

Nicolas Cellier

Lead Platform & Software Engineer — Data & AI Systems

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Profile

Trained as a research engineer, I take R&D products from prototype to production across the full stack: architecture, applications, data pipelines, **Kubernetes/GitOps** and operations.

Professional Experience

Lead Platform & Software Engineer — R&D Systems, MotionSign – Isère, France 2026 – present

Cross-functional technical lead for internal systems and R&D tools, spanning infrastructure, applications and data pipelines.

- Designed and operated internal and cloud **Kubernetes** platforms through **GitOps** with FluxCD; PostgreSQL/CloudNativePG services, storage, backups and restores.
- Developed business applications in **Python, TypeScript/SvelteKit** and **Rust/Tauri**.
- Hardened ingestion, synchronization, video-processing, animation and inference pipelines.
- Managed access, application identity, private networking, DNS, TLS and OAuth/OIDC integrations.
- Turned R&D prototypes into observable, deployable and production-ready systems; diagnosed end-to-end incidents and made pragmatic architecture decisions.

Data Scientist, R&D Team, IVèS – Isère, France 2024 – 2026

- Built infrastructure and automated ETL pipelines, BI dashboards and a decision-support tool for sizing an accessible relay-call platform for deaf and hard-of-hearing users.
- Explored and prototyped Data Science solutions for R&D work.

Research Engineer, IMT Mines Albi — Industrial Engineering Center – Tarn, France 2021 – 2024

- ACDC project — data collection, time-series forecasting, discrete-event simulation and scheduling for a relay call center.

Postdoctoral Researcher, Université Savoie Mont Blanc — LAMA / LOCIE – Savoie, France 2018 – 2021

- Modeling and numerical solvers for the ANR FRAISE and European OPTIWIND projects — falling-film transfer, droplet flow and icing.

Skills

Platform and production: **Kubernetes**/k3s, OpenStack, FluxCD/**GitOps**, Kustomize/Helm, Linux, Docker, CI/CD, PostgreSQL/CloudNativePG, storage, backup/restore, observability, DNS/TLS/Tailscale

Software engineering: **Python, TypeScript/JavaScript**, Svelte/SvelteKit, **Rust/Tauri**, APIs and data contracts, SQL, OAuth/OIDC, testing

Data engineering and science: Prefect, ETL/ELT, S3/WebDAV, orchestration, idempotency, video processing, machine learning, time series, simulation, optimization, numerical methods

Education

Université Savoie Mont Blanc — LOCIE, PhD in Optimization of falling-film heat exchangers – Savoie, France 2014 – 2018

- Thesis advisor: C. Ruyer-Quil

Université de Technologie de Compiègne, Engineering degree in Process Engineering – Oise, France 2009 – 2014

Freelance Projects

- 2025:** CAELI Energie — parametric EnergyPlus code development
- 2024:** ColibriTD — partial differential equation solver development
- 2023:** LOCIE — scientific library consolidation and optimization

Selected Research

- 2025:** *Machine learning-based agent staffing under uncertainty* — Expert Systems with Applications — DOI
- 2024:** *A simulation based digital twin approach to assessing emergency-call response* — npj Digital Medicine — DOI
- 2023:** *A systematic approach to classify and characterize genomic islands* — Nucleic Acids Research — DOI

Languages

- French:** native
- English:** fluent