GRÉGOR RONCIN

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EDUCATION

École des Mines de Paris, France — Sep 2023 – Sep 2027
Major: Artificial Intelligence Engineering (Master's Degree)
Expected: M2 MVA – Mathematical Vision and Learning, ENS Paris-Saclay (2027)

Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio), Brazil — Feb – Jun 2025
Academic Exchange Semester
Courses: Statistical Learning, Cognitive Science, Entrepreneurship

CPGE (MPSI – PSI*), Lycée Descartes, Tours, France — Sep 2021 – Jul 2023
Competitive preparatory classes for French Grandes Écoles
Top 40 national rank (Mines-Ponts 36th, CentraleSupélec 31st)

PROFESSIONAL EXPERIENCE

MIRACL.ai, AP-HP Lariboisière, Paris, France — Sep 2025 – Feb 2026
Machine Learning Intern
- Built ML models to predict cardiovascular events using clinical, biological and imaging data
- Contributed to cardiovascular risk prevention tools

CEMEF Laboratory, CNRS, Sophia Antipolis, France — Dec 2024 – Jun 2025
Research Intern - Python Developer
- Contributed to a research initiative aiming to reopen the therapeutic pathway for treating adult respiratory distress by developing optimized surfactant delivery methods
- Built a physics-based 1D simulation from scratch in Python to model pulmonary surfactant propagation, including the structural and functional modeling of the lungs
- Designed and implemented a full Deep Reinforcement Learning (Single and Multi Step) pipeline to optimize surfactant injection parameters, including environment design, reward design, and integration with the physical lung simulation

PROJECTS

Machine Learning for Stock Return Prediction — Jun 2025
Qube Research & Technologies - Data Challenge
Built a model via feature engineering and multi-algorithm experimentation (ranked 2 / 960 teams)

AI-Powered SaaS for VC Knowledge Management — Sep – Nov 2025
Entrepreneurship Project
Ideated and prototyped an AI-driven SaaS platform for venture capital insights

Deep Learning for White Blood Cell Classification — Mar – Jun 2024
Applied Deep Learning Project – PyTorch, TensorFlow, Streamlit
Built and deployed CNN for classifying WBC subtypes

Coral Bleaching Detection using ML and Ray Tracing — Nov – Dec 2023
CRC Lab in collaboration with Ifremer and Airbus, Mines Paris
Simulated coral reef images using ray tracing and trained ML models to detect bleached corals

PUBLICATIONS

- P. Meligat, **G. Roncin**, E. Hachem. Optimizing surfactant replacement therapy for large respiratory systems: a coupled modeling and AI approach *(in preparation)*
- P. Meligat, **G. Roncin**, E. Hachem. Optimizing surfactant replacement therapy for large respiratory systems: a coupled modeling and AI approach. *30th Congress of the European Society of Biomechanics, 2025, Zurich (Switzerland)*
- P. Meligat, **G. Roncin**, E. Hachem. A combined modeling and AI-driven optimization approach to enhance surfactant replacement therapy in adult lungs. *50ème Congrès de la Société de Biomécanique, 2025, Marseille (France)*

SKILLS

Languages	French (Native), English (C1), Portuguese (B1), Spanish (B1)
Programming	Python (Scikit-learn, TensorFlow, PyTorch, Streamlit), GitHub, C++, HTML/CSS

INTERESTS

Mental Health – Ambassador trained in mental health first aid, alcohol awareness, prevention of gender-based violence, anti-LGBT-phobia
Sports – Running (4x/week), Skateboarding (5 years), Football (8 years)
Teaching – Private tutor in mathematics, physics, chemistry (high school to CPGE)
Travel – 2-month road trip across South America