GABRIEL LANCELOT

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PROFILE

Student in a double major in Mathematics and Physics at Université Paris-Saclay (17.38/20, top 5%), specializing in probability theory, stochastic processes, and statistical modeling. Strong background in computational mathematics with hands-on research experience in Monte Carlo methods, statistical inference, and numerical analysis. Seeking to pursue research in probability and statistics.

EDUCATION

Université Paris-Saclay September 2024 – Present
Double Bachelor's Degree: Mathematics, Physics, and Engineering Sciences *Orsay*

- GPA: 17.38/20 – Top 5% of the class;
- Key Grades: Probability (19.5/20), Analysis (18.5/20), Algebra (18/20), Physics (17/20);
- Relevant Coursework: Probability Theory, Statistics, Numerical Analysis, Linear Algebra;
- Scientific Programming: Advanced algorithms, numerical methods, signal processing.

RESEARCH & SCIENTIFIC PROJECTS

Study of the Multi-Dimensional Ising Model September 2025 – Present
Computational Physics Project (Python & C++)

- Preliminary theoretical study: derivation of the Hamiltonian, partition function, analytical solution of the 1D case;
- Monte Carlo simulations (Metropolis-Hastings algorithm) in 1D, 2D, 3D, and extension to arbitrary n dimensions;
- Statistical analysis: magnetization, susceptibility, specific heat, detection of critical temperature T_c;
- High-performance numerical optimization: Python prototyping and C++ implementation for large-scale grids;
- Visualization: spin time evolution, phase diagrams, animations of ferromagnetic transitions.

Analysis of Chaotic Systems: Lorenz Attractors April 2025 – June 2025
University Research Project (Python)

- Numerical simulation and interactive 3D visualization of chaotic trajectories;
- Signal processing: spectral analysis, detection of recurrent patterns, study of pseudo-periods;
- Investigation of deterministic chaos and sensitivity to initial conditions.

Optimization using Genetic Algorithms Nov. 2024 – Dec. 2024
Personal Project (C++)

- Implementation of stochastic optimization methods combining Minimax with alpha-beta pruning;
- Innovation: genetic algorithm for multi-parameter optimization;
- Object-oriented architecture with graphical interface using SDL.

AWARDS & COMPETITIONS

First Ascent Business Europe by Bending Spoons October 2025
Winning Team *Milan, Italy*

· Strategic analysis and data-driven decision-making in high-pressure competitive environment.

French Tournament for Young Mathematicians (TFJM^2) Dec. 2023 – March 2024
1st Place Regional *Rennes*

· Team competition on open research-level mathematical problems.

French National Mathematics Olympiad March 2023
11th Place Academic *Nantes*

TECHNICAL SKILLS

Programming	Python (expert), C++ (advanced), SQL, JavaScript/TypeScript, LaTeX
Scientific Computing	NumPy, SciPy, Statsmodels, Matplotlib, Pandas
Machine Learning	PyTorch, stochastic optimization, numerical methods
Tools	Git/GitHub, Jupyter, Linux
Web Development	NextJS, React, MongoDB, Tailwind CSS (entrepreneurial projects)

LEADERSHIP & ENGAGEMENT

French Air and Space Force November 2023 – Present
Operational Reservist *Avord Air Base*

· Training in leadership, crisis management, and decision-making under pressure in demanding environments.

Entrepreneurial Projects 2023 – Present
Tech Startup Co-Founder

· ChatWrapped: Architected a viral data-visualization platform, transforming personal chat histories into a summary for users;
· Revolt Studio (SAS): Premium web solutions for SMEs (NextJS, React, TypeScript);
· Qube Wear (SAS): Innovative textile startup integrating interactive QR codes;
· Developed skills in project management, business negotiation, and team leadership.

INTERESTS

Probability theory, stochastic processes, Ising models, statistical inference, Monte Carlo methods, computational mathematics, chaotic dynamical systems.