

Djalim SIMAILA

Computer Engineering Student —
Distributed Systems, DevOps &
Infrastructure | Seeking 2026
Internship

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🔧 Skills

Languages
C++, Java, Python, TypeScript, SQL, Bash

Web & Mobile
React, React Native, Flutter, Symfony,
Node.js, REST API

Systems & Networks
Linux, Systems administration,
WireGuard/VXLAN

DevOps & Cloud
Docker, Kubernetes, Ansible, CI/CD (Jenkins),
Git

Observability
Prometheus, Grafana, Loki, Alerting

Databases
PostgreSQL, MongoDB, Data modeling

🗣️ Languages

French	English
Native	Fluent — TOEIC 945 (C1)

📖 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.

📁 Professional Experience

SATT Sud-Est	Aix-en-Provence
Mobile Developer (engineering internship)	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.	
• Owned the multi-platform release : iOS (TestFlight) and Android publishing, managing the full design → development → deployment cycle (Flutter/Dart).	

INRAE — RECOVER unit (geomechanics)	Le Tholonet (13)
Scientific Software Developer (internship)	2023
• Future-proofed a critical soil-erosion research tool by leading its LabVIEW → Python migration , removing a dependency on a proprietary license.	
• Built a desktop application (Qt) for morphological analysis of 3D scans of HET tests: mesh loading (.obj/.stl/.xyz), straightening and discretization into layers, computation and export of morphological indices, GPU-accelerated 3D rendering .	
• Methodology reused in an international scientific publication .	
• Additionally delivered a water-height measurement interface for the lab's instrumentation.	

🎓 Education

Polytech Marseille (Aix-Marseille University)	Engineering Degree (MSc level)
Computer Science	Marseille • 2024 – 2027
Engineering program, 4th year. Core: distributed systems , advanced networking, virtualization & containers , DevOps, security and machine learning . Team engineering project each semester.	
IUT d'Aix-Marseille — Aix-en-Provence campus	BUT (Bachelor of Technology)
Computer Science	Aix-en-Provence • 2021 – 2024
Project-based degree. Core: full-stack web (Java, Symfony, JS/TS), virtualization (VMware/QEMU/Docker), CI/CD (Jenkins, Nexus), quality & TDD, SQL/NoSQL and networking.	

<> Projects

Homelab — Proxmox server cluster (3 nodes)	2024 – present
Design, deployment and 24/7 operation of a 3-node Proxmox cluster interconnected by an encrypted overlay network (WireGuard/VXLAN) across remote sites. Goal: highly available hosting of personal production services (Gitea, Nextcloud, Matrix, Jellyfin). 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 migrate the department's HR management to the cloud. Deployed in high availability on the Aix-Marseille University datacenter (Docker Swarm, HAProxy). Architecture with interchangeable modules and a module-generation CLI.	
3D rendering engine in OpenGL (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.	