CONTACT

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in emile-hazard

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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 yr

Tableau — 6 mths

Teaching — 7+ yrs

LANGUAGES

French — 25+ yrs
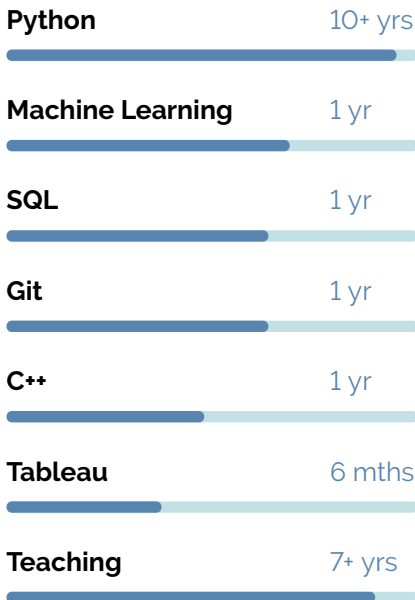
English — 10+ yrs

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 international 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 de 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   `theses.fr`
PhD thesis

Explorable automata   `CSL 2023`
Computer Science Logic

Cyclic proofs for transfinite expressions   `CSL 2022`
Computer Science Logic

Both with Denis Kuperberg

TEACHING

Redaction of a competitive exam correction   `2023`
H&K Editor
Correction and publication of the computer science subject for a competitive examination (CCINP).

High school teaching   `2022-2023`
Lycée Joliot-Curie, Nanterre

See **Professional experience** for details

Tutorial classes to Master students   `2021-2022`
ENS de Lyon
Calculability and complexity classes for students preparing for the computer science agrégation competitive examination.

Tutorial classes in Bachelor Computer Science   `2019-2022`
ENS de Lyon

Teaching computer science foundations, logic, and programming theory.

Tutoring in mathematics for university students   `2015-2018`
Paris and Lyon

MANDATES

Elected student representative   `2019-2022`
ENS de Lyon
- **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.