

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

JCDecaux

Linux Expert

Plaisir, France

February 2013 – present

Archos

Software Engineer - Linux/Android

igny, France

August 2011 – January 2013

- 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 production tools and custom Linux OS for production use (Hardware and software validation). Firmwares and marketing content deployment.
- Prototyped a home automation gateway running OpenWrt - TP-Link TL-WR703N - Bluetooth Low Energy (BLE), Zigbee
- C, Bash, Buildroot, Git/repo - Datasheets and PCB schematics reading

Mindscape

Embedded Software team leader - Team of 3 people

Boulogne-Billancourt, France

March 2011 – July 2011

- Wrote software and hardware specifications for the next product running on Android
- Android development on ARM Cortex A8 - Prototyping on the PandaBoard.
- Wrote tests, fixed bugs, maintained / improved Karotz product and managed the worldwide developer community.

Mindscape

Embedded systems engineer

Boulogne-Billancourt, France

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)

Intern - Long term navigation for a planetary exploration robot

Toulouse, France

July 2009 – December 2009

- Conceived and implemented algorithms of topographic map 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

Intern - Web development

Rungis, France

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

Master's degree in Information and Telecommunication Systems

Specialty in mobile technologies and embedded systems

Troyes, France

2005 – 2009

Technische Fachhochschule Berlin

6 months Erasmus exchange program

General scientific courses

Berlin, Germany

2006

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, software forges (Trac, Jira, ...) - Agile & Scrum methods
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-platform indie Point & Click game - Java, libgdx
2010 – present	Developped Open Source softwares : SHOUTcast recorder , ucblog , ucwiki , uCAM
2009 – present	Developped 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 Twice an exhibitor 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 systems section of developpez.com Largest french-speaking community of professional developers
Hobbies	Badminton, Running, Hiking, Music/Piano, Drawing, Comics Robotics, hacking and DIY - Attending technical events and conferences - Technical writing / blog .