

Gaëtan Narozniak

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EDUCATION

SORBONNE UNIVERSITY - M2A (Learning and Algorithms) <i>Data Science and Artificial Intelligence, with a particular focus on statistical learning and deep learning</i> Core courses: Deep Learning, Statistical Learning, Reinforcement Learning	2024 - 2025
ECOLE POLYTECHNIQUE <i>Grande Ecole Programme - Ranked 13th in the entrance exam, math & computer science track.</i> Core courses: Applied and Theoretical Mathematics, Computer science	2021 - 2024
COLLEGE STANISLAS <i>Competitive and intensive preparation courses for entrance exams to top French Engineering Schools</i>	2019 - 2021

WORK EXPERIENCES

META Fair (PARIS) Research internship • Researched and developed reasoning capabilities for large language models (LLMs) using post-training methods and reinforcement learning with verifiable rewards • Contributed to a NeurIPS conference paper proposing a novel reinforcement learning algorithm for LLMs (Publication link: https://arxiv.org/abs/2506.20520)	Avr25-Sep25
GUNVOR (GENEVA) Quantitative Research internship • Implemented a local volatility model derived from Dupire equations to price commodity future options. The solution used is based on the discretization of the Dupire PDE and the resolution of a parametric optimization problem using the adjoint method. • Implemented a model to accelerate the computation of average option on futures using a correlation model and a method of moment matching.	Mar24-Jul24
DERIV (PARIS) Quantitative Analyst internship • In charge of modeling, development and backtesting of new optional instruments on <i>crash-boom</i> indice : highly negatively skewed distribution, discretization, FFT, convolution, real-time pricing.	Jun23-Aug23
ARMY CORPS OF PARIS FIREFIGHTERS (SAPEURS-POMPIERS DE PARIS) Officer in charge of a rescue squad (<i>all Polytechnique first year students complete a six months training in Army</i>) • Followed an intense formation of two months with other Parisian firefighters to learn first-aid response • Lived in the fire station for 4 months along the other firemen in a military environment • Had the responsibility on intense rescue operations	Oct21-Mar22

EXTRA CURRICULAR ACTIVITIES

MISTRAL AI x ALAN HACKATHON (OCT 2024) • Secured 3rd place with my teammates in the Kaggle competition on a medical multiple-choice quiz • Used regular expression recognition techniques, automated web scraping and prompt engineering to enhance the context for Mistral Large, improving its accuracy from 24% to 40%	
ANIMATH ASSOCIATION IN CHARGE OF THE FRENCH MATHEMATICS OLYMPIC TEAM • Followed several intense internships with high level teachers • Won several mathematics competitions (ranked 2nd in the mathematics competition of Paris) • Finalist in the 2019 Prologon competition (competitive algorithmic code)	

OTHER INTERESTS

- Judo at the Racing Club de France (2016 - 2019)
- Skydiving license
- Scuba diving license
- Polytechnique rugby team
- Improvisation class