# Julien GADONNEIX

*Objective: Internship application at Meta Brain and AI (Research Scientist Intern)*

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## Education

Oct. 2025 – Current
**Université Paris Cité / Hôpital Fondation Adolphe de Rothschild – *PhD* – Paris, France**
- *Deciffering the cerebral bases of language with self-supervised learning. Using AI as a tool and a model for brain data processing.*
- *Supervised by Pierre Bourdillon and Jean-Rémi King.*

Sep. 2024 – Sep. 2025
**Imperial College London – *MSc Biomedical Engineering (computational)* – London, United Kingdom**
- *Master's degree with a research project in deep learning applied to medical images.*
- *Relevant Coursework: Statistics, Reinforcement Learning, Digital Biosignal Processing, Image Processing (Computer Vision), Brain-Machine Interfaces, Computational Neuroscience.*

Sep. 2021 – Sep. 2025
**École Polytechnique – *Diplôme d'ingénieur (equivalent Master)* – Palaiseau, France – GPA: 3.89/4.0**
- *Specialized in an advanced program in Applied Mathematics, Computer Science and Computational Biology.*
- *Relevant Coursework: Statistics, Algorithm Design, Decision Theory, Neuroscience, Cognitive Science, Bioinformatics, Data Analysis, Machine and Deep Learning, Data Visualization, Advanced Machine Learning and Autonomous Agents, Advanced Deep Learning.*

Aug. 2019 – Jul. 2021
**Lycée privé Sainte-Geneviève – *Preparatory program* PCSI-PC* – Versailles, France – GPA: 3.97/4.0**
- *A two-year program leading to the entrance to top Grandes Ecoles for scientific studies.*
- *Track: Mathematics, Physics, Chemistry.*

## Relevant Projects

Nov. 2024 – Dec. 2024
**Imperial College – *Department of Bioengineering* – London, United Kingdom**
- *Implemented the Proximal Policy Optimization method in Reinforcement Learning.*
- *Applied it to patients with movement disorders under the supervision of Faraz Janan.*

Dec. 2023 – Apr. 2024
**École Polytechnique – *Department of Computer science* – Palaiseau, France**
- *Conducted a Reinforcement Learning team project on financial data.*
- *Implemented advanced architectures and algorithms to train agents, supervised by Professor Jesse Read.*

Dec. 2023 – Mar. 2024
**École Polytechnique – *Department of Computer science* – Palaiseau, France**
- *Developed a solution for the Large Parsimony Problem to construct a phylogenetic tree from DNA data.*
- *Designed and optimized complex algorithms under the supervision of Professor Sebastian Will.*

Sep. 2023 – Mar. 2024 | **École Normale Supérieure (Ulm) – *Perceptive Systems Laboratory* – Paris, France**
- *Evaluating a model to simulate the auditory system under the supervision of Pierre Orhan.*
- *Training a self-supervised learning framework on a dataset generated from real experiments.*

Sep. 2023 – Dec. 2023 | **École Polytechnique – *Department of Computer science* – Palaiseau, France**
- *Analysis of patients suffering from Alzheimer's disease under the supervision of Emmanuel Pietriga.*
- *Processed and visualized a dataset about the distribution of some proteins in the brain.*

Feb. 2023 – Jun. 2023 | **École Polytechnique – *Department of Computer science* – Palaiseau, France**
- *Built a model to predict the cleavage site of proteins supervised by Professor Sarah Berkemer.*
- *Development of machine learning models adapted to Biology.*

## Work experience

Jan. 2025 – Sep. 2025 | **Imperial College – *Department of Bioengineering* – London, United Kingdom**
- *AI Research Scientist Intern in medical computer vision.*
- *Implementing the latest Deep Learning architectures for medical images of eczema. Data-efficient fine-tuning of large pre-trained foundation models and pre-training from scratch.*
- *Uncertainty calibration using generative models under the supervision of Professor Reiko Tanaka.*

Mar. 2024 – Jul. 2024 | **Biomedical Signal Processing laboratory at DTU – Copenhagen, Denmark**
- *AI Research Scientist Intern in applied neuroscience.*
- *Developed Deep Learning models and signal processing techniques for EEG analysis and classification.*
- *Achieved state-of-the-art performance.*

Jun. 2023 – Aug. 2023 | **g.tec medical engineering GmbH – Schiedlberg, Austria**
- *Worked as a software developer and a neuro-engineer intern.*
- *Performed data analysis and signal processing on EEG signals.*
- *Designed API for data processing.*

Sep. 2021 – Apr. 2022 | **Marseille Fire Brigade – Marseille, France**
- *Trained as a firefighter for two months at the Marine Firefighting Academy.*
- *Worked as vehicle crew member and first responder in Marseille.*

## Skills

- *French* (native)
- *English* (TOEFL: 106)
- *Spanish* (intermediate)

- ***Computer*** – Python, C++, Java, SQL, ROS, Rhino, MATLAB, HTML, JavaScript, AMPL, TypeScript, Kotlin, AWS frameworks

## Additional information

***Sports***
- Soccer, sailing, skiing