

EDUCATION

2024-2025	SORBONNE UNIVERSITY OF SCIENCE <i>Master 2 M2A (Mathematics, Algorithm, Learning), One of the Most Selective Programs in France</i> Relevant Coursework: Learning, Non-Smooth Optimization, Deep Learning, Reinforcement Learning Natural Language Processing, Diffusion Models, Computer Vision, GPU Parallel Programming, PAC-Bayesian	Paris, France
2022-2025	INSTITUT POLYTECHNIQUE OF PARIS - TRIED <i>BSc & MSc in General Engineering at Télécom SudParis, Specialization at Télécom Paris - GPA: 4.0</i> Double degree program concurrent with M2A at Sorbonne University Relevant coursework: Bayesian Inferences in Markovian models, Communications Theory, Vision, Advanced Signal Theory, Advanced Statistics, Generative Modeling of Graph-Based Objects.	Palaiseau, France
2020-2023	SORBONNE UNIVERSITY OF SCIENCE <i>Bachelor in Mathematics - Top 20/400</i> Relevant coursework: Advanced Probabilities, Optimization, Functional Analysis, Measure Theory, etc.	Paris, France
2020-2022	CLASSE PRÉPARATOIRE (PCSI-PC*) <i>Focus on Mathematics, Physics & Chemistry - Top 1/55 - Admitted to Télécom SudParis</i> Advanced undergraduate coursework for entry to French Engineering Schools	Paris, France

WORK EXPERIENCE

Mar 25-Sep 25	FactSet <i>LLM Machine Learning Engineer - R&D GenAI Intern</i> Worked on Hector product within Menditor team: intelligent financial data extraction system utilizing LLMs for M&A teams and hedge funds. Developed NLP pipelines for automated extraction of complex financial attributes (ratios, projections, debt) from unstructured documents. Implemented custom GenAI architectures combining data extraction and reasoning to process multi-company documents at scale. Designed automated evaluation system to measure extraction accuracy, latency, and reliability. Tech stack: PyTorch, Transformers (LLaMA, GPT), LangChain, Vector Databases, MLflow, AWS, Lambda... .	Paris, France
Sep 24-Feb 25	MINISTRY OF HIGHER EDUCATION AND RESEARCH <i>Teaching Assistant (Oral Examiner in Mathematics MP* & PC*)</i> Conducted weekly oral exams and provided coaching to students in Classe Préparatoire.	Paris, France
Jul 24-Sep 24	ECOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE <i>Research Intern at LMS - ENAC with Dr. Llabjani</i> Worked on stress detection using DFOs and implemented deep learning models for signal reconstruction. Research contributing to a forthcoming journal publication. Supervised by Pr. Laloui.	Lausanne, Switzerland
May 23-Aug 23	SOCIÉTÉ GÉNÉRALE <i>Quant Research Intern</i> Developed Time Series, Deep Learning Algorithms for Financial Modeling and Strategy Optimization.	Algiers, Algeria
Jul 22-Feb 25	KRYPTOSPHERE FRANCE - VP <i>R&D in AI</i> First student union in Europe focused on Web 3.0 and AI, with over 10,000 members.	Paris, France

PROJECTS

- **Optimal Transport in Neural Networks** (Dec 2023 - Jun 2024)
 - Applied Optimal Transport and Sinkhorn loss for enhanced convergence in neural networks.
 - Worked on Theoretical Evolution of Self-Attention in Transformers with Sinkhorn Algorithm.
- **SuperTuxKart Reinforcement Learning Racing** (Jan 2024 - Mar 2024)
 - Implemented a complete RL pipeline for autonomous racing in SuperTuxKart using PPO algorithm
 - Employed behavioral cloning from expert dataset to initialize policy weights for faster convergence
 - Developed training and evaluation infrastructure with PyTorch and virtual cloning techniques
 - Successfully trained agents that competed effectively in racing environments with obstacle avoidance
- **Pokémon Generation with Diffusion Models** (Oct 2023 - Dec 2023)
 - Designed and implemented Score-based models and diffusion models for generating novel Pokémon images
 - Utilized CNNs for feature extraction and enhancement of generated imagery
 - Experimented with various noise schedules and sampling strategies to improve generation quality
 - Created a complete pipeline from training to inference demonstrating generative AI capabilities
- **ENS / Elmy**: Top 17 in the 2024 data challenges, working on energy prediction with advanced machine learning.

LANGUAGE & IT SKILLS

- **Languages:** French (native), English (fluent), Spanish (intermediate), Arabic (native)
- **IT:** Python, SQL, Java, LaTeX, Bash, knowledge of Solidity, JavaScript, C#, CI/CD
- **Statistics & Data Science:** NumPy, Pandas, scikit-learn, PyTorch, bbrl, Jupyter, Transformers, Langchain

ACTIVITIES & INTERESTS

- **Archipélia Association:** Provided free tutoring to disadvantaged students.
- **Hackathons:** Won ETH Global London 2024 - Galadriel's Prize, Blockchain HEC Paris 2023 with Bongo Project.
- **Conference:** Organized Pragma 2023 – A conference held at Télécom Paris with Kryptosphere, focusing on research in Web 3.0. The event featured key participants such as Hedera, Nomadic Labs, and BPI France, among others.