

Guillaume Kunsch

Research Engineer ([LinkedIn](#), [GitHub](#), [Website](#))
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PRINCIPAL INTERESTS

Machine learning, Deep learning theory, Software engineering, Large Scale System, AI, Language models

EDUCATION

ENS Ulm, Mines Paris, Université Paris Dauphine - PSL University 2021 - 2022

Master 2 IASD, Artificial Intelligence

- Related courses: Optimisation, NLP, Sequence model, Deep Reinforcement Learning, Databases, Game Theory. Graduated with Distinction (ranked 3/47).
- Master thesis: *Medical code classification based on free-text clinical notes*. Advised by Dr. Alexander Belikov.

CENTRALE PARIS - Paris-Saclay University 2017 - 2021

Master "Grande Ecole" curriculum

- Related courses: Maths, Physics, Software Development, Machine Learning.
- Exchange with ETSII-Universidad Politecnica de Madrid in Operation Research.
- Master thesis: *Quantitative study on the relationship between cryptocurrencies and social media flows*. Advised by Pr. José Manuel Mira-McWilliams.

COLLEGE STANISLAS 2015 - 2017

Preparatory Class PCSI-PC

- Post-secondary intense preparation in Mathematics, Physics and Chemistry for the highly competitive national entrance exams to the top French engineering schools.
- Project: Measurement and monitoring of antifouling concentration in salt water for the prevention of marine biodiversity.

EXPERIENCE

Research Engineer, Technology Innovation Institute April 2024 - present

- Developed and optimised a suite of libraries for LLM pre-training: data pipeline and refinement, distributed computing on heterogeneous cluster, evaluation
- Participated in the end-to-end training of [FalconMamba-7B](#). Stack Involved: Python, Pytorch, Megatron-LM, AWS Sagemaker, Triton

Machine Learning Engineer, Qantev September 2022 - April 2024

- Data exploration & cleaning on large datasets. Understand and prototype ideas from research papers. Version controlling, reproducibility, and deploying machine learning models (Git, Docker, CI/CD, Azure, Kubeflow, Django, Dagster).
- Implemented the 1st in-house medical LLM classification model (RoBERTa) enhancing SOTA models (f1 macro from 15.1% to 21.9%) leveraging Hugging Face and Pytorch.
- Implemented from scratch in Pytorch a contrastive embedding model leveraging non-Euclidean geometry and trained it

Venture Capital Deep Tech Analyst, Elaia

January 2021 - September 2022

- Conducted investment in multi-sectorial deep-tech areas, mainly Artificial Intelligence, Cloud Computing & Cybersecurity. Helped conclude 10+ investments; in-depth analysis of technology.
- Participated in the development of a quantitative portfolio management tool based on Monte-Carlo method.

OTHERS

- Languages: English (fluent), Spanish (conversational), French (native).
- Interests: Running, Judo, Cinema.
- Skills: Python (Pandas, Numpy, Scikit-learn, Pytorch, Networkx, Hugging Face), SQL, AWS (Sagemaker, S3, EC2)