AGATHE MUNIER

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Second-year M.Sc. Engineering student at Télécom Paris with a strong background in machine learning, data analysis, probability and statistics. Interested in applying quantitative and AI-driven methods to solve complex real-world problems and build intelligent systems. Seeking a 6-month gap year internship starting in July 2026.

EDUCATION

Master of Science in Engineering *September 2024 – June 2027*
Télécom Paris, Institut Polytechnique de Paris – Top French Graduate School
Mathematics, Computer Science

- **Majors**
  - **Data Science & AI**: Statistical learning, linear models, machine learning, deep learning, natural language processing, graph mining, databases, and optimization for machine learning, with applications in Python focused on predictive modeling, data analysis, and intelligent systems.
  - **Random Processes & Scientific Computing**: Probability and statistics, conditional distributions, mathematical statistics, martingales, Markov chains, stochastic processes, Brownian motion, Poisson processes, high-dimensional probability, numerical analysis, and scientific computing applied to uncertainty modeling and quantitative methods.

Preparatory Classes for Grandes Écoles *September 2021 – June 2024*
Lycée Fénelon Sainte-Marie, Paris (France)
Intensive three-year program in Mathematics, Physics, and Engineering, preparing for highly competitive national entrance examinations.

PROJECTS

Layer-wise Representation Analysis and Information Fusion in EEG Foundation Models (2026)
Interpretability and performance analysis of deep learning models for EEG signal decoding.

- Evaluated hierarchical representations by truncating model backbones at different depths
- Identified where task-relevant performance peaks for seizure detection and sleep staging
- Correlated layer-wise activations with neuroscientific biomarkers (Alpha/Beta power, spatial topography)
- Designed layer fusion mechanisms combining complementary representations across depths
- Assessed whether weighted multi-layer fusion outperforms standard final-layer embeddings

Quantum Random Number Generation – QuED Platform (2025)
Experimental study of stochastic processes using quantum-generated randomness.

- Generated random numbers using polarization-entangled photon states
- Analyzed statistical properties (distribution, entropy, independence) of generated data
- Evaluated correlation structures and randomness quality
- Applications to stochastic simulations (e.g., Monte Carlo)

EXPERIENCES

Vice-President, Télécom Business & Finance (TBF) *June 2025 – June 2026*
Leading student association in finance, consulting, and entrepreneurship at Télécom Paris

- Coordinated quantitative-focused workshops (macroeconomic analysis, algorithmic trading fundamentals), reinforcing analytical thinking and data-driven decision-making.
- Managed event planning processes involving budgeting, timelines, and reporting, ensuring operational accuracy while supporting the association's long-term development.

Retail Associate, 180 the Store *August – September 2025*

- Gained client-facing experience and operational rigor in a fast-paced concept store in NYC, and designed an automated Excel database connected to Shopify sales data to enhance customer tracking and reporting.

SKILLS

- **Languages:** French (Native), English (Fluent – full professional proficiency), Spanish (Working proficiency), Chinese (Mandarin – HSK 2)
- **Technical:** Python (statistical analysis, modeling), SQL, GitHub, HTML & CSS, LaTeX
- **Leadership & Teamwork:** Vice-President of a student association; Captain of the Women Rugby Team; Scouting Experience (+10 years)
- **Other:** CPR and First Aid certified, Youth Leader Certification (BAFA, France)