Zacharie Rodière

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Education

Georgia Institute of Technology
Jan 2024 – May 2026

Master of Science in Electrical and Computer Engineering
Atlanta, GA

- GPA: 4.0/4.0
- Currently enrolled: High-dimensional Statistics & Optimization, Machine Learning
- IEEE Eta Kappa Nu (Beta Mu Chapter) - Secretary
- Completed: Nonlinear Dynamics & Chaos (A), Computer Network Security (A)

École Nationale Supérieure de l'Électronique et de ses Applications
Sep 2021 – Dec 2024

Diplôme d'Ingénieur, Electrical and Electronics Engineering
Paris, France

- Ranking: 1st/221 in 2nd year, 3rd/28 in Signal Processing and AI specialization
- Focus: Deep Learning, Signal Processing, Computer Vision

Experience

Research Intern
Nov 2024 – Jun 2025

École Normale Supérieure de Lyon
Lyon, France

- Developed novel supervised contrastive learning framework for sEEG-based epileptogenic zone detection
- Preparing ICLR 2026 submission on transformer-based seizure onset localization in intracranial EEGs
- Presented work at MILA Montreal for the 2025 Graph Signal Processing Workshop
- Validated with highest honors ("Mention Très Bien avec Félicitations du Jury")

Associate Support Analyst
Jun 2024 – Sep 2024

Manhattan Associates
Paris, France

- Developed Java Spring backend solutions for B2B SaaS microservice enterprise application
- Performed server monitoring, production fixes, and system optimization
- Worked with Spring Boot in enterprise environment

Deep Learning Research Intern
Jun 2023 – Sep 2023

CNRS
France

- Fine-tuned Vision Transformer (ViT) for multi-label classification of book cover defects
- Developed expertise in transformer architectures and computer vision applications
- Implemented PyTorch solutions for image classification tasks

Technical Skills

Programming Languages: Python, C, Java, MATLAB
Machine Learning: PyTorch, NumPy, Pandas, scikit-learn, Transformer Models, Neural Networks
Statistics & Theory: Statistical Learning Theory, High-dimensional Statistics, Optimization, Research
Tools & Frameworks: Git, Linux, LaTeX, Jupyter, Spring Boot
Domains: Deep Learning, Signal Processing, Computer Vision, Graph Neural Networks, Time Series Analysis

Key Projects

Epileptogenic Zone Detection with Transformers | *PyTorch, EEG Signal Processing*
2024-2025

- Developed novel contrastive learning framework using transformer encoders for iEEG SOZ localization
- Applied advanced representation learning techniques to neurological time series with real-world validation

Vision Transformer for Defect Classification | *PyTorch, Computer Vision*
2023

- Implemented and fine-tuned ViT architecture for multi-label image classification achieving 97% AUPRC
- Developed automated quality control system for cultural heritage preservation at scale

Certifications & Awards

Machine Learning Specialization, Coursera (2022)
IEEE Eta Kappa Nu Honor Society, Georgia Tech (2024)
Highest Honors Research Validation, ENS Lyon (2024)