Alain Gysi

ML Engineer

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Experience

Unit8 | Data & AI Engineer

September 2025 – Current | Lausanne / Zürich, Switzerland

- Architecting high-reasoning RAG systems for complex automated assistants by designing advanced prompt engineering strategies and logic consistency checks, resulting in reduced hallucination rates for enterprise clients.
- Optimized the open-source Darts library as a core contributor, achieving a 1000x speedup in scikit-learn forecasting while enforcing rigorous architectural standards to facilitate adoption by the wider ML community.

University of Applied Sciences HE-Arc | Expert for B.Sc. and M.Sc. Theses in ML and Invited Speaker

July 2025 – Present | Neuchâtel, Switzerland

- Served as external expert and advisor for Bachelor's and Master's theses in machine learning and reinforcement learning by providing feedback aligned with academic and industry best practices.
- Giving guest lectures on machine learning topics including Reinforcement Learning and its applications with LLM.

ORamaVR | ML Engineer

September 2023 – August 2025 | Geneva, Switzerland

- Designed and deployed a production-grade multimodal generation pipeline for text-to-3D model generation, reducing asset creation time for end-users.
- Engineered a massive-scale data processing infrastructure capable of ingesting, normalizing, and storing 5M+ 3D meshes, enabling the training of robust generative models.
- Deployed an end-to-end multimodal pipeline for text-to-3D generation, leveraging Vision-Language Models (VLMs) to automatically generate high-quality prompts for dataset enrichment.
- Accelerated model inference speeds (10x throughput increase) in production by deploying vLLM and integrating customized Transformer architectures into a live service environment.
- Designed an intelligent agent-to-agent routing framework using Google's Agent framework to dynamically dispatch requests to specialized models (e.g., textured vs. untextured generators) based on complexity and resource requirements.

University of Applied Sciences HE-Arc | Research Engineer

September 2020 – August 2023 | Neuchâtel, Switzerland

- Secured continuous client partnerships by spearheading full-lifecycle AI deployments (Vision, NLP, Time-Series) across multi-domain environments (Finance, Aerospace, Industrial, Agriculture), taking projects from hypothesis to production-ready systems.
- Achieved a 15% accuracy improvement in satellite anomaly detection over classical methods by designing and deploying deep learning models.
- Authored and published a peer-reviewed paper on Reinforcement Learning (IEEE PIMRC 2021), demonstrating novel approaches to task scheduling algorithms.
- Designed and supervised practical exercises for a Master's course on Parallel Programming with CUDA, focusing on model distillation and inference optimization using TensorRT.

Skills

Machine Learning & AI

PyTorch • Transformers • VLMs • Reinforcement Learning • Diffusion Models • NVIDIA NeMo • Scikit-learn • Tensorflow • Weights & Biases • Pandas • NumPy • PySpark • vLLM • Jupyter Notebooks • TensorRT • Vector Database - PyVespa

Infrastructure

Docker • Kubernetes • Azure • AWS • FastAPI • Palantir Foundry

Programming Languages

Python • C++ (CUDA, Qt) • SQL • C# (Unity)

Software Engineering

Git • Design Patterns • CI/CD • APIs • Code Review • Unit testing • Algorithms & Data Structures

Education

Master's Thesis

Osaka Metropolitan University

04/2022 - 09/2022 | Osaka, Japan

Grade: 6.0 / 6.0

M.Sc. in Data Science

University of Applied Sciences HES-SO

09/2019 - 08/2020 | Lausanne, Switzerland

GPA: 5.5 / 6.0

B.Sc. in Computer Science

University of Applied Sciences HE-Arc

09/2016 - 08/2019 | Neuchâtel, Switzerland

GPA: 5.6 / 6.0

Languages

French	Native
English	Fluent
Japanese	Advanced (JLPT N2)
German	Intermediate

Interests

AI Research	Anime & Manga
Board Games	Escape Games
Video Games	Weightlifting