

SUMMARY

2+ years of embedded systems experience. Skilled in integration and development of embedded Linux solutions. Dynamic, reliable and passionate about innovative projects and open source.

EMPLOYMENT

MINDSCAPE, Boulogne-Billancourt, France

March 2011 - present

Embedded Software team leader

- Got promoted team leader after one year - Team of 3 people
- Write software and hardware specifications for the next product running on Android
- Work on Android porting on ARM Cortex A8 - Prototyping on the PandaBoard (OMAP) and iMX535 board
- Write tests, fix bugs, maintain / improve [Karotz](#) product and manage the worldwide developers community.

MINDSCAPE, Boulogne-Billancourt, France

January 2010 - February 2011

Embedded systems engineer - [Karotz](#) (Nabaztag V3)

- 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++, Javascript programming - Used GIT, Jira, Jekyll and wikis

CNES - Centre National d'Etudes Spatiales - (French Space Agency) - Toulouse - France

July 2009 - December 2009

Intern - Long term navigation for a planetary exploration robot

- 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 and on the real robot.
- **C** programming and optimization for an embedded Linux system target (Leon)
- Improved segmentation algorithms for ground numeric models.

Viveris Technologies, Rungis, France

February 2008 - July 2008

Intern

- 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.

EDUCATION

2005 - 2010

Master's degree in Information and telecommunication systems
Speciality in mobile technologies and embedded systems
UTT - University of Technology of Troyes - France

2006 - 6 months

Erasmus exchange program - General scientific courses
TFH - Technische Fachhochschule Berlin - Germany

Sept 2004 / Feb 2005

Post-secondary preparatory school for the French « Grandes Ecoles » - Physics, chemistry and engineering
Lycée Jean-Baptiste Corot - Savigny-sur-Orge - France

June 2004

Scientific Baccalauréat diploma with honors - Physics, chemistry - European classes (German speciality)
Lycée Marcel Pagnol - Athis Mons - France

TECHNICAL SKILLS

Programming	C, C++, Shell , Python, JAVA and web development: PHP, HTML, CSS, JavaScript, Zend
Embedded Linux	Good knowledge in embedded Linux: architecture, kernel and GNU/Linux tools x86, ARM (ARM 920T, 926, SAM9G20, OMAP), AXIS processors and PIC/Atmel microcontrollers Cross compilation toolchains and Linux programming (make, gcc, gdb, gdbserver, ddd, valgrind, uClibc, glibc, Busybox, crosstool-NG, qemu, bootloaders, U-Boot, filesystems, etc.) Buildroot, OpenEmbedded / Ångström - Android, MeeGo - Multimedia, audio, network Creation of Linux system from scratch - Configuration, kernel optimization - drivers
Tools & libs	GIT, SVN, CVS, Trac/Gforge, Jira, UML - AGILE / SCRUM methods Glib, D-Bus, Protocol buffers, Gstreamer, OpenCV - Vim / Eclipse - Scilab/Matlab
Protocols & Buses	Wifi, Bluetooth, RFID, Zigbee, GPS, GSM/GPRS/EDGE - USB, RS232/FTDI, JTAG
Other	Open source licences knowledge - Digital electronics - Image processing notions.

PROJECTS

2009	Created an autonomous mobile robot . With home-made mechanics, electronic and software Programming in C using Linux (Foxboard), Sensors, Odometry and Stereoscapy
2009	Created a wiimote-remote controlled robot Programming in C using Linux, Wiimote, SDL, video streaming, RS232, Bluetooth, Wifi and PIC18
2009	Developed an Android mock-up for touristic activities planning called Tourismo Programming in JAVA with Android.
2009	Set up an embedded SMS server running on Linux (Foxboard system / Axis processor) Send UTT exams results to the students by SMS. Programming in C using Linux, AT commandes on GSM modem, CGI scripts, embedded web server
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

LANGUAGES

English	Fluent - TOEIC: 890/990 in 2009
German	Fluent - ZERTIFIKAT DEUTSCH: 267/300 in 2005 and studied 6 months in Berlin
French	Native speaker

INTERESTS

Voluntary work	Editor and in charge of the embedded sytems section of developpez.com Largest french-speaking community of professional developers
Free Software & community	Strong technical curiosity - Committed to Free Software and involved in knowledge sharing. Technological monitoring - Takes part as often as possible in seminars, forums and conferences
Hobbies	Reading, Drawing, Comics, Robotics, TV Shows/ Movies Badminton, Jogging

REFERENCES

Available upon request. And for more information and other projects, visit my blog www.yoannsculo.fr