

Djalim SIMAILA

Computer Science Engineering Student —
Distributed Systems, DevOps & Infrastructure |
Seeking 2026 Internship
@DjalimS.pro@outlook.fr
☎ +33 7 60 32 50 21
📍 Marseille, France
🌐 djalim.fr
📄 linkedin.com/in/djalim-simaila

Skills

Programming Languages

C, C++, Java, C#, Python, TypeScript, JavaScript, PHP,
Dart, SQL, Bash

Web & Mobile

HTML5, CSS3, React, React Native, Flutter, Symfony,
Flask, Qt, Node.js, Deno, Astro, REST APIs

Systems & Networking

Linux, Systems administration, TCP/IP, DNS, WireGuard
(VPN), VXLAN, Nginx, Sockets, SSH, Wireshark

DevOps & Cloud

Docker, Kubernetes, Proxmox VE, QEMU/KVM, VMware,
Ansible, Jenkins, CI/CD, Git, Gitea, Nexus

Observability

Prometheus, Grafana, Loki, Monitoring, Alerting,
Centralized logging

Databases

MariaDB, PostgreSQL, Oracle, MongoDB, CouchDB,
SQLite, Data modeling

Hardware

PC assembly, Hardware diagnostics, Repair, Fleet
management, FOG image deployment, Wake-on-LAN

Methods & Quality

TDD, pytest, JUnit, Design patterns, UML, Agile/Scrum,
Project management, Code review

Certifications

TOEIC Listening & Reading — 945/990

2024

ETS Global

Languages

French	English
Native	Fluent — TOEIC 945 (C1)
●●●●●	●●●●○

Interests

Retro computing & hardware

Collecting and preserving retro games and consoles,
hardware repair

Self-hosting

Running a personal infrastructure of open-source
services

4th-year engineering student at **Polytech Marseille** (graduating 2027), focused on **distributed systems, virtualization and infrastructure reliability**. 5 industry and research-lab experiences, one of which contributed to an **international scientific publication** (EWG-IE / EURCOLD 2023). Designs and operates a self-hosted **server cluster** to keep personal production services highly available. Goal: bring this combined development / operations culture to demanding engineering teams.

Profiles

📄 LinkedIn djalim-simaila	📄 Gitea (self-hosted) git.djalim.fr
------------------------------	--

Work Experience

SATT Sud-Est Mobile Developer (engineering internship)	Aix-en-Provence, France 2025
--	---------------------------------

- Led the development of **ReadAtHome**, a mobile reading-assistance app designed with researchers from **Université Lyon 2**: translated scientific requirements into functional specifications, then into a field-ready product.

- Delivered the **multi-platform production release**: iOS publishing (TestFlight) and Android, owning the full design → development → deployment cycle (Flutter/Dart).

- Secured project continuity through documentation and handover to the research teams.

INRAE — RECOVER research unit (geomechanics) Scientific Software Developer (internship)	Le Tholonet, France 2023
---	-----------------------------

- Future-proofed a critical soil-erosion research tool by driving its **migration from LabVIEW to Python**, removing a proprietary-license dependency.

- Designed a desktop application (Qt) for **morphological analysis of 3D scans** from HET tests: mesh loading (.obj/.stl/.xyz), straightening and layer-based discretization, computation and export of morphological indices, **GPU-accelerated 3D rendering**.

- Methodology adopted in an **international scientific publication** (EWG-IE / EURCOLD 2023, see Publications).

- Additionally delivered a water-level measurement interface for the lab's instrumentation.

Cyber Café Games Hardware Technician (internship)	Digne-les-Bains, France 2018
---	---------------------------------

- Brought customer machines back into service: **PC assembly, hardware fault diagnosis and repair**.

- Reduced recurring failures by introducing preventive hardware maintenance.

DOSI — Aix-Marseille University (IT department) Systems Administrator (internship)	Digne-les-Bains, France 2017
--	---------------------------------

- Industrialized campus fleet deployment: **system image deployment with FOG** and **Wake-on-LAN** automation.

- Managed and maintained the computer fleet (workstations, lab rooms).

Education

Polytech Marseille (Aix-Marseille University) Engineering degree (Diplôme d'ingénieur, MSc level) Computer Science	Marseille, France • 2024 – 2027
---	---------------------------------

Engineering cycle, currently in 4th year. Coursework: **distributed systems and distributed programming**, advanced networking, **virtualization, VMs and containers**, DevOps, IT security, cryptography, compilers, automata and formal languages, graph and information theory, **machine learning and data mining**, image analysis, graphics programming, advanced databases, object-oriented analysis and design, project management. Team engineering projects every semester (including PolyMPR, an HR platform deployed on the university's datacenter).

IUT of Aix-Marseille — Aix-en-Provence campus Computer Science	BUT (3-year technological bachelor's degree) Aix-en-Provence, France • 2021 – 2024
--	---

Project-based curriculum: building complex applications in teams, from requirements gathering to delivery. Coursework: **full-stack web development** (Java, PHP/Symfony, JS/TS, MVC), **mobile** (React Native), **software quality and TDD (18/20)**, **virtualization with VMware/QEMU/Docker (20/20)**, build-pipeline automation (**CI/CD with Jenkins, Nexus**), SQL and NoSQL databases, systems programming (sockets) and networking, cryptography and security, software architecture and design patterns, multimedia programming (Unity, Blender), IT team management.

Projects

Homelab — Proxmox server cluster (3 nodes)	2024 – present
---	----------------

Design, deployment and 24/7 operation of a **3-node Proxmox server cluster** interconnected through an encrypted overlay network (**WireGuard/VXLAN**) across remote sites. Goal: host personal production services (Gitea, Nextcloud, Matrix, Jellyfin) with high availability. Automated provisioning with **Ansible**, monitoring and alerting with **Prometheus / Grafana / Loki**.

PolyMPR — high-availability HR platform	2024 – 2026
--	-------------

Team engineering project: in-house **modulith** framework (Deno/Fresh, TypeScript, Drizzle/PostgreSQL) to move the department's HR management to the cloud. **Deployed**

in high availability on the Aix-Marseille University datacenter (Docker Swarm, HAProxy).
Swappable-module architecture and a module-scaffolding CLI.
<https://info-polytech.univ-amu.fr/gitea/admin/PolyMPR>

AI Image Tagger — AI-powered image annotation 2026

Full-stack app for automatic image annotation using vision models (Bun, Next.js, PostgreSQL/Drizzle), built for production: **complete Kubernetes deployment** (17 manifests: deployments, services, ingress, PVC, secrets) with **dedicated Prometheus/Grafana monitoring**, Docker containerization, file-hash caching, backend tests.

3D OpenGL rendering engine (C++) 2025

Rendering engine written **from scratch in C++/OpenGL** to master the GPU graphics pipeline: **17 GLSL shaders** (Phong, Blinn-Phong, directional/point/spot lighting), OBJ/MTL model loading, cubemap skybox, free camera, ShaderProgram/Mesh3D/Texture2D abstractions.

Impossible Boss Battle — game AI in C++ 2025

Boss-fight game in C++ with **A* pathfinding implemented from scratch** (priority queue, heuristic, path reconstruction) for enemy movement, entity and animation systems, CMake build.

TruthInquiry — multiplayer web game 2023

Online deduction game built by a **team of 5**: Flask/MariaDB backend, multiplayer sessions, YAML dataset import, **pytest test suite**, API documentation and Git contribution workflow.

HTTP server in C++ 2023

Web server implemented in C++ **by reading the HTTP specification** (RFC), to master the protocol and low-level network programming on Linux (**POSIX sockets**).

ClipSync — multi-device clipboard synchronization 2022

Complete 3-component ecosystem: **Flask/SocketIO** server, Linux client integrated with the **D-Bus** message bus (native notifications), **React Native** mobile app. Real-time sync between PC and phone.

Publications

Morphological analysis of a post-erosion pipe after a HET test July 2023

29th Meeting of the EWG-IE / 4th EURCOLD WG on Overflow and Overtopping Erosion, Lyon
P. Philippe, S. Youssef, N. Benahmed, S. Nicaise, A. Doghmane, F. Byron, **D. Simaila** — INRAE RECOVER, Aix-Marseille University. Co-author: 3D analysis tool developed during the INRAE internship.

Awards

1st prize — departmental programming competition 2018

Crazy Space, team-developed space shooter — featured in La Provence newspaper laprovence.com