

# Aël Quélenne

Having completed my doctorate, I am seeking a research position in Artificial Intelligence applied to the biomedical field, and more particularly to neuroscience.

AI PhD

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## Academic and Professional Background

### 2022 – 2025 PhD – Artificial Intelligence and Cognitive Sciences

Télécom Paris

- Design of energy- and memory-efficient AI algorithms for embedded machine learning. Publication of contributions at international conferences (WACV2024, NeurIPS2024, ICML2025, ICLR2026, and currently under review at TMLR).
- Involvement in teaching, student supervision, and outreach activities to disseminate my research.
- Design and implementation of an EEG/ECG signal collection protocol during attentional tasks.
- In-depth literature review in the fields of AI compression and Cognitive Science.

### 2021 – 2022 Consultant – Data Science Division

Headmind Partners

- 3-month audit mission at L'Oréal – Classification of HR reports based on their ethical or discriminatory nature using Natural Language Processing.
- 6-month project within Société Générale's Finance department on the topic of intraday liquidity.
- Research and development work on internal NLP projects..

### 2018 – 2021 Engineering Degree – M2 Data, Learning and Knowledge

Dual degree Télécom Paris – Sorbonne Université Sciences, Paris VI

- Research internship at ENS Ulm, Department of Cognitive Studies (DEC). Study of the emergence of human language models through genetic algorithm optimization of neural networks.
- Training across the various fields constituting Artificial Intelligence and Data Science.
- Labourer internship, WWOOFing at an arboretum in Scotland.

## Skills

### Informatic/Coding

- Python (Pytorch, Pandas, Sklearn, Tensorflow, Tensorboard, Open AI gym, Django, Matplotlib, PySpark)
- Linux/Debian
- Windows
- Script Shell
- SQL

### Data Science

- Machine Learning
- Deep Learning
- Reinforcement Learning
- Natural Language Processing
- Advanced Statistical Inference
- Computer Vision

### Language

- English (C1, Toefl 2019 : 111/120)
- Spanish (A2, elementary)
- Italian (A2, elementary)

### Research

- Scientific monitoring
- Definition of a research question and plan
- Design and implementation of the experimental protocol
- Collaborative research and student supervision
- Statistical analysis of results
- Paper writing and dissemination of scientific output

### Engineering

- Requirements specification
- Proof of concept development
- Unit testing and performance benchmarking of the proposed solution
- Scaling and deployment in a real-world environment
- Monitoring of the deployed solution

## Activities et Interests

**Living abroad** Kuwait then Nigeria from 2003 to 2011

**Travels** Benin, Belgium, Germany, Greece, Italy, Japan, Jordan, Lebanon, Netherlands, Oman, Portugal, Qatar, Syria, Spain, Thailand, United Arab Emirates, United Kingdom, United States, Vietnam, Yemen

**Sport** Running (Paris Marathon 2021), Climbing, Surfing, Muscle strengthening, Hiking, Yoga

**Interests** Acting, Exhibitions, Literature, Cognitive Science