Youwan Mahé

PhD Student
Rennes, France
📧 youwan.mahe@inria.fr | 🌐 youwanmahe.fr | 🖥️ youwanM

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👩‍💻 About Me

I am a PhD student within the Empenn and MALT research teams, funded by Siemens Healthineers. My PhD research focuses on anomaly detection and segmentation for the characterization of post-stroke recovery.

I am naturally curious with a passion for exploring electronics, meteorology, chemistry, physics, and AI.

🎓 Education

PhD in Computer Sciences *Nov 2024 - present*
Anomaly detection and segmentation for the characterization of post-stroke recovery
Université de Rennes, Rennes (FR)

Master's degree in Nanomedecine & Structural Biology *Sept 2022 - June 2024*
Université Grenoble Alpes, Grenoble (FR)
With high honours

Master's degree in Biomedical Engineering *Sept 2022 - June 2024*
Institut National Polytechnique de Grenoble, Grenoble (FR)
With highest honours

Bachelor of Engineering *Sept 2021 - June 2022*
Institut National Polytechnique de Grenoble, Grenoble (FR)

Bachelor of Technology in Instrumentation and Measurement *Sept 2019 - June 2021*
Université de Rennes 1, Lannion (FR)
With highest honours

💼 Research Experience

PhD in computer sciences Nov 2024 - Present
Supervisors: Dr. Elise Bannier, Pr. Elisa Fromont, Pr. Francesca Galassi, Dr. Stéphanie Leplaideur

Title : Anomaly detection and segmentation for the characterization of post-stroke recovery

📍 Univ Rennes, Inria, CNRS, Inserm, IRISA UMR 6074, Empenn, Rennes, France

Master Internship (2nd year) Feb - June 2024
Supervisors: Dr. Burhan Rashid Hussein, Dr. Cedric Meurée, Pr. Francesca Galassi

Title : Improving multiple sclerosis lesions segmentation in 3D spinal cord magnetic resonance images with recent advancements in deep learning

📍 Univ Rennes, Inria, CNRS, Inserm, IRISA UMR 6074, Empenn, Rennes, France

Master Internship (1st year) Feb - June 2024
Supervisor: Pr. Marina Eckermann

Title : Multi-modal X-ray data analysis of brain tissue

📍 European Synchrotron Radiation Facility (ESRF), Grenoble, France

📝 Publications

Preprints available on HAL

1. **Mahé, Youwan**, Bannier, E., Leplaideur, S., Fromont, E. & Galassi, F. *Unsupervised Generative Models for Post-Stroke Anomaly Detection* in preparation for submission to *ISBI 2026*.

2. **Mahé, Youwan**, Bannier, E., Leplaideur, S., Fromont, E. & Galassi, F. *Unsupervised Deep Generative Models for Anomaly Detection in Neuroimaging: A Systematic Scoping Review* Manuscript in preparation for submission to *Imaging Neuroscience*.

3. **Mahé, Youwan**, Leplaideur, S., Fromont, E., Bannier, E. & Galassi, F. *Détection et segmentation des anomalies cérébrales post-AVC* in *IABM 2025 - Colloque Français d'Intelligence Artificielle en Imagerie Biomédicale* (Nice, France, Mar. 2025), 1–2. https://hal.science/hal-04910273.

📚 Teachings

Year	University	Public	Course	N. of hours	Type
2025	ESIR Université de Rennes	Graduate students in Computer Science – Information Systems option	Machine Learning	24	Lab Sessions

💬 Scientific outreach

- **Semaine du cerveau (Brain week)** 🧠 : Organization and preparation of a quizz about neuroimaging research (the jobs, image processing, neuroimaging methods, findings about the brain, etc.). Presentation during the Semaine du cerveau 2025 at Café des Champs Libres, Rennes.
- **1 scientifique, 1 classe : chiche !** : 1-hour talk for high school students on the challenges of AI technologies at Lycée La Mennais in Ploërmel.