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# Mathieu Abati

Fullstack Software Engineer – Linux Systems & Security

January 26th 1986 (40 years old)

Email: [mathieu.abati@gmail.com](mailto:mathieu.abati@gmail.com)

Website: <https://mathieu-abati.com>

Passionate about designing reliable and high-performance systems, I have solid experience in software, web, and embedded development, with a strong background in Linux and security.

Curious and pragmatic, I enjoy working on complete projects where I can contribute from architecture to production deployment.

## Professional Experience

### 2016 - 2026, R&D Engineer at [Trusted Objects](#)

Startup of about 10 people in Aix-en-Provence, France, specialized in security for industrial IoT.

Development in **C** of the **operating system** for a **Secure Element** dedicated to **IoT**. Implementation of **ECIES**, AES modes **GCM** and **CCM**, and **CMAC**.

Customer support for integrating this solution into their products.

Work on a **programming and personalization system for production lines**, designed to prevent counterfeiting, overproduction, and API theft.

Development of the **VueJS** web interface, business layers, and **Python REST API**.

Design of a **virtual machine management tool** based on **libvirt (Qemu/KVM)**.

Implementation of a **unified development environment** for team projects involving multiple software components, including a **Jenkins** CI/CD pipeline.

### 2010 - 2016, Technical Leader in Digital TV and Security Lead at [Wyplay](#)

Company of over 100 employees in Allauch, France, developing solutions for digital TV operators.

**Cybersecurity lead** on a project involving about 50 engineers. Supervised a 5-person team handling hardening and **LXC** isolation.

Project obtained **Cisco certification** for content security compliance.

Development in **C/C++** and **Python** on **DVB** and multimedia software stacks, participation in software **architecture**.

### 2009 (3 months), 2010 (6 months), Engineering Internships at [Wyplay](#), System Team

Reduced standby power consumption on set-top boxes using **Linux kernel power management**. Added sleep/wake-up support in several **kernel modules**.

Specification and development in **C** of an *in situ* microcontroller programmer via the **SPI bus**.

## Technical Projects

My personal and collaborative projects are presented on my website <https://mathieu-abati.com>.

### 2008 - 2011, 2026 [UniverseViewer](#) – [presentation article](#)

Development of software for research in cosmology, based on an academic publication presenting a method designed to produce a conformal mapping of cosmological structures. Work carried out in collaboration with one of the authors of the publication.

**2010 - 2023, MyBookImmo**

Specification and implementation of a full **web platform** for real estate management, developed in collaboration with a real estate agent within a micro-enterprise framework.

**Technical Skills**

**Languages:** C (expert, on PC and microcontrollers), Python, C++, Bash.

**Linux:** system administration (expert), isolation and containerization (Docker, LXC, Qemu/KVM).

**Embedded Linux:** power management, kernel modules, cross-compilation, Secure Boot.

**Web frontend:** HTML5 / CSS / JavaScript and VueJS (strong proficiency), NuxtJS, Electron.

**Web backend:** Python Flask, Redis, SQL.

**Cryptography:** ECC, RSA, AES, X.509, ASN.1, mutual authentication, TLS.

**Security:** side-channel attack mitigation, product hardening and certification.

**Tools:** Git (strong proficiency), unit and functional testing tools, Jenkins.

**Networking:** strong knowledge of IP networks, Zigbee, LoRa.

**Languages**

**French:** native language.

**English:** professional level (technical writing, TOEIC 775).

**Spanish:** intermediate level.

**Education****2008-2010, École Supérieure d'Ingénieurs de Luminy, Marseille, France**

Major in Computer Science, specialization in Embedded and Real-Time Systems.

**Other**

**Practice and teaching of Taekwonkido**, federal instructor, 2nd dan FFTDA.

Taekwondo Hapkido Club of Marseille.

**First Aid Certificate** (PSC1).

obtained in 2024 from the French Red Cross.

**Parametric 3D modeling** (FreeCAD) and **digital electronics** (KiCAD).