

Youssef MILED

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EDUCATION

- Centrale Lyon**, *BSc/MSc in General Engineering* 2023 – April 2025
- GPA: 3.83/4.0
 - *Computer Science Coursework*: Data Analysis and Pattern Recognition, Programming of Graphic Interface in C++, Algorithms and Data Structures, Object-Oriented Programming, Web Programming.
 - *Mathematics Coursework*: Numerical Analysis, Applied Analysis, Probability, Statistics, Mathematical Biology, Signal Processing.
 - *General Engineering*: Electronic Systems, Linear Control, Materials Physics and Engineering, Energy.
- Lycée Champollion, Grenoble**, *MP2I/MPI preparatory classes* 2021 – 2023
- Grade: A (1st/46)
 - *Computer Science Coursework*: Analysis of Algorithms, Logic, Formal Languages and Automata Theory, C and OCaml Programming, Advanced Algorithms and Data Structures, Concurrency, Graph Theory, Game Theory, Algorithmics for Artificial Intelligence, Decidability and Complexity Classes, Databases (SQL).
 - *Mathematics Coursework* : Combinatorics, Algebraic Structures, Number Theory, Linear Algebra, Reduction of Endomorphisms, Topology, Euclidian and Hermitian Spaces, Probability Theory, Discrete Random Variables, Differential Calculus and Optimization.
 - *Physics Coursework* : Quantum Mechanics, Logic Electronics, Electromagnetism, Thermodynamics.

RESEARCH AND PROJECTS

- Data analysis for table tennis matches**, *LIRIS*, Lyon, France September 2024 – April 2025
Research project. Supervisor: Romain Vuillemot
- Ongoing sports analytics research at the LIRIS computer science laboratory: classifying players by ball-strike trajectory percentages and developing a predictive model for optimal strike timing.
 - Analysis of simulated trajectories and statistical analysis of points from a database of 1000+ matches.
- Android app for classroom learning assistance**, *Centrale Lyon*, France September 2023 – June 2024
Study Project
- Project leader of a team of 6 students developing a classroom learning assistance application using Android Studio. Utilized text processing algorithms to provide feedback on student note-taking.
 - Developed two interfaces where the teacher gets insights into the students' mistakes or lack of focus, and the students receive evaluations of their own work.
- Type system extension for noninterference**, *Lycée Champollion*, Grenoble, France 2021 – 2023
Semi-independant research project
- Developed and implemented a type system for a simple programming language in OCaml.
 - Proved the noninterference property (for secure information flow) in the extended type system.
 - Implemented an n-ary tree representation for formal proofs and a type checker to validate proof tree correctness in this programming language.

PROFESSIONAL EXPERIENCE

- Operations Intern**, *MAGRIPLAST*, Tunis, Tunisia July 2024 – August 2024
- Assisted in operational tasks in a manufacturing environment as part of a team of workers to .

TEACHING

- Oral Examiner**, *Minsitry of higher education and scientific research*, France September 2024 - Present
- Oral examiner in mathematics for first-year preparatory class students. Preparing students through biweekly sessions for competitive exams to enter the top-tier engineering schools in France (French 'Grandes Écoles').
 - *Topics*: Real Analysis, Complex numbers, Differential equations, Calculus, Number Theory, Algebraic Structures, Linear Algebra, Combinatorics, Probability.
- Teaching Assistant**, *Centrale Lyon*, Lyon, France September 2024 - Present

- Organizing weekly sessions for third-year undergraduate students for in-depth discussions and exercises in Signal Processing.
- *Topics:* Matlab, Mathematics for Signal Processing, Cross-Correlation, Filtering and Sampling, Random Signals, Analog to Digital Conversion.

Private Tutor, *Complétude*, Lyon, France

November 2023 - June 2024

- Private tutor in mathematics, computer science and physics at high school and university levels.

COMMUNITY LEADERSHIP

Software Programmer, *Eclair - Centrale Lyon*

January 2024 - Present

- Developer at Eclair, an association dedicated to advancing the connectivity experiences of Centrale Lyon students.
- Contributed to developing MyECL, the application for Centrale Lyon students.

IT Manager, *Centrale Lyon Conseil - Centrale Lyon*

November 2023 - Present

- Managed data systems and website administration as a member of Centrale Lyon Conseil, a Junior Enterprise that operates similarly to a consulting firm in IT, engineering, and market studies.
- Supervised IT missions, driving the achievement of a revenue milestone of 50,000 euros.
- Migrated to *ERPNext* for customer relationship management and intern management.

VOLUNTEERING

Tutor / Mentor, *Les Cordées de la réussite Cap'Ingé*, Lyon, France

November 2024 - Present

- Tutoring and mentoring students from underprivileged rural high schools.
- Providing scientific tutoring and academic guidance to overcome self-censorship.

Tutor, *Lycée Champollion*, Grenoble, France

September 2021 - April 2023

- Tutored a high school student in mathematics and physics through one-on-one weekly sessions.
- Contributed to his admission to the prestigious MP2I preparatory program.

TECHNICAL SKILLS

Coding	C/C++, OCaml, Python, Matlab, Java, JavaScript, SQL, HTML, CSS
Tools	Android Studio, Jupyter Notebook, Visual Studio Code, Git, LaTeX, Ubuntu
Languages	English: <i>Fluent</i> , French: <i>Fluent</i> , Arabic: <i>Native</i> , Spanish: <i>Professional working proficiency</i> Mandarin: <i>Basic proficiency</i>