Marianne Metais

MACHINE LEARNING ENGINEER

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Machine Learning Engineer with over 3 years of experience specializing in **Deep Learning** for **Speech Technologies** at **École Normale Supérieure Ulm**. Expertise in **Speech-to-Text**, **Transformers**, and **Large Speech Models**, similar to LLM. Proficient in **Python** and **PyTorch**, with a strong background in **Programming** and **Applied Mathematics**. Seeking to leverage advanced AI technologies and contribute to impactful projects.

WORK EXPERIENCE

Jan 2021 - Dec 2023
Machine Learning Engineer *École Normale Supérieure Ulm*

- Developed a Deep Learning model using Python and PyTorch for audio quality diagnosis, predicting noise levels, reverberation, and voice activity.
- Created a synthetic speech dataset from audiobooks, noise recordings, and room impulse responses.
- Published research at **ASRU2023**, releasing **code** and a **pre-trained model** on GitHub and Hugging Face (10,000+ downloads).
- Improved model performance by 20% through **hyperparameter tuning**.
- Explored self-supervised models to enhance **ASR performance** on low-resource languages.

June 2020 – Nov 2020
Operational Research Intern, *Orange*

Researched **multiperiod planning** of virtual networks using **heuristics** and **metaheuristics** for optimal solutions. Implemented solutions in **Python**.

June 2019 – Aug 2019
Engineering Intern *École Normale Supérieure Ulm*

Generated **video sequences** using the **Unreal Engine Python API** for machine learning model testing.

EDUCATION

2017 - 2020
Engineering Degree in Computer Science, Grenoble INP Ensimag

SKILLS

Programming : Python, PyTorch, Pandas, NumPy, Object Oriented Programming, NLP, LLM, SQL
Miscellaneous : Linux, Shell (Bash, slurm), LaTeX (Overleaf/R Markdown), Git, CI/CD
Soft Skills : Teamwork, Problem−solving, Adaptivity, Communication