# Omar Ziyad Azgaoui

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## Education

**SUPSI DTI** Sep 2026 - Jul 2029 (expected)
*BSc in Data Science and Artificial Intelligence* *Lugano*

**EPFL** Sep 2023 - Jul 2026
*Computer Science coursework* *Lausanne*
Preparatory year (MAN), then first-year courses. **Selected grades (Swiss 6-point scale):** Analysis A (MAN): **5.5**; Introduction to Programming: **5.0**; Linear Algebra: **5.0**; Practice of Object-Oriented Programming: 4.25; Analysis I: 4.0.

## Experience

**LiGHT Lab, EPFL** Aug 2025 - Present
*Research Student Assistant, Core Team* *Lausanne, Switzerland*
**MOOVE**, the lab's platform where clinicians assess medical AI: 21 countries, 3,000+ clinical experts, 500,000+ evaluations (Sep 2026). **Team award:** Innovate for Impact, AI for Good 2026.

- Helped move MOOVE from Firebase to Convex: finished the switch to ID-based model references in both databases and ran the production migration (74 organizations, 38,815 answers, 156 schedules) with zero legacy references left.
- Traced a MOOVE login failure to Convex sessions expiring after 30 days while Firebase ones never did, measured 56 of 216 active password users affected, and shipped a fix that sends them back to log in.
- Replaced MOOVE's Elasticsearch-based RAG with mmore, the lab's open-source document retrieval pipeline, and added page and paragraph citations end to end, so answers drawn from uploaded documents show their sources.
- Built organization, working-group and review screens for MOOVE's clinicians and admins in React and TypeScript.
- Tested if clinical guidelines bring Meditron's medical LLM judge closer to clinicians on 1,004 rated pairs: never helped (up to 6.8 points worse, $p = 0.001$); a winner-only prompt beat rubric scoring by 4 to 6 points.
- Built a pipeline adapting 200 patient-case vignettes to Ethiopian guidelines and extended the lab's generator for a partner study (566 cases), where retrieval and prompt fixes cut ungrounded Pakistan cases from 42% to 10%.
- Fixed a silent failure in MMIRAGE, the lab's LLM dataset-processing library, that left most structured outputs empty (usable rows went from 11 to 150 of 151), added its CI and reproduced its benchmarks on 4 H100 GPUs.

## Projects

**Reviewer Two**: AI code reviewer | *TypeScript, GitHub Actions* Marketplace | Source

- Built a GitHub Action for MOOVE's rush sessions, when the team was juggling feature work and code review: it reads the repository and the team's conventions, then takes a first pass at pull requests.
- Catches routine issues, such as a missing await or an unchecked organization ID, so human reviewers can focus on the harder changes; it has reviewed 90+ pull requests across three MOOVE repositories since July 2026.

**LiGHT Events Radar**: Conference tracker | *Next.js, TypeScript, Slack API, OpenAI API* Live | Source

- Built for the lab when it had no reliable way to follow conferences: 160+ events, Slack reminders before each deadline, and monthly syncs from OpenReview and venue websites that arrive as pull requests.

**SUPSI Schedule**: Timetable calendar feed | *React, TypeScript, Cloudflare Pages* Live | Source

- Scrapes SUPSI's HTML timetable every 3 hours into a feed that students add to their calendar once.

**ReCHor**: Swiss transit journey planner | *Java, JavaFX* Source

- EPFL CS-108 project with a classmate: Pareto-optimal Swiss transit routing with the connection scan algorithm.

## Publication

**hypMOOVE-PHC study protocol** | medRxiv preprint, Sep 2026 DOI: 10.64898/2026.09.14.26362984
Co-author of a multi-country protocol testing LLMs for clinical decision support in primary care.

## Technical Skills

**Programming:** Python, TypeScript, JavaScript, Java.
**Development:** React, Next.js, Node.js, Convex, Firebase, FastAPI, HTML/CSS.
**AI and research:** LLM-as-judge evaluation, RAG (hybrid search, reranking), vLLM.
**Infrastructure:** Git, GitHub Actions, Docker, Linux, EPFL RCP (Run:ai), CSCS Alps (Slurm).
**Languages:** French C2; Arabic C2; English C1; German B1; Mandarin HSK 2.

## Teaching & Activities

- **Students 4 Students** (2025-2026): teaching assistant for first-years in programming, Java, mechanics and AICC.
- **EPFL AI Team** (2025-2026): built pose extraction and motion comparison for MATCH, a dance-feedback project.
- **Associations:** AGEPoly sport team (since 2025), Forum EPFL volunteer (2025), CLIC staff (2026); DESMNU Model UN delegate, then trainer (2019-2023), Best Delegate 2023.