

Hugo Lamy

# Backend / Systems & IoT Developer (ATS-Friendly Version)

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## Profile

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Backend and embedded systems developer specializing in **C, TypeScript, and IoT**.

Design of **cloud APIs** for communicating with **embedded devices**, with experience in **firmware, Linux, and network protocols**.

Strong interest in **low-level systems** and **open-source software**.

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## Skills

- **Languages** : C, C++, TypeScript, JavaScript, PHP, bash, CSS, HTML
  - **Backend / Cloud** : Node.js, NestJS, Firebase Cloud Functions, MongoDB, MySQL
  - **Embedded / IoT** : Linux, Zephyr RTOS, memory optimization
  - **Tools** : Git, Docker
  - **Web** : WordPress, Svelte.js, React.js, Next.js
  - **Practices** : TDD, Functional, emails, sending emails, receiving emails
  - **Languages** : French (native), English (fluent)
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## Experience

**OSKEY** | Backend & Embedded Developer | September 2024 – Present

- Design of **Firebase Cloud Functions backend APIs** in TypeScript / NestJS for communication with **IoT devices**
- Refactored existing backend (**TypeScript** typing, bug fixes, maintainability improvements)
- Development of **backend helpers** that centralize **access controls**, error handling, and access to documents in the database
- Optimized memory usage of an **IoT firmware written in C (Zephyr RTOS)** running on microcontrollers
- Implemented backend and firmware **integration tests**

**FIPF – carteprof.org** | Fullstack Developer | January 2024 – August 2024

- Developed a **WordPress plugin (PHP / MySQL)** for payment management
- Audited and fixed **third-party plugins**
- Automated **payment workflows**

**KOSMOPOLIT** | Front-End Developer | March 2023 – June 2023

- Developed a **multilingual static website** (JavaScript, HTML/CSS)
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## Education

- **École 42, Paris** | 2021 – 2023 | Systems programming, algorithms, software development
  - **SIMPLON** | 2018 | Intensive JavaScript Fullstack Web Development Program
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## Projects

- **Systems Programming (C)** — Implementation of a **Unix shell** with command parsing, **pipes, redirections, process management and signal handling**
  - **Network Protocols / HTTP (C++)** — Implementing a **non-blocking HTTP/1.1 server** with support for **GET / POST / DELETE**, and **CGI execution**
  - **Graphics Algorithms (C)** — A **raycasting** graphics engine, featuring 3D rendering based on a 2D map and FPS movement handling
  - **Metaprogramming (C)** — **Self-replicating program** generating its own source code at runtime (metaprogramming)
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## Community

- **ZEROMILLIONS** | 2021 – 2024 | Educational outreach on male contraception
- **MIGRANTS-WILSON** | 2020 – 2022 | Food distribution
- **UTOPIA 56** | 2016 | Refugee camp volunteering