

# Louis Rannou

## Embedded Linux Developer

Grenoble or remote  
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<https://gitlab.com/Louson-public>

*Excellent knowledge of the Linux ecosystem  
Enthusiast C developer/architect and bug hunter  
Makes the link between hardware teams and cloud/edge  
Good socialization, willing to share and learn, team player*

### Skills

Languages	C, C++, Python	Systems	GNU/Linux, uboot, systemd
Toolchains	<b>Yocto Project</b> , buildroot, crosstool	OTA updates	SWUpdate, RAUC, Memfault
Tools	git, gcc, clang, cmake, meson	CI	Jenkins, Jira, GitHub, Gitlab
Tests	Unit, functional, integration (C, C++, Python)	Architecture	Oriented Object Programming, UML, documentation

### Experience

- Since 2023 **Yocto consulting**, *Schneider Electric*, Grenoble, France  
Yocto consulting for an advanced Linux distribution supposed to become the reference design for Schneider devices with a strong focus on testing and security. Support for reference boards including Linux and U-boot configuration.
- Since 2023 **Linux Trainer**, *Le campus numérique*, Grenoble, France  
Training on Linux for DevOps: algo, containers, programming
- 2023 **Yocto developer**, *Yocto Project*  
Work on SPDX3 support for SBOMs
- 2021-2023 **Linux, Yocto&OTA consultant**, *Baylibre*, France  
YoctoProject debug, Linux support and OTA exploration with SWUpdate, RAUC and Memfault
- since 2021 **Founder**, *Syslinbit*, France  
Founded a consultancy company uniting freelancers focused on Open Source and Embedded Systems. Syslinbits offers services at low level, cloud/edge communication and security.
- 2020–2021 **Linux developer**, *Enlaps*, France  
BSP setup for imx7 low power, SPI debug, boot sequence and Linux support with OTA on SWUpdate
- Embedded Linux Developer, Open Wide & Smile (2015–2019)*
- 2019–2020 **Yocto integrator and Linux consultant**, *Eaton*, France  
Work on the update of the former Linux buildsystem and replacement of outdated core software such as OTA updates and Rest API for PDU (Power Distribution Unit)
- SW support for HW teams
  - integration of an external memory as an overlay
  - integration of HTTP server with TLS 1.3 support and development of theFastCGI layer to offer a Rest API.
  - OTA updates with SWUpdate

- 2018–2019 **Linux and OTA consultant**, *Capsys*, France  
Architecture and development of an embedded gateway to manage the communication between public transports and traffic lights. Development of an OTA solution with **SWUpdate**
- 2017–2018 **IoT Linux developer**, France  
GSM integration to secure a gateway connection with automatic switch from ethernet to GSM.
- 2016–2017 **IoT lead developer**, *Smile*, France  
Architecture and development of an **IoT** prototype for the **SunTripTour 2017** :  
  - Yocto/Linux for Raspberry Pi with touchscreen
  - Catching data from various sensors (GPS, speed, heart beat, pressure, temperature...)
  - Support for several communications (BLE, Garmin/Ant, Wifi, Sigfox, Lora, 3G/4G)
- 2016–2019 **Linux C developer**, *See*, France  
Development of communication stack for the eDMR protocol  
  - complex decoding driver with efficiency and security requirements
  - communication kernel/userspace through netdev sockets
  - high level decoding and forward to an Asterix server
- 2015–2016 **Linux C developer**, *See*, France  
Linux&Yocto setup for a core system embedded in tramways
- 2015 **Linux consultant**, *Sagem/Airbus*, France  
Support on a complex and sensitive logger system for Airbus planes
- Linux C/C++ developer**
- 2012-2014 **Linux C developer**, *Soft At Home*, France  
Work on a C middleware for TV set-top-box with a strong focus on testing (unit, integration and functional). Support for DTT and DTS, conception of a complex resource manager, support for the central firmware manager, support for networking
- 2011-2012 **Intern**, *Archos*, France  
Conception of a remote controller with camera detection and OpenCV for Android devices

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## Volunteer work

- Volunteer **Rézine**, *Grenoble*, France  
Help for the development of a neutral network and internet provider rezine.org through radio and fiber. Support for Wireguard and OpenWRT, help on the management and presentations to the public (schools...)
- Developer  
Work on a mbzero, python bindings for the musicbrainz.org API to replace the outdated musicbrainzngs
- Author (french) GPG management <http://www.linuxembedded.fr/2017/09/initiation-a-gnu-privacy-guard/>
- Author (french) Toolchains with crosstool-ng [linuxembedded.fr/2018/09/crosstool-ng-human-crossing/](http://www.linuxembedded.fr/2018/09/crosstool-ng-human-crossing/)
- Author (french) Database with rrdtool <https://gitlab.com/Louson/rrdtool-presentation>

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## Education

- 2008-2011 **MSc**, *ENSIMAG*, France  
C, C++, SQL databases, electronic
- 2011 **Exchange year**, *UFRGS*, Brasil  
Concurrent computing, security and cryptography

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## Additional informations

- Interests Open Source, Science-fiction (with a strong focus on women authors), low techs, mathematics, French comics
- Keywords C C++ Python Unit tests Functional tests Integration tests Linux kernel u-boot IoT buildroot Yocto Oriented object UML Microcontroller Security git GitHub ARM Systemd D-bus dm-verity dm-crypt
- Soft skills Curious, Good quality, Teamwork, Share