1 Contact

Name	Magnus Olsson
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Date of birth	15 June, 1983
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2 Education

- 2008, Master thesis "Hardware accelerated bi-cubic scaling", Ericsson Mobile Platforms, Lund.

- 2003-2010, Master of Science in Computer Science, Lunds University, Lund.

- 1999-2002, Natural science programme, Elof Lindälvs gymnasium, Kungsbacka.

3 Experiences

Embedded software engineer

2019-ongoing, Victor Hasselblad AB, Gothenburg, Sweden.

- Development and maintenance of medium-format digital cameras (Linux & RTOS-based components such as drivers, system daemons and libraries).
- Implementation of system for continuous integration for Hasselblad cameras.

Senior embedded software engineer

2014-2019, HMS Industrial Networks, Mölndal, Sweden.

- HMS Linux distribution architect & tech lead (based on OpenEmbedded/Yocto). Maintenance and development of low-level components (board-support packages, buildsystem, toolchains).

2011-2014, HMS Industrial Networks, Mölndal, Sweden.

- Bare-metal embedded programming, fieldbus protocol implementation, product development at the HMS office in Mölndal.

Embedded software engineer

2008-2011, Axis Communications, Lund, Sweden.

- Linux device driver development, board bring-up, SoC verification and prototyping within the Axis product platform group.

Warehouse worker

Summer of 2007, Volvo Car Corporation Customer Service, Gothenburg, Sweden.

- Vehicle off Road (VOR), high-priority delivery of spare parts for stranded vehicles.

Software engineer

Summer of 2004, Ericsson, Gothenburg, Sweden.

- Development of a localization tool for the front desk reception to locate employees and vacant offices for arriving guests and consultants.

Web developer

2003, Replayers.com, Vallda, Sweden

- Developer and co-founder of Replayers.com, a Warcraft III gaming community for sharing replays (recorded matches).
- Server admin (webservers, file servers and load balanced databases)
- Approx. 16000 unique visitors per day.
- Site was sold in 2004, and it is still an active community.

4 Professional qualifications

Embedded development

- Embedded development on architectures such as MIPS, ARM32/ARM64, CRIS and AVR.
- Linux kernel development, device drivers (net, audio, gpio and video) and core functionality.
- Linux buildsystems (OpenEmbedded/Yocto, buildroot, Android build (soong)).
- Real-time operating systems, bring-up and implementation of apps/tasks on FreeRTOS and Redboot (eCos).
- Baremetal programming on MCUs such as STM32 and AVR.
- Software- and hardware-debugging using standard tools. Used to working in an environment which heavily integrates logic analyzers, oscilloscopes and JTAGs in workflow.

General software and hardware

- Experience from working with programming methodologies such as Extreme Programming (XP) and agile software development using Scrum. Experience working as scrum master.
- Databases, design and optimization. Primarily against MySQL servers and SQLite databases.
- Knowledge in audio codecs, ALSA (ASoC) and Gstreamer framework.
- Experience from working with video streaming and image exposure (sensor bringup & integration, image signal processing and compression).

- Shell (preferrably using bash) and Python scripting.

- Web development, AJAX (jQuery). Experience with PHP and Javascript for dynamic content.

- Jenkins and continuous integration pipelines using Groovy scripting.

- Experience with working as DevOps: Linux server management using Ansible. Docker and container orchestration using Docker Compose.

- Basic knowledge in industrial communication protocols. DeviceNet, CAN, ModBus TCP, EtherNet/IP, and other fieldbus technologies.

- Basic knowledge in FPGA development using System Verilog and chip-prototyping using gate arrays.

Courses and certification

- Red Hat enterprise courses: Linux Internals and Linux Device Drivers.

- Scademy courses: Secure C/C++ coding. Cryptography, buffer overflows, DoS, ROP-programming, SQL injections.

5 Relevant information

- Inventor of patent Arrangement for bicubic interpolation (WO2009098129A1). See http://patents.google.com for details.

- Driver's license, Class B for vehicles up to 3.5 tonnes.

- Truck driver's license (TLP-2B), certified by Volvo Car Corporation.

- Certified paraglider pilot (soaring, towing, thermal and alps flying). Competition and tandem license.

- Received first prize in Softhouse Innovation Awards 2007 for an innovative calorietracker mobile application.

- Received first prize in Epsilon programming challenge, where the objective was to implement a robot simulator with emphasis on robust, testable and re-usable code.

Languages

- Swedish (mother tongue)

- English (fluent in both written and spoken form)

6 Interests

- Paragliding.

- Electronics and programming.