

# Adrien Nader

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Libera, OFTC, geeknode: adrien

## Professional Experience

- 2019–present **R&D Software Engineer for Automobile**, *Parrot Faurecia/Faurecia Clarion*, Paris, >150 employees
- Supported A/V aspects across the company, mostly on Linux
  - Developed GStreamer plugins and pipeline configurations
  - Achieved < 1.4 seconds boot-time for a product after userland fixes, development, and kernel optimisations
  - Identified hardware clock issue, beginning with vague user reports
  - Updated the internal meta-build system with support for the Meson build system
  - Took part in RFIs and RFQs
  - Trained people in France and India on cybersecurity matters
- 2014–2019 **R&D Software Engineer for Business Aviation Internet Access**, *Satcom1 France*, Le Bourget
- Debian-based router with custom modular management software
  - Updated the distribution across three Debian versions
  - Migrated software components to Autotools, all with split Debian packages (including -dbg-sym ones)
  - Reduced the installation time from 30 minutes to 10 minutes
  - Added runtime dynamic instrumentation and debugging with ltt-ng
  - Designed and implemented a link-aggregation software with >99.9% availability. Work included client and server software, deployment and tooling. No security flaw found in security audit done by Bishop Fox.
  - Isolated a bug in a network provider's router without access to it
  - Modernised the router's Web interface UI and UX
  - Drove the switch to Gitlab, and deployment of CI with static analysis
  - Migrated the product's source code from nested submodules to monorepo while preserving commit history
  - Mentored and supervised junior employees
  - Acted as Level 3 support
- 2012–2014 **Software Consultant**, *OpenWide Ingénierie*, Paris
- Worked on all aspects of an In-Flight Entertainment system for commercial aviation (2 years) including GUI implementation, packaging, underlying Debian distribution management, maintenance tools.
  - Accompanied developers who arrived subsequently
  - Doubled the throughput of media updates and reduced data loss by a factor 10
  - Stepped up as sysadmin for the Paris' office and maintained telephony services, servers, traffic prioritization to protect VoIP and fair use
  - Software integration of a SOHO gateway (4 months) (firewall, routing, WiFi, VPN)
- 2011 (summer) **Intern**, *KMP Motorsports*, Enschede, The Netherlands
- Designed and implemented a real-time (on netbook) sensor visualization software in GTK+/OCaml
  - Designed and implemented a car Engine Control Unit configuration software in Qt/C++

## Personal projects

- 2021–present **esp32-prodboard**, *Compact and streamlined ESP32-S3 board for both development and small-scale production*
- 2020–present **Unnamed/unreleased**, *Boot to camera and microphone on Ubuntu on Raspberry Pi Zero v1; boot time improved from > 40 seconds to around 15 seconds*
- 2008–present **Self-hosting at home**, *Mail, XMPP, Web, Nextcloud, calendars, ...*
- 2005–present **Contributions to open-source projects**, *OCaml, EFLs, mingw-w64, wget, bsd-tar/libarchive, WebKit, ...*
- 2017–2019 (dormant) **Prose**, *High-performance collaborative text editor in OCaml and JS based on the Ocsigen framework and WebSockets*
- 2011–2014 **lablgtk**, *GTK+2 bindings for OCaml*

2009–2017 **Win-builds**, *Free software distribution for Windows: package manager, built on Linux and using (stopped) mingw-w64; fit for development and application distribution*

2005–201x **French translations**, *xz (compression), midori (web browser), nLite (windows system tool)*

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## Community Involvement

2016–2019 **FFDN**, *Federation of DIY ISPs*, Vice president, Board member, analysis of EU laws and regulations, answers to public consultations, day-to-day life of the association

2014–present **Franciliens.net**, *Do-It-Yourself ISP*, Secretary, Board member, day-to-day projects of the association

2008–present **IRC**, *Operator on several large channels on Freenode.net then Libera.chat, OFTC, Geeknode*

2003–present **Free software communities**, *OCaml, Slackware Linux, mingw-w64, xz, Enlightenment, WebKit*

### Talks

2017 **5 years of DIY Internet Access**, *FOSDEM 2017*, Brussels, Available on fosdem.org

2017 **FFDN: A Federation of DIY-ISPs in France and Belgium**, *34c3 - Freifunk Assembly*, Brussels, Available on media.ccc.de

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## Education

2008–2011 **Engineering/Masters Degree**, *CPE*, Lyon, 3rd, 4 th and 5 th years of higher education

- Electronics: analog and digital
- Computer science: C, Operating Systems, networks, databases, embedded software, compilers, graph algorithms
- Management, economics, Quality and Assurance

2006–2008 **Classes préparatoires Maths-Physique**, *Janson-de-Sailly*, Paris

Courses in Math and Physics, theoretical computer science; lessons and exams focused on theorem proving and algorithmic complexity using OCaml.

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## Languages

French **Native speaker**, *very good grammar and vocabulary*

English **Native speaker**, *daily practice of English*

German **B2 level**, *occasional practice*

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## Skills and tools

Tools vim, git, zsh, gdb, valgrind, strace, {core,find}utils, qemu, L<sup>A</sup>T<sub>E</sub>X

Build systems Meson, Autotools, GNU Make

Networking IP, TCP, UDP, HTTP, TLS, DHCP, DNS, CoAP, CBOR

Computer Languages C, OCaml, Shell scripting (combined with shellcheck), Awk, Javascript, PHP, HTML, CSS, Auto-HotKey

Operating Systems GNU/Linux (Slackware or Debian-based), Windows

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## Contact and Links

Mail adrien@notk.org

XMPP adrien@im.yaxm.org and adrien@im.dcln.fr

- Link
- Lobste.rs, user: adrien
  - gitlab.freedesktop.org, user: adrien
  - Gitlab, user: adrien-n
  - Github, user: adrien-n