

# MAXENCE RENAUD

## Fullstack/DevOps Engineer

**Main Stack:** Python • Django • React/TypeScript • Next.js • Docker • GitLab CI/CD • PostgreSQL • Prometheus/Grafana

📍 Massy, France

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## Profile

Initially trained to become a **Civil Aviation Engineer** (IEEAC / ENAC), I worked as an **Airspace Manager & Designer** at the Paris Area Control Center, where I spent years designing airspaces and deploying operational procedures in one of Europe's busiest control centers. This dual experience now shapes how I build systems—combining the operational rigor of air traffic control, where risk management is non-negotiable, with the pragmatism enabled by rapid iteration and modern software best practices. I've worked across critical domains — civil aviation, European healthcare research, telemedicine at scale (MSF, Emirates, SMUR Île-de-France) — owning both technical and organizational layers: architecture, CI/CD pipelines, monitoring, team mentoring, cross-functional coordination. I reduced CI build times and deployments by **10x** at Parsys through caching and parallelization; I design systems meant to last — grounded in TDD, systematic code reviews, living documentation, and iterative delivery (Scrum/Kanban). I strongly value knowledge sharing: corporate training delivery (Docker, GitLab CI/CD), developer mentoring, internal documentation. Comfortable in international distributed contexts and multidisciplinary teams, I bridge technical depth and clear communication — with devs, PMs, domain experts, and across organizations.



## Technical Skills

- **Languages & Frameworks:** Python (uv), Django, JavaScript, TypeScript, React.js, Next.js, NVIDIA Flare, Redux Toolkit, Pyramid
- **CI/CD & DevOps:** GitLab CI/CD (expert-level), Pytest, Traefik, Docker, docker-compose, Nginx, SonarQube, semantic releases
- **Backend, API & Data:** REST, OpenAPI, PostgreSQL, Pydantic, django-ninja, FastAPI, Celery, Redis, RabbitMQ
- **Frontend, UI/UX:** TailwindCSS, Material Design, HeroUI, Bootstrap
- **Monitoring:** Grafana, Prometheus, ELK Stack, Sentry
- **Linters:** pre-commit hooks, uv, Ruff, Biome

- **Project Management:** team leadership, agile workflow, tech meeting facilitation, cross-functional coordination
- **Collaboration & Ticketing Tools:** GitLab (issues, boards), OpenProject, Redmine, Mattermost, MediaWiki
- **Miscellaneous:** Jitsi-meet (RTC), Linux, Shell, OAuth2

## Work Experience

### Fullstack Developer / DevOps Engineer

#### **BDM Consulting** (OPTIMA Platform - European Research Project)

October 2025 – Present

- Design and development of **full-stack applications** (Next.js 16, Django 6, Django Ninja, Flask) for federated learning job approval and coordination.
- Implementation of **NVIDIA FLARE-based** distributed data analysis infrastructure across European healthcare sites.
- Creation of **reusable GitLab CI/CD templates** for Python projects (uv, Ruff, pytest, Docker).
- Deployment and configuration of **OHDSI analytics stack** (ATLAS, WebAPI, Keycloak, JupyterHub) with Docker Compose.
- Setup of **Traefik v3** reverse proxy with automatic TLS certificate management (Let's Encrypt).
- Development of CLI tools for **NVFlare participant provisioning** with automated CI/CD pipelines.
- Refactor multiple repositories with a better **separation of concerns** approach for future contributions.
- Standardization of multiple workflows (from code quality and proper GitLab issues management to NVFlare startup-kits distribution).
- Technical documentation with **Sphinx**, **MyST Markdown** and architectural diagrams (**Kroki/Mermaid**).

### Fullstack Developer / Lead Backend

#### **Parsys Telemedicine**

March 2024 – October 2025

- Technical lead and mentoring of developers regarding architecture and best practices.
- Contribution to backend team organization.
- Backend development (Python, Pyramid, REST API) and codebase modernization.
- Functional specification in direct collaboration with project managers.
- **React development and frontend support:** integration of modern components, user interface improvements.
- Integration of a connector for the **French Health Data Hub (ARS)**.
- **Implementation of Prometheus/Grafana monitoring stack** for application monitoring and performance analysis.
- **Development of zero-downtime deployment scripts** for production updates.
- **Configuration centralization** across different environments (dev, staging, prod) to facilitate tenant, profile, and permission updates.
- CI/CD pipeline optimization with GitLab: **reduced build times by 10x** through intelligent caching and parallelization.
- Refactoring and technical documentation.

- Daily tech support, RTC module enhancements (Jitsi-meet stack).
- Software developments for **SMUR Île-de-France** public tender.
- Deployment of a **recording access server** for **Emirates'** long-haul teleconsultation fleet.
- Implementation of an **automated medical file allocation system** for **Doctors Without Borders (MSF)** at international scale.

## Freelance Technical Trainer **Docker & GitLab CI/CD Training**

2023

- Design and delivery of **Docker** and **GitLab CI/CD** corporate training programs.
- Custom training modules adapted to enterprise contexts and specific technical stacks.
- Hands-on workshops with real-world use cases and best practices.

## DevOps Engineer / Senior Expert **Directorate of Technology & Innovation (DSNA)**

November 2020 – May 2022

- “Accelerator” mission: promoting DevOps and agile practices.
- Transversal technical coach: support for teams adopting DevOps practices, pipeline redesign, and continuous delivery structuring.
- Organizational restructuring to promote continuous delivery.

## Airspace Manager / Project Manager **Paris Area Control Center (CRNA Nord - DSNA)**

September 2014 – November 2020

### **Airspace Manager** (2014–2017)

- Airspace design, operational safety, civil/military coordination.
- Drafting of Letters of Agreement (LoAs) with French and foreign civil/military air traffic control units.
- Safety studies for airspace design and reorganization projects.

### **Digital Project Manager / Internal Developer** (2017–2020)

*(in addition to the above responsibilities)*

- Redesign of internal documentation system (self-hosted MediaWiki), internal process structuring.
- Supervision of internal webapps, co-design workshop facilitation.
- Implementation of technical standards and change management.
- Rollout of collaboration tools (Redmine, Mattermost, GitLab), agile management.

## **Education**

### ENAC (French Civil Aviation University)

2011 – 2014

- Engineering Degree in Computer Science & Air Traffic Management
- Master's in Research – Networks & Telecommunications (CNRS – LAAS)

2008 – 2011

- Accepted to Supélec, Centrale
- Accepted to Arts & Métiers
- 1st at “Mines” entrance competitive exam

## Languages

- **French:** native
- **English:** fluent
- **Spanish:** fluent (2 years spent in Latin America)

## Achievements and passions

### My Latest Project: Self-Hosted Infrastructure

Personal project to regain control over my data and reduce Big Tech dependency:












- **Repurposed MacBook Pro** as a headless `Ubuntu Server 24.04` (power-optimized with TLP for 24/7 operation)
- **Self-hosted cloud:** `Nextcloud` (files, calendar) + `Immich` (photos with ML search) — replacing iCloud and Google main services, coupled with the use of the Proton suite
- **NAS Ugreen** for centralized storage via `SMB`, with `systemd` automount for Docker resilience, with a `3-2-1 backup` strategy applied
- **VPS + WireGuard tunnel** to securely expose services without opening home network ports
- **Security-first approach:** Fail2ban, UFW, SSH hardening, unattended updates, rootkit detection
- **Pi-hole** installed on a Raspberry-Pi Zero 2w as my main DNS server, with VPN tunnel for outside use

### Meet2Geek — Matchmaking Platform for Gamers (2017–2020)

Personal project turned registered company: matchmaking platform for gamers. Company incorporation, trademark registration, booth at Chartres gaming convention. Community management across Discord, Twitter, Facebook.

### Others

- **StravHop** ([stravhop.com](http://stravhop.com)) — Interactive Strava activity visualizer with smooth time-based navigation (“hops”). **Stack:** Django + django-ninja + Next.js + deck.gl + CI/CD
- **The Silent Wonders** ([thesilentwonders.com](http://thesilentwonders.com)) — Ongoing social platform project showcasing positive actions without promoting ego. **Stack:** Next.js + django-ninja
- **stravawizard** (`pip installable`) — Python middleware/connector for Strava: OAuth handling, data retrieval, extensible.
- **Coinvest APP** ([CitLab repo](http://CitLab repo)) — A responsive web application for tracking co-investment payments in property purchases. Built with Flask and modern responsive design principles.
- **resoltus** — SUTOM (French Wordle) command-line solver in Python.
- **Advent of Code** — Regular participation, puzzle solving “just for fun”.
- Volunteering as a tutor in my free time.

- 2 years traveling in Latin America (       ) – **trail running** across the Andes  
- Enthusiast of **slow travel** and self-sufficient hiking.
- Regular trail & ultra-trail runner , skydiver , and light aviation pilot (including aerobatics) 
- Participated in 24h of Le Mans Roller (team).
- Former *The North Face* brand rep (Vieux Campeur – Paris).
- Woodworking: furniture building and restoration.