

IA Scientist/ML Engineer

Phd in Reinforcement Learning for Microgrids

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Currently

- 2023 **Machine Learning Scientist**, Enginn (TTS startup)
Formalization and training of a voice identity creation system with a non copy guarantee of the the training voices (patent under study). Training, analysis and conditioning on emotions of a TTS model (LLM, Pytorch). Setup of an ETL to improve velocity (Spark). Formalization of a multi-modal voice search and guidance of a data scientist for the implementation.

Diplomas

- 2022 **Thesis: « Learning, prediction and optimization of energy intakes for a low footprint building »**, ETIS
Formalization of an hybrid energy storage management system inside a microgrid. Solving using Reinforcement Learning (RL). Implementation of the simulator (Numpy), learning algorithms (Pytorch) and analysis (Using Numfocus: Pandas, seaborn, matplotlib, ...). Defended on December 16 2022
- 2018 **Master of Computer Science & Complex Systems Engineering**, *Université de Cergy-Pontoise*, IA and Big Data track

Experience

- 2018-2022 **Teaching**, *Freshman to Senior*, CY Cergy-Paris University
Including projects coaching in Software Engineering and Embedded Systems
- 2018 **Temperature Forecasting**, *Graduate year Internship*, ETIS
Local prediction over several hours using a Convolutional Neural Network (Keras)
- 2017 **IoT Prototype**, *Senior year Internship*, SPEM
For fire safety. Embedded system in C and web service in Python

Publications

- 2021 **Deep Reinforcement Learning for Hybrid Energy Storage Systems: Balancing Lead and Hydrogen Storage**, *Energies*
Formulation and reduction of the hybrid energy storage management in a microgrid to enable deep Reinforcement Learning
- 2019 **Short-Term Temperature Forecasting on a Several Hours Horizon**, *ICANN*
Proposition of a short-term local temperature forecaster

Projects

- 2016 **Smart Radio**, *Université de Cergy-Pontoise*
Synthesis project. Interfacing NFC from C to Python

2015 **Multiplayer networked Pacman**, *Université de Cergy-Pontoise*
Protocol writing. Server (C) and client (Java) implementation

Skills

Languages Python, C, SQL, Shell Tech tools Git, MLflow, Linux, GCP
Libraries Pytorch, Pandas, Seaborn, Sklearn, Numpy, ipywidgets, Matplotlib, Spark
Theor. Tools Reinforcement Learning, Deep learning, Scaling laws
Models Neural Networks (ANN, CNN, Transformers/LLM)
Applications Hybrid Energy Storage Systems/Microgrid, Text-to-Speech
English TOEIC 925 French native language

Extra Curricular activities

2017 **Interactive terminal**, *Day-Click*
Magic wand using image processing (openCV) and demo web game

2016 **Hackathon**, *2nd place*, *Day-Click*
Eye-tracking magnification system prototyping

2014 – 2017 **LAN-parties**, *Versity*, *Université de Cergy-Pontoise*
Management of a 10+ people group, website creation and skill transmission to the next organizing team

2024 **Quine-LM**
Working on a Language Model that outputs its training code

Reading papers
Syntesis documents (RTE report, GIEC) reading, scientific papers outside my field (Psychology, Sociology)

If you have the pdf version of this CV, some of the titles are links