

Zaccharie Tardy

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PROFILE

Third-year engineering student at École Polytechnique in Applied Mathematics with strong foundations in probability, statistics and optimization, and experience taking ML models from an open question to production. Focused on quantitative finance and AI through a personal Python project: testing time-series ML models on market data with walk-forward validation and net-of-cost P&L.

EDUCATION

École Polytechnique | Polytechnique Engineer, expected 2028 | Palaiseau | 2024 – Present

- > Applied Mathematics track, GPA 3.93
- > Coursework: Statistics, Optimization and Control, Advanced Probability and Martingales, Monte-Carlo simulation of rare events (research project)
- > Current courses: Stochastic Models in Finance, Adversarial ML, Statistical Learning Theory

National Gendarmerie Officer Academy (AMGN) | Melun | 2024

- > Officer training in leadership, operational decision-making and crisis management

Lycée Sainte-Geneviève | Preparatory classes (Maths, Physics) | Versailles | 2022 – 2024

- > Two-year intensive programme for entrance into top engineering schools, GPA 4.0/4.0
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EXPERIENCE

Selectra, AI Lab | ML Research Intern | Madrid | Jun. – Sep. 2026

- > Fine-tuned and optimized a speech-to-text model: word error rate 29.4% → 17.1%, 150× cheaper
- > Deployed it on AWS (GPU spot, nightly batch, tests, cost caps), replacing Gladia and Mistral
- > Trained noise and answering-machine detectors; automated CRM updates for 7,800 calls/day
- > Built a call-derived knowledge base; fine-tuned a French encoder for a low-latency sales copilot

French armament procurement agency (DGA) | Student Project Lead | Aug. 2025 – Present

- > Leading a 5-student team on real-time rollover-risk prediction from vehicle sensor time series
- > Designed and benchmarked sequence models (LSTM, PatchTST, Neural ODE) on sensor data

Gendarmerie Nationale | Military Intern | Rodez | Sep. 2024 – Apr. 2025

- > Supported the captain of a 25-person unit; 100+ operations (searches, interviews, arrests)
 - > Built a deep learning model to deblur license plates, helping resolve multiple cases
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SKILLS

Programming & Tools

- > Python (NumPy, Pandas, PyTorch, TensorFlow, Scikit-learn, Hugging Face), Java, SQL, AWS
- > Mathematics: probability, statistics, stochastic processes, optimization, Monte-Carlo, time series

Languages & other

- > French native | English C1 | Spanish B2 | Chinese beginner (4h/week)
- > Team leadership (5-student research project) | Competitive boxing and swimming