

Théo TCHILINGUIRIAN

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EDUCATION

Polytech Montpellier

3-year Engineering degree in Computer Science (Equivalent to M. Eng.)

Montpellier, France

Sep 2023 — Present

Expected graduation: 2026

- Coursework on theoretical Comp. Sci. includes algorithms and data structures, graph theory, automata, formal languages and grammars, mathematics for computing, and machine learning.
- Setting up and maintaining complex declarative infrastructure setups with Proxmox, OpenStack, and Kubernetes.
- Designing and developing scalable, distributed applications using Web technologies and Rust.
- Working with the entire chain of testing, CI/CD, improvement and monitoring of applications and infrastructure.

Every short- and long-running project was conducted in self-managed teams of up to 15 students.

Polytech Montpellier

2-year Engineering school Preparatory Classes

Montpellier, France

Sep 2021 — Sep 2023

- Mathematics, Physics, Engineering Practices, Computer Science, Human Sciences.

WORK EXPERIENCE

Apprentice Research Engineer

Laboratoire d'Informatique, de Robotique et de Microélectronique de Montpellier (LIRMM)

Montpellier, France

Jun 2026 — Present

- Contributed bug fixes, performance optimizations, features, and refactors to A-SABR, an open-source routing library for Delay-Tolerant Networks (DTN), written in Rust.
- Improved CI/CD, benchmark, and simulation software (Python, Rust).
- Designed and implemented new internetwork connectivity capabilities in A-SABR, for routing across DTNs.
- Designed and ran simulations comparing DTN internetworking techniques, analyzing and interpreting the results.
- Co-authored two research papers and a poster, on A-SABR and internetwork pathfinding.
- Contributed to a joint project with the CSUM space center.

Apprentice DevOps Engineer

Renault Digital

Paris, France

Sep 2023 — May 2026

- Built and managed declarative infrastructure with Google Cloud and Kubernetes.
- Maintained GitLab CI/CD pipelines.
- Automated SQL/NoSQL database migrations.
- Improved IaC, websites, and scripts.

Network R&D Intern

D3TN GmbH

Dresden, Germany

Jun 2025 — Oct 2025

- Designed a BGP multiprotocol extension (RFC 4760) for distributing EID reachability information in DTNs, as part of the DARKSOL space-Cloud project.
- Produced an open-source implementation in Rust and C, based on the BIRD Internet Routing Daemon.
- Automated integration with Linux and Kubernetes, containers and VMs using Nix and NixOS.
- Wrote comprehensive documentation.
- Co-authored a research paper, presented at the STINT 2025 workshop, and published through IEEE.

Construction Worker and Assistant Manager

Cuartero SAS

Mauguio, France

Jun 2022 — July 2022

- Installation of partitions, insulation, plasterboards, doors and windows.
- Trained in administrative functions, supplies and logistics management.
- Produced estimates and quotations, provided IT support.

SKILLS

- **Programming Languages:** Rust, C, Go, Python, JS/TS, Java.
- **Systems Administration:** Linux, Proxmox, Kubernetes, OpenStack, GCP/AWS/OVH, Docker/Podman, Helm, Kustomize, Terraform/OpenTofu, Ansible, ArgoCD, MongoDB QL, PL/PgSQL, Nix.
- **Interpersonal Skills:** Empathy, Curiosity, Adaptability, Patience, Self-awareness, Critical thinking.
- **Languages:** French (native), English (advanced). Beginner in German and Spanish.

CERTIFICATIONS

- **Certified Kubernetes Administrator (CKA)**, Linux Foundation (Certificate ID LF-uxze5if49j) Aug 2025
- **Test of English for International Communication (TOEIC)**, ETS (Score: 985/990) Sep 2024
- **PSC1 (French first aid certificate)**, FFSFP Jun 2019

PUBLICATIONS

Marius Feldmann, Théo Tchilinguirian, Felix Walter. A Border Gateway Protocol Extension for Distributing Endpoint Identifier Reachability Information in Delay-tolerant Networks. *2025 IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE)*, Oct 2025, Halifax, Canada. pp.1-6, doi: 10.1109/WiSEE57913.2025.11229835.

PROJECTS

OpenStack infrastructure, Dec 2025 — May 2026

- Class project to migrate the school's infrastructure to a declarative OpenStack deployment, with a comprehensive networking configuration, GPU on demand, log management, monitoring, and alerting.

Beep Web application, Discord-like, Real-time video, audio, text and file handling. Jan 2023 — May 2026

- Managed a team of 15 DevOps for a month, in an experiment to find the most fitting management approach.
- Lead the effort for refactoring into a scalable microservices architecture of 11 services, and from TypeScript to Rust.
- Evolved the declarative infrastructure through Proxmox, Kubernetes, and OpenStack.
- WebRTC built in Elixir and Rust, queuing with PostgreSQL, Kafka, and RabbitMQ.

SealCI, Distributed CI system. Jun 2024 — Jun 2025

- Various teams for a total of 15 self-managed DevOps, coordination through well-defined interfaces.
- Microservices architecture of ultimately 10 services, fully written in asynchronous Rust.
- Developed in-house micro-VM manager and virtio-net implementation, based on Rust-VMM.
- Wrote comprehensive documentation.

Personal involvement in the A-SABR project, contributing bug fixes, optimizations, features and refactors since Jan 2026.

Various toy projects to learn x86 NASM, COBOL, parsing, and machine learning.

PUBLIC SPEAKING

- **RINA: Reinventing the Internet of the future**, Polycloud 2026 & Sunny Tech 2026 Jun & Jul 2026
- **Delta-T: TCP without handshakes**, Hello World's Open Computing II Jun 2026
- **The state and usability of Cloud Native Confidential Computing in Kubernetes**, Polycloud 2025 May 2025

ASSOCIATIVE WORK

President & Secretary Montpellier, France

Hello World students' association (founded 2015) Dec 2025 — Present

- Heading the Comp. Sci. and Mathematics students' association of the Faculty of Science of Montpellier.
- Organizing meetups, conferences (Hello World's Open Computing), tutoring, and participation in other events.
- Installing and managing Linux and BSD systems, computer networks, and hosting applications.
- Providing IT support to students and other associations.

HOBBIES

- **Reading**: Computer networking, History of Comp. Sci., Sci-Fi, Fantasy.
- **Sports**: Bouldering, cycling, hiking, fitness.
- **Independent research** on computer networking theory (RINA).