# Youssef Miled

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## EDUCATION

**École Centrale de Lyon** - *Master of Science in General Engineering*   2023 – April 2026
- GPA : 3.95/4.0. French Grande École
- Probability, Statistics, Partial differential equations, Numerical and applied analysis, Optimization.
- Algorithms and data structures, Object-oriented programming, Data analysis and pattern recognition.
- Economics, Market finance, Stochastic calculus, Enterprise management.

**Lycée Champollion** - *MP2I/MPI preparatory classes for French 'Grandes Ecoles'*   2021 – 2023
- (1st/46). Intensive 2 year-curriculum to prepare for the entrance exam to French 'Grandes Écoles'.
- Probability, Abstract and linear algebra, Optimization, Differential equations, Multivariable calculus.
- Advanced algorithms (C, OCaml, Python), AI, Machine learning, Databases, Parallel computing.

**Lycée Champollion** - *General French Baccalaureate*   2018 – 2021
- Grade: 18.08/20 (highest honors with congratulations of the jury). Mathematics, Physics, Engineering.

## EXPERIENCE

**Data Science research assistant** - *LIRIS, CNRS*   August 2024 – April 2025
- Conducted research in statistical methods and machine learning to improve table tennis performance.
- Used a database of 53 matches in the Olympic Games, worked with the French Table Tennis Federation.
- Wrote a research paper in the ≪ Machine Learning and Data Mining for Sports Analytics ≫ workshop.

**Software Developer** - *ECLAIR, AEECL*   January 2024 – Present
- Developer at Eclair, in a team advancing the connectivity experiences of Centrale Lyon students.
- Contributed to the development and integration of the loan module in the application MyECL.

**IT Manager** - *Centrale Lyon Conseil Junior Enterprise*   November 2024 – Present
- Responsible for overseeing data management and website administration of this Junior Enterprise.
- Led the migration project to an open source software (ERP Next) for CRM and intern management.

**Private Tutor** - *Complétude*   November 2024 – Present
- Organized weekly sessions in mathematics and physics for high school and university-level students.
- Helped a student gain admission to MP2I preparatory classes, the most selective STEM program.

## PROJECTS

**EduCapture** | *Python, Java, AndroidStudio, Github, LateX*   September 2023 - June 2024
- Project manager of a team of 6 members developing a classroom learning support application using Android Studio and text processing algorithms in order to provide feedback on student note-taking
- Design and development of two comprehensive interfaces tailored for both teachers and students

**Weex - Week of Engineering Experience** | *MATLAB*   March 2024
- Worked in a group of 12 to quantify polluting gases emissions for sites of a fictitious enterprise.
- Parsed datasets and simulated gas propagation after developing fluid mechanics equations.

**Type System for secure information flow** | *OCaml, LateX*   2021 – 2023
- Designed, developed, and extended a comprehensive type system for a simple imperative language, which I defined by defining a grammar in OCaml, and successfully integrated function handling capabilities.
- Implemented n-ary trees to represent type proofs, and a type checker to ensure their correctness.
- Proved the noninterference property for the extended type system to ensure secure information flow.

## Technical Skills

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| Coding | C, Python, Java, MATLAB, OCaml, SQL, JavaScript, HTML, CSS |
| Tools | Android Studio, Jupyter Notebook, Visual Studio Code, Git, LaTeX, Microsoft Office Suite |
| Language | English (*Fluent*), Arabic (*Native Language*), French (*Fluent*), Spanish (*Intermediate*) |

## Certificates

**Supervised Machine Learning** | *Deeplearning.AI, Stanford Online, Coursera* 2024
- Worked on supervised and unsupervised machine learning, regression models, and training models.

## Interests

Quantitative research or trading, machine learning research, software engineering, data analytics.