robotics.

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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:

Dell Technologies, Hopkinton, MA. October 2016 – Present: **Principal SW Engineer.**
- Member of embedded Linux platform team that develop C and Python code for a number of embedded Linux applications for server & storage BMC enclosure management.
- Contributor 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.
- Ported BMC (U-boot/Linux kernel) to new hardware platforms.
- Experience with developing and porting code for ARM, ARM64, X86 platforms.

EMC Corporation, Hopkinton, MA. January 2012– October 2016: **Principal SW Engineer.**
- Member of embedded Linux platform team that develop C and Python code for a number of embedded Linux applications for server & storage BMC enclosure management.
- Developed platform specific adaptations in u-boot, Linux applications, kernel, and drivers for different server and storage products.
- Ported BMC (U-boot/Linux kernel) to new hardware platforms.

December 2011 – April 2013: Principal SW Engineer.
- Member of UEFI team that developed C and C++ code.
- Developed UEFI Application for Host side Firmware Update and X86 based utilities.
- Developed UEFI DRAM ECC error injection/detections based on Intel EDS spec
- Developed UEFI Device Drivers for various 3rd party SOC devices
- Collaborated with 3rd party vendors for UEFI Device driver development.

June 2009 – December 2011: Principal HW/FW Engineer.
- Member of small team that developed C and Python code for InfiniBand test application
- Developed a python framework that facilitated stress testing on Intel X86 and InfiniBand SOC device used on EMC high end platforms.
- Developed some low level embedded C routines that were used build packets to stress internal SOC internal queues

- The python framework coordinated the tests and gathered test results statistics.

January 2004 – 2009: Principal HW/FW Engineer.

- Technical lead for small sub-team for a family of custom ASICs
- Responsible for architecture and design (Firmware & Hardware) making extensive use of Tensilica embedded processors.
- Developed C code to run on embedded Tensilica processors, and the Verilog code for various hardware modules on the ASICs.
- Responsible for co-design of hardware vs firmware tradeoffs and optimizations

January 2000 – January 2004: Senior HW Engineer.

- Responsible in the design of next generation large-scale data storage hardware systems.
- Extensive use made of FPGA & ASIC to implement high speed DMA engines used to facilitate high speed data transfers in high speed mainframe based data storage system designed for high availability.

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

- Assigned to a small team that started an 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

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

- Member of small team 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.**

- Duties: Design & Implementation of 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.