Baye Malick Gning

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I am seeking a full-time position as an AI Researcher

EDUCATION

Engineering Degree, Centrale Supélec, 2021 – 2025
Mathematics and Data Science, Information and Data Sciences

Master's Degree in Applied Fundamental Mathematics (M2), University of Lorraine, 2024 – 2025
Advanced Probability: discrete stochastic processes and continuous-time stochastic processes
Optimal stochastic control

Preparatory Classes for the Grandes Écoles (MP), Lycée Henri IV, 2019 – 2021

EXPERIENCE

AI Research Internship May 2025 – Nov 2025
Michelin Clermont-Ferrand
Reduction of metal artifacts in tire tomographic images using Deep Learning
After a quick introduction to X-ray tomography, I conducted a literature review on metal artifact reduction using deep learning techniques. I built a synthetic tomographic image database of tires. I performed a benchmark of the most promising models, including supervised and unsupervised approaches.

Data Science Intern March 2024 – August 2024
EDF Grenoble
Turbine failure classification
I annotated textual data related to turbine failures, designed a methodological annotation guide, and fine-tuned the CamemBERT language model for this specific task.

Data Science Intern July 2023 – Dec 2023
Innov+ Gif-sur-Yvette
Emotion prediction from video data
I conducted a literature review on emotion prediction, implemented 3D convolutional architectures based on research papers, and developed preprocessing and data augmentation techniques for video data.

PROJECTS

School project : Digital holography and deep learning for 3D localization of bacteria
I studied deep learning methods for 3D tracking of bacteria using holographic diffraction patterns. I implemented and trained a physics-based localization model using simulated synthetic data, then evaluated its performance on experimental data from LEMTA.

School project : Tweetoscope — Java application for tweet processing
Use of Kafka and containerization of services. Deployment on a Kubernetes cluster and analysis of risks and failure scenarios.

School project : Denoising of simulated stent images
I worked on the restoration of X-ray images with high noise levels. I simulated noisy images containing stents. I implemented a U-Net architecture for the denoising task and compared it to different methods such as PCA and BM3D. I also applied data augmentation techniques.

Personal project : Machine Learning grind, https://github.com/bmalick/machine-learning-grind
I study research papers in machine learning and deep learning. I implement various statistical and deep learning algorithms from scratch. I apply these models to datasets to evaluate their performance.

SKILLS & INTERESTS

Programming	Python, C++, LaTeX, SQL
Frameworks	Scikit-Learn, PyTorch, TensorFlow, pandas, NumPy, Matplotlib, Seaborn, OpenCV, CleanLab, Albumentations
Tools	Git, Conda, Docker, Kafka, Kubernetes, Spark
Languages	French (bilingual), Wolof (native), English (C1 – Cambridge certified)
Interests	Reading, chess, football, manga, animes