Mbaimou Auxence NGREMMADJI

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Skills

- Mathematics: Optimization, Probability, Statistic, Numerical Analysis
- Quantitative Magnetic Resonance Imaging
- Machine Learning and Deep Learning
- Image Processing: image reconstruction, debluring, denoising
- Programming: Matlab, Python, R, C++ , bash and Git

Education

- **Ph.D. in Medical Imaging, Université de Lorraine, France**
  Medical Imaging
  Since October 2021 to May 2025
- **M.Sc. Mathematical Modeling**
  Sorbonne Université (UPMC), Paris, France
  2018-2019
- **M.Sc. Mathematical Engineering**
  Aix-Marseille Université, Marseille, France
  2017-2018
- **B.SC Mathematics**
  Université Cheikh Anta Diop, Dakar, Sénégal
  2014-2015

Volunteering

- **Association Tous Réfugiés**
  External collaborator and Advisor
  Since 2023

Languages

- Sara (Mother tongue)
- French (Work language)
- English (Work language)
- Swahili (Beginner)

Soft skills

- Teamwork
- Communication

Expériences

| 03/2021 - 12/2021 | **Fatima Fellowship Program** | Remote |

- Project: Using Bayesian Optimization for Sampling Non-convex space.
  Advisor: Marouen Ben Guebila, Harvard University, USA

| 06/2020- 10/2020 | **Data science** | Occitanie Data - Toulouse, France |

- Literature about Federated Learning and Homomorphic Encryption
- Image Classification using Federated Learning
- House Price Prediction on Encrypted Data
- Python Programming

| 05/2019- 09/2019 | **Image Processing** | TSI2M Lab - Lannion,France |

- Literature about Image Restoration
- Image Restoration using Variational Method
- Matlab Programming.

Projects

2024 — Ex vivo Placenta MR images Segmentation
nn-Unet model used for the segmentation purpose. Programming language: Python (PyTorch)

2024 — CT Images Segmentation
nn-Unet model with attention used for the segmentation purpose. Programming language: Python (PyTorch)

2020 — IEEE-CIS Fraud Detection
Data Analysis, Machine Learning Models and Evaluation

International Communications

2024 — Conference paper — Athens, Greece
A Variational Inference Super-resolution Method with Beltrami Regularization for In-vivo MR Placenta MR Images, in Proceedings of the 24th International Symposium on Biomedical Imaging

2023 — Annual Meeting of European Society for Magnetic Resonance in Medicine and Biology (ESMRMB) — Basel, Switzerland
Super- resolution with Hybrid Regularization for In-vivo Free- breathing Human Placental MRI

2022 — Annual Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM) — London, United Kingdom
asbtract: *Impact of motion correction on in-vivo assessment of Placenta Adhesion Abnormality (PAA) disorders using IVIM method*