Amaury Mazoyer

ENS de Lyon — Computer Science

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Research Experience

June–July 2025   **Research Internship**

6 weeks research internship supervised by Martin Bodin ↗ in Centre Inria de l'Université Grenoble Alpes ↗, with a written report ↗ and a presentation ↗ at the end of the internship (in French).

- Topic: Function analysis in Rocq: bridging informal reasoning and formal proofs
- Methods: proof analysis, formal verification, real analysis

Education

2025 − current   **Master d'Informatique**

Master's degree in Computer Science (Master d'Informatique) in the École Normale Supérieure de Lyon (research-oriented elite institution).

Relevant coursework ↗ : Proofs and Programs, Semantics and Verification, Compilers and Program Analysis, Parallel and Distributed Algorithms and Programs, Optimization . . .

2024 − 2025   **Double Licence: Informatique Fondamentale et Mathématiques**

Licence d'Informatique Fondamentale (i.e a Bachelor's degree in fundamental computer science) in the École Normale Supérieure de Lyon and Licence de Mathématiques (i.e a Bachelor's degree in mathematics) in the Université Claude Bernard Lyon 1 validated in parallel through examinations.

Relevant coursework ↗ : Algorithms, Programming Language Theory, Foundations of Computer Science, Functional Programming, Logic . . .

2022 − 2024   **Classes préparatoires aux grandes Écoles**

Classes préparatoires aux grandes Écoles (a two year intensive undergraduate program preparing to the competitive entrance of grandes Écoles) in the Lycée Champollion in Grenoble.

Track MPI: Mathématiques, Physique et Informatique (Mathematics, Physics and Computer Science).

2019 − 2022   **Baccalauréat général**

Baccalauréat général, mention très bien, with a major in Mathematics, Computer Science and Engineering (equivalent to British A-levels).

Languages

- French (native)
- English (fluent, Cambridge English: Advanced ↗ — C1 grade B, score 197)
- German (basic knowledge, A2)

Academic Distinctions & Competitions

2024, 2025   **SWERC — Southwestern Europe Regional Contest (ICPC)**

Team participant for the ENS de Lyon (team-based competitive programming contest)

Projects

September 2025 – current   **VeriSLO** ⬈

A tool for streamlining Iris proofs of OCaml programs (ENS integrated project).

- Collaborative work with 4 team members using OCaml for formal verification
- Developed documentation and usage guides for Iris proof automation

April–June 2025   **Pieuvre** ⬈

A proof assistant based on the Calculus of Inductive Constructions (CIC), inspired by Rocq and written in OCaml (PROFON course project).

- Implemented complex tactics including `induction`, `inversion`, `auto`, and `semiring`
- Designed implicit argument handling and built VSCode extension for user interaction
- Full type inference and unification algorithms for CIC

February–April 2025   **Fouine** ⬈

A faithful interpreter for a substantial subset of OCaml, written in OCaml (PROFON course project).

- Implemented full lexer, parser, type inference (both monomorphic and polymorphic), and evaluator
- Optional continuation-passing style (CPS) code transformation

A (non-exhaustive) list of other smaller projects can be found on my GitHub portfolio ⬈.

Technical Skills

Languages: OCaml, Rocq, Python, C, LaTeX
Tools: Git, Linux

Association Experience

2025–2026   IT manager of the BDE (Students' Union) of the ENS de Lyon

Personal Interests

- Archery (9 years experience, multiple rewards) and sports in general
- Video games