

CONTACT

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ABOUT ME

I obtained my PhD in Computer Science at the ENS de Lyon for my research on logic and automata theory, conducted autonomously and as part of a team. Additionally, I completed the French agrégation in mathematics, a rigorous examination that certifies teachers for university level, showing my communication abilities. My interest in data science led me to transition from academia by developing my skills in this field.

SKILLS

Python 10+ yrs

Machine Learning 1 yr

SQL 1 yr

Git 1 yr

C++ 1 yrs

Tableau 6 mths

Teaching 7+ yrs

LANGUAGES

French 25+ yr

English 10+ yrs

PORTFOLIO

perso.ens-lyon.fr/emile.hazard/data

EMILE HAZARD

Computer Science PhD
Mathematics and Machine Learning expertise

PROFESSIONAL EXPERIENCE

High school associate professor in mathematics

2022-2023

Lycée Joliot-Curie, Nanterre

- Designed courses to teach mathematics and computer science to high school students, adapting the discourse to include every student, regardless of expertise.
- Evaluated and monitored students to offer personalized support where needed, and reported to parents and teaching staff on their progress.
- Addressed many day-to-day academic or disciplinary issues with and between students.

Computer Science PhD

2019-2022

LIP, ENS de Lyon

Subject: Non-determinism, explorability and cyclic proofs.

- Conducted a long research project to solve intricate problems, autonomously and in small teams, dealing with numerous deadlines and adapting to frequent changes.
- Communicated results with two peer-reviewed research articles and through talks to several audiences, from high school students to research conferences.
- Actively contributed to the university project by teaching computer science up to Master level and representing students on the scientific council, health committee, and disciplinary board.

EDUCATION

Computer Science PhD

2019-2022

LIP, ENS de Lyon

See [Professional experience](#) for details

Bachelor's and Master's degree

2015-2019

ENS de Lyon

- Studied logic, programming, and general computer science culture.
- Conducted research in several universities, nationally and internationally, through three internships.
- Created an application to ease communication for lock-in syndrome patients, as part of a team project involving collaborative programming and reports to stakeholders.

French mathematics agrégation

2018

Académie de Lyon

Prepared for a competitive examination by studying mathematics and how to teach it, and obtaining a Master's equivalent diploma (in addition to a Computer Science Master's degree the next year).

Classe préparatoire aux grandes écoles

2013-2015

Condorcet High School, Paris

MPSI, MP*: a two-year intensive mathematics, physics, and computer science program following high school graduation.

ACHIEVEMENTS

ENS the Lyon admission Computer science exam

Admitted in 2015 to a very selective university. Shanghai top 75 in mathematics, QS top 5 France, with high teachers/students ratio.

French mathematics agrégation Competitive exam

Successfully passed in 2018 (national rank 111). Selection of teachers for university level.

Machine learning specialization Coursera online course

Andrew Ng, DeepLearning.AI, Stanford

Acquiring an understanding of machine learning techniques, mathematical foundations, and implementations.

Python specialization

FUN MOOC online course

Basic and more advanced notions of Python: classes, context managers, NumPy, and pandas tools.

TALKS

PhD defense Lyon, Sep 2022

30 attendees

StrIP Kick-Off Workshop Birmingham, Jun 2022

50 attendees

RECIPROG project launch Lyon, May 2022

30 attendees

CSL 2022 Göttingen, Feb 2022 (remote)

100 attendees

Plume team meeting Lyon, Feb 2020

15 attendees

Highlights of logic, automata and games

Warsaw, Sep 2019

70 attendees

SOFT SKILLS

Independent learner	Analysis
Problem solving	Teamwork
Communication	Pedagogy
Adaptable	Autonomy

SCIENTIFIC PUBLICATIONS

Non-determinism, explorable automata and cyclic proofs PhD thesis

theses.fr

Explorable automata Computer Science Logic

CSL 2023

Cyclic proofs for transfinite expressions Computer Science Logic

CSL 2022

Both with Denis Kuperberg

TEACHING

Redaction of a competitive exam correction H&K Editor

2023

Correction and publication of the computer science subject for a competitive examination (CCINP).

High school teaching Lycée Joliot-Curie, Nanterre

2022-2023

See **Professional experience** for details

Tutorial classes to Master students ENS de Lyon

2021-2022

Calculability and complexity classes for students preparing for the computer science agrégation competitive examination.

Tutorial classes in Bachelor Computer Science ENS de Lyon

2019-2022

Teaching computer science foundations, logic, and programming theory.

Tutoring in mathematics for university students Paris and Lyon

2015-2018

MANDATES

Elected student representative ENS de Lyon

2019-2022

- **Scientific board:** attributed local grants, fixed research and teaching orientation, evaluated university
- **Health committee (CHSCT):** addressed work environment issues, organized COVID-19 response, investigated accidents
- **Disciplinary council:** discussed incidents and possible sanctions, informed students

INTERESTS

During my free time, I enjoy DIY, cycling, bouldering, skiing, juggling, sailing, mountaineering, reading, and fitness.