

MORGAN GIRAUD

ML engineer and Tech lead

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PROFILE SUMMARY

Passionate ML & Web engineer, skilled in Python, and its diverse set of ML frameworks (TF, PyTorch, JAX). Also proficient in JS/TS and web app engineering. Experienced in working with on-site and remote diverse teams.

Notable experiences:

- **Team Leadership:** Led the technical team on a project that generated millions of euros in benefits.
- **Open-Source Contribution:** Core original contributor to the open-source library, [tf-encrypted](#), for privacy-preserving machine learning in TensorFlow, accepted at the NeurIPS 2018 PPML workshop.
- **Research:** Completed a research internship on grounded language learning and modality fusion. Find the [annotated slides here](#).
- **Entrepreneurship:** Founded Explee in 2012 as the CTO, an online platform for creating animated videos.

SKILLS

- Proficient in Python with experience in Jax, Pytorch and TensorFlow (Local and Distributed Settings).
- Average knowledge of CUDA and Triton.
- Extensive experience in infrastructure engineering (AWS, Docker, Linux) and development processes (CI/CD, Git, etc.).
- Proficient in TypeScript/JavaScript and PHP. Notion of C++ and Golang.
- Fluent in French and English, with limited working proficiency in Italian.

RESEARCH & ENGINEERING INTERESTS

- ML scalability: Reducing the need for compute by improving data and models efficiency, and building scalable infrastructure and algorithms for ML research and deployments.
- Traditional-ML enhanced LLMs: especially LLMs enhanced with external planner, critics and verifiers.
- Explainable/Interpretable Machine Learning: developing tools to open-up the blackbox.
- Reinforcement Learning (RL), especially Multi-agent RL and LLM-enhanced agents to improve human-agent interactions.

WORK EXPERIENCE (ordered by date)

WoW Studio | Tech lead

Apr 2022 – Nov 2023 | Location: Remote

Led a remote team of 5 technical professionals at [WoW Studio](#), a tech and media company that develops innovative experiences and products using blockchain technologies. (Ethereum L1/L2).

- Remotely led the development of the highly successful WoWG NFT collection.
- Actively participated in the developer hiring process by conducting interviews and creating technical assessments to evaluate candidates, ensuring a highly skilled team.
- Delivered [multiple web application](#) by coordinating and supervising developers' work.
- Established effective processes for task organization, promoting collaboration and transparent communication within the remote team. (main tools: Asana and Github)
- Served as the main contact for technical matters, offering guidance, support and code reviews to team members to enhance their skills and overall efficiency.

Leniax | ML engineer

2020 - 2022 | Location: Remote

Built [Leniax](#), a JAX library to apply state-of-the-art quality-diversity algorithms to the Continuous Cellular Automata Lenia:

- Explored the under-researched direction of QD algorithms in the Lenia domain, focusing on both algorithm design and implementation.
- Organized interdisciplinary research meetings with mathematicians and ML researchers.
- Published Leniax, a fully-fledged software to facilitate the use of QD algorithms on Lenia.

ANITI | ML research internship

Jun 2020 - Sep 2020 | Location: Toulouse, France

Research internship on Grounded Language Learning in simulated environments at ANITI (Artificial and Natural Intelligence Toulouse Institute):

- Conducted research under the supervision of [Rufin VanRullen](#).
- Optimised a multi-agent simulation game to boost model training efficiency.
- Developed and trained several multimodal models for modality fusing (computer vision and natural language processing).
- Final [presentation](#) and [annotated slides](#)
- Project done using PyTorch: <https://github.com/rufiab/soc>

Freelance | ML engineer

2016 - 2019 | Location: Remote

Core original contributor to the Open Source library for privacy-preserving Machine Learning in TensorFlow: [tf-encrypted](#) accepted at the NeurIPS 2018 PPML workshop. [Associated research paper](#)

- Contributed to the prototype that enabled [Cape Privacy](#) to secure its first seed round of funding.
- Developed discretized functions for neural networks, enabling training and inference to be conducted in cryptographic settings for enhanced privacy.

Other contributions:

- GANs for video compression (2019)
- [Deep reinforcement learning with world models](#) (2017)
- Blogger at <https://medium.com/@morgangiraud> (Main subject: ML engineering)

EatWith, MyLittleParis | Web Developer

Jul 2015 – Jan 2016 | Location: Paris, France

Worked as a freelance PHP/JavaScript developer, optimizing technical stacks, developing applications and structuring technical processes.

ECV Digital | Teacher

Oct 2015 – Jan 2016 | Location: Paris, France

Taught two semester-long classes: PHP/MySQL and Algorithm/JavaScript, introducing students to programming languages, ecosystems, and basic algorithm concepts.

Explee | Co-founder & CTO

2012 – 2021 | Location: Paris, France

Co-founded the startup Explee as its CTO: an online platform for creating animated videos.

- Developed the entire technical stack of a complex distributed web application.
- Built and managed infrastructure using AWS and Docker.
- Created the Javascript video rendering engine and computer vision algorithms for automatic drawing.

EDUCATION:

Telecom SudParis - Engineer's Degree (MSc in Comp. Sci.)

2009 - 2012 | Location: Evry, France.

Leading graduate school of engineering and part of the Institut Mines-Télécom, a top institute for Information and Communication Technology in France.

Berthollet - Classes préparatoire

2007 - 2009 | Location: Annecy, France.

Intensive courses in advanced mathematics and physics, preparing for the highly selective entrance exams to the French "Grandes Ecoles."