

# Yoann Sculo

## Embedded Linux Engineer

✉ [yoann.sculo@gmail.com](mailto:yoann.sculo@gmail.com)  
🌐 [www.yoannsculo.fr](http://www.yoannsculo.fr)  
📄 [github.com/yoannsculo](https://github.com/yoannsculo)  
French nationality



*4 years of embedded systems experience. Skilled in integration and development of embedded Linux & Android solutions.*

## Experience

### Bookeen

*Embedded Linux Engineer*

**Paris, France**

*April 2013 – present*

- Development and integration of embedded Linux platforms for e-reader products - OMAP 3621 / E-Ink screens
- Bootloader (U-boot), Linux kernel (2.6.32), device drivers (touchscreen, wlan, led, ...) and userspace development.
- Factory, test and update tools development.
- Energy consumption optimisation
- C, shell, Buildroot, Git/repo

### JCDecaux

*Systems Integration Engineer - Linux/Android*

**Plaisir, France**

*February 2013 – April 2013*

- Conceived, integrated and maintained Linux distributions for digital urban panels and billboards.
- Worked on remote control and updating systems.
- Android & Fedora - Spacewalk, CFEngine & Rudder - Bash/Git/rpm

### 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.

## 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

<b>Languages</b>	C, Unix Shells, Java - Web development: PHP/HTML/CSS
<b>Embedded System</b>	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.)
<b>GNU/Linux tools</b>	make, gcc, gdb, gdbserver, ddd, valgrind, qemu
<b>Tools</b>	Git/repo, SVN, software forges (Trac, Jira, ...) - Agile & Scrum methods
<b>Protocols</b>	Wifi, Bluetooth, BLE, RFID, Zigbee, GPS, I2C, USB, RS232, ...
<b>Misc</b>	Open-source licenses, digital electronics, datasheets and PCB schematics reading

## Projects

<b>2012 – present</b>	Developping a multi-platform indie Point & Click game - Java, libgdx
<b>2010 – present</b>	Developped Open Source softwares : <a href="#">JobCatcher</a> , <a href="#">SHOUTcast recorder</a> , <a href="#">ucblog</a> , <a href="#">ucwiki</a> , <a href="#">uCAM</a>
<b>2009 – present</b>	Developped several embedded projects like mobile robots, an embedded SMS server - See my blog
<b>2005 – 2009</b>	Created and developed a web based game - <a href="#">Simerion</a> 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

<b>Voluntary work</b>	Editor and moderator of the embedded sytems section of <a href="#">developpez.com</a> Largest french-speaking community of professional developers
<b>Hobbies</b>	Badminton, Running, Hiking, Music/Piano, Drawing, Comics Robotics, hacking and Do It Yourself - Attending technical events and conferences - Technical writing / <a href="#">blog</a> .