

RAPHAËL ROMAND-FERRONI

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EDUCATION

CentraleSupélec (Gif-sur-Yvette)

2021-2025

Master of Engineering, Major in Mathematics and Computer Sciences - Overall GPA 3.74/4.33

Relevant coursework: Applied Mathematics, Probability, Statistics, Machine Learning, Deep Learning, Optimization, Stochastic DEs and PDEs, Graphical Models, ML in Network Science, Time Series, Quantum Physics, Harmonic Analysis

ESSEC Business School (Cergy)

2020-2025

Master in Management - Overall GPA 3.81/4.33

Relevant coursework: Business Data Science, Statistics, Market Finance, Business Economics, Econometrics, Geopolitics, Corporate Law, Marketing Analytics, Accenture Strategic Business Analytics Chair (top 1% of the cohort)

Lycée Michelet (Vanves)

2018-2020

Economic and Scientific Preparatory Classes in Mathematics, Geopolitics, Economics and Philosophy - Overall GPA 4.17/4.33

A French specific two-year undergraduate program leading to a nationwide competitive exam into the “Grandes Ecoles”.

PROFESSIONAL EXPERIENCE

CNRS - IRL Crossing Australia - Internship

May - Dec 2024

Under supervision of Prof. Mai Quyen Pham (IMT Atlantique), implemented a supervised deep learning model to reconstruct 3D human mesh sequences from LiDAR point cloud data. ([GitHub](#))

BNP Paribas CIB - Paris - End-of-studies project

Jan - Apr 2024

Implemented efficient fine-tuning techniques for document multi-labeled classification task under supervision of Dr. Stergios Christodoulidis during my end-of-studies project at CentraleSupélec with BNPP Datalab ([GitHub](#)).

ESSEC - Teaching Assistant - Part-time contract

2023-2024

Delivered an introductory course on Computer Vision to first-year students in the selective Accenture Strategic Business Analytics Chair under supervision of Prof. Jeroen Rombouts. Led a final hands-on session using OpenCV to build a live face recognition tool for classroom attendance.

Papernest - Paris & Barcelone - Internship

Jul - Dec 2022

Data extraction, manipulation and visualization using Python, SQL and BigQuery.

LANGUAGES AND SKILLS

- **Technical Skills:** Python (PyTorch, Pandas, Scikit Learn, Matplotlib), R, SQL, C++, HTML, PHP, CSS
- **Competitions:**
 - Predicting missing links in an actor co-occurrence network (top 5%) ([GitHub](#))
 - Predicting EEG signals for automated sleep staging (top 3%) ([GitHub](#))
 - Ovarian cancer subtypes classification using Vision Transformers (ViT) on histopathology images ([GitHub](#))
 - GAIA Hackathon 2024 (Mistral AI x Salon de l'Agriculture), developing a chatbot for farmers using RAG techniques and fine-tuned LLMs to address agricultural law queries ([GitHub](#))
 - BCG X Datathon 2024 (3rd place), optimization of a company's delivery process via road traffic prediction in Paris
- **Course projects:**
 - Mario Kart car detection using tree based method and max-flow/min-cut algorithms ([GitHub](#))
 - Overcoming “over-smoothing” effect in GNN with regularization and adaptive edge ([GitHub](#))
 - Liver cancer subtypes analysis using PCA and RGCCA methods ([GitHub](#))
 - CentraleSupélec AI Project Hub - processing of textual data to strengthen school-business relations using NLP
- **Languages:** English (C1) TOEFL 100/120 TOEIC 950/990 - Spanish (B1)
- **Mentoring:** Equal opportunities mentoring with a group of five students (4h/week) in 2022
- **Certifications:** Youth worker qualification (BAFA) for camp counselor every summer

RELEVANT EXPERIENCES

- **Rugby** (12 years, 10h/week). Semi-professional rugby player in France
- **Music:** Saxophone (15 years, 15h/week), middle school music program (CHAM) with intensive music classes integrated with academic studies, high level music theory classes (3rd Cycle). Big Band lead saxophonist (tours across Europe, jazz/funk concerts).
- **Article writers:** Mathematics and geopolitics article writer for preparatory class students (Mister Prépa)
- **Last initiative:** Founder of L'Échappée Solaire (The Solar Ride), a non-profit organization dedicated to distributing solar bags to schoolchildren in northern Ivory Coast during my 18,000 km solar bike journey from Paris to Cape Town, undertaken between January and June 2025