Yoann Sculo

Embedded Linux Engineer

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github.com/yoannsculo
French nationality

3+ years of embedded systems experience. Skilled in integration and development of embedded Linux solutions.

Experience

Archos   **Igny, France**
Software Engineer - Linux/Android   *August 2011 – present*

- Worked on Archos Gen 8, 9 and 10 Android products (10+ devices) From Froyo to Jelly Bean - OMAP 3630/4430/4460/4470
- Board bring-up & validation - 2.6.x/3.x kernel development and device drivers.
- Low-level userspace development: bootloader, init, recovery, charge loop - Android layers: services, daemons, hardware layer
- Developing Archos custom Linux OS for production use. Hardware and software validation. Working with production in China to track, fix bugs and deploy production and enduser firmwares. Developed Mac address and HDCP flashing system.
- C, Bash, Buildroot, Git/repo - Datasheets and PCB schematics reading

Mindscape   **Boulogne-Billancourt, France**
Embedded Software team leader - Team of 3 people   *March 2011 – July 2011*

- Wrote software and hardware specifications for the next product running on Android (never went into production)
- Android development on ARM Cortex A8 - Prototyping on the PandaBoard.
- Wrote tests, fixed bugs, maintained / improved Karotz product and managed the worldwide developers community.

Mindscape   **Boulogne-Billancourt, France**
Embedded systems engineer   *January 2010 – February 2011*

- Wrote specifications, designed and developed Karotz embedded software architecture.
- Created and set up from scratch the embedded Linux system / BSP on ARM 920T and 2.6.28 kernel
- Used Buildroot, uClibC, Busybox and cross-compiled application for ARM target
- Set up development environment, YAFFS filesystem, factory system restauration and automatic OS updating system, D-Bus based architecture, serial protocol for the Karotz configuration, network connection (LAN/WLAN), mass storage, Karotz SDK, user applications, ...
- Optimized boot time, enhanced system performance and developed inside the Linux kernel (drivers, kernel patching)
- Was exhibitor at the CES 2011 in Las Vegas
- Played key role in submitting ideas, developing the whole system from scratch and solving deep technical issues
- C, Bash, Python, C++ and Javascript programming - GIT, Jira

CNES (French Space Agency)   **Toulouse, France**
Intern - Long term navigation for a planetary exploration robot   *July 2009 – December 2009*

- Conceived and implemented algorithms of topographic maps merging for the Exomars mission rover (2016)
- Stringent / critical constraints on size and weight - Processor of 30MHz with 5Mb of memory.
- Integrated my work into the martian environment simulator.
- C programming and optimization for an embedded Linux system target (Leon)
- Improved segmentation algorithms for ground numeric models.

Viveris Technologies   **Rungis, France**
Intern - Web development   *February 2008 – July 2008*

- Developed the works council portal of the company - PHP 5, Zend, Joomla, CVS/SVN, Eclipse, Linux
- Developed for Thales an XML file generator in C# for the public transport application of the city of Toronto.
- Ported from Visual Basic to C# company's customer relationship management software.

Education

University of Technology of Troyes **Troyes, France**
Master's degree in Information and Telecommunication Systems *2005 – 2009*
Specialty in mobile technologies and embedded systems

Technische Fachhochschule Berlin **Berlin, Germany**
6 months Erasmus exchange program *2006*
General scientific courses

Languages

French: Native speaker

English: Fluent *TOEIC: 890/990 in 2009*

German: Fluent in 2006 (can be reactivated) *ZERTIFIKAT DEUTSCH: 267/300 in 2005*

Computer skills

Languages	C, Unix Shells, Java - Web development: PHP/HTML/CSS
Embedded System	Good knowledge in Linux and embedded use, Linux OS assembly from scratch, and software integration. Device driver and Kernel development x86, ARM, MIPS, ETRAX targets and PIC/Atmel microcontrollers Cross compilation toolchains and Linux programming (Android, Buildroot, crosstool-NG, uClibc, glibc, Busybox, bootloaders, etc.)
GNU/Linux tools	make, gcc, gdb, gdbserver, ddd, valgrind, qemu
Tools	Git, repo, SVN, Trac, Jira, vim, Eclipse
Protocols	Wifi, Bluetooth, BLE, RFID, Zigbee, GPS, USB, RS232, ...
Misc	Open-source licenses, digital electronics, datasheets and PCB schematics reading

Projects

2012 – present	Developping a multi-platforms indie Point & Click game - Java, libgdx
2010 – present	Developped Open Source softwares : SHOUTcast recorder, ucblog, ucwiki
2009 – present	Developed several embedded projects like mobile robots, an embedded SMS server - See my blog
2005 – 2009	Created and developed a web based game - Simerion Handled a team of 4 people - Specified, conceived, developed and administrated the game Exhibitor 2 times at the French video game festival in 2007 and 2008 in Paris PHP / MySQL, Ajax (home-made framework) and Javascript programming - SVN, Trac, Debian

Other

Voluntary work	Editor and moderator of the embedded sytems section of developpez.com Largest french-speaking community of professional developers
Hobbies	Badminton, Running, Hiking, Music, Drawing, Comics Robotics, hacking and DIY - Attending technical events and conferences - Technical writing / blog