

# Pierre-Antoine FARIBAUD

## Biomedical Engineering, Clinical AI & Neurotechnology

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Portfolio: https://pa-faribaud.site

*Research interests:* Biomedical AI, clinical data, medical devices, signal processing, neurotechnology, human-centered health systems.

### EDUCATION

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- BME Paris Master's Program – Neurotechnology** Incoming 2026  
*Universite PSL & Universite Paris Cite (fully taught in English)*
  - Selective research-oriented Master's program bridging Data/AI, biomedical engineering and neurotechnology; includes a 6-month research internship abroad.
- Arts et Metiers ParisTech (ENSAM)** 2024 – Present  
*Combined BS/MS-level Engineering Program – Mechanical & Industrial Engineering*
  - Top French Graduate Engineering School with training in mechanics, materials, manufacturing, optimization, statistics and computer science.
- Lycee Marcelin Berthelot – CPGE** 2021 – 2024  
*Preparatory Classes – Mathematics, Physics, Engineering Sciences (MPSI/PSI)*
  - Intensive post-high-school scientific training before engineering school entrance exams.
- Lycee Albert de Mun – High School Diploma** 2018 – 2021  
*Mathematics, Physics – with honours*
  - Scientific high school curriculum with strong emphasis on mathematics, physics and rigorous problem-solving.

### BIOMEDICAL, DATA & INDUSTRIAL EXPERIENCE

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- GE HealthCare / Imactis — Biomedical R&D / New Product Introduction Intern** Summer 2026  
*Objective: Develop and industrialize an image-guided biopsy assistance medical device* Buc, France
  - Contribute to a new CT-navigation product based on Imactis technology, supporting design-to-manufacturing transfer for interventional biopsy guidance.
  - Work across R&D, manufacturing, quality and clinical-use constraints: process optimization, workstation/cell improvement, documentation, traceability and continuous improvement.
- AMJE (Junior Enterprise – Arts et Metiers) — IT Officer, IT/AI Pole** Nov 2025 – Present  
*Objective: Develop reliable internal tools, web platforms and automation for operational users* Paris, France
  - Improve AMJE websites and internal IT tools; develop client websites with clear documentation, reliable delivery and stakeholder communication.
  - Best Junior-Enterprise in France (CNJE Excellence Award, 2024); 300 kEUR+ annual revenue.
- Internship — TECHWAVE/OPEO (BPI financing)** Dec 2024 – Jul 2025  
*Objective: Industrial AI/Data integration in a mechanical & electronics company* Paris, France
  - Interface between AI consultancy OPEO and Techwave engineers; contributed to needs analysis, requirements definition, workflow validation and documentation.
  - Helped translate industrial needs into structured AI use cases, with attention to operational constraints, confidentiality and practical deployment.
- SELECTED PROJECTS** 

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- Clinical Machine Learning for Diabetes Risk Stratification from Patient Data** 2025 – 2026  
*Objective: Build, compare and interpret ML models for clinically relevant screening from structured data* Python
  - Preprocessed clinical data: cleaning, missing/zero values handling, normalization and consistency checks.
  - Benchmarked KNN, linear SVM and Random Forest with confusion matrices, focusing on false negatives and medical interpretability.
- Awake Project — AI-enabled Autonomous Vehicle Competition** Sep 2024 – Jan 2025
  - Cross-functional autonomous systems project combining in-house chassis manufacturing, embedded electronics, software and AI-driven route learning.
  - Integrated sensors, actuators and electronics into a functional vehicle; contributed to iterative testing linking hardware constraints, perception, control and AI-based trajectory adaptation.
- Project Lead — Modular Fountain for Arts et Metiers Gala (Team of 10)** Sep 2025 – Dec 2025  
*Objective: Lead the delivery of a pump-controlled modular fountain for a ~4,000-attendee event* France
  - Led planning, task allocation and on-site assembly; integrated fluid mechanics, pump-control constraints, wood/metal fabrication and aesthetic requirements.

### LEADERSHIP AND ACTIVITIES

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- Tennis Association (Arts et Metiers) — Captain & President** 2024 – Present
  - Lead training sessions, manage operations and represent the club in competitions.
- Sailing Instructor & Skipper** 2021 – Present
  - Sailing at regatta/competition level; skipper for cruises: navigation planning, crew coordination and onboard safety.
- Mathematics & Physics Tutor (High School)** 2024 – Present
  - Tutored mathematics and physics to high school students, adapting explanations to each student's level and progression.

### SKILLS AND INTERESTS

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**Languages:** Native French; Fluent English; Fluent German

**Programming / Data:** Python, SQL, Excel (*prior experience: MATLAB/Simulink, Arduino*)

**Biomedical / Engineering:** clinical data, ML evaluation, medical devices, manufacturing, validation, documentation

**Software:** Claude, 3DEXperience, CATIA V5, WordPress, Star-CCM+, Fusion, ModBus

**Licenses / Interests:** Driving license; Boating license; Tennis (UTR 5.5), Sailing, Skiing, Football, Chess