Hugo Jarkoff

Machine Learning Software Engineer (MSc.)

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ML Software Engineer with 4+ years of experience in designing, training and deploying models at scale; passionate by MLOps and everything Computer Science related.

Experience

- **Addactis (formerly NamR, acquired in 2025)** — Paris, France
  ML/CV Software Engineer, focused on aerial imagery processing — 2024 - present

  Various high-impact contributions to the team's technical stack, promoting good/modern Python practices:
  - Refactor of the team's training framework, drastically reducing time needed between data acquisition and model release to production.
  - Ongoing refactor of the team's DB and aerial imagery processing pipelines.

- **Invoxia** — Paris, France
  R&D Machine Learning Engineer — 2021 – 2024 (3 years)

  Several projects led successively :
  - Development and training of a CV model for human detection and counting using high frequency radar waves.
  - Development and training of a signal processing (CV approach) model for estimation of the respiratory rate of dogs using accelerometer signals from a connected medical collar. Average model accuracy exceeding 98.5% (preprint available on *bioRxiv*).
  - Research on neural networks architectures: reviewing scientific literature, adapting and modifying existing models (CNNs, Vision Transformers), research on model compression for embedded deployment in the collar.
  - Contributions to the team's model training pipeline: rapid detection and correction of outlier data, code refactoring for high performance data preprocessing.
  - Deployment of the collar's models in production to more than 10k users (and growing) using Kubernetes and AWS SageMaker. Real-time performance monitoring of the cluster using Grafana and Prometheus, identifying improvements in the deployment.

- **Institut Louis Bachelier** — Paris, France
  End-of-Studies Internship — 2020 (6 months)
  - Research project on online learning for training recurrent neural networks.

- **Sopra Steria (for NavBlue - Airbus)** — Toulouse, France
  End-of-Studies Team Project — 2019 – 2020
  - Automatic segmentation and classification of airport images using fully convolutional neural networks (UNet).

Education

- **ISAE-SUPAERO** — Toulouse, France
  Engineering Degree (MSc.) — 2016 – 2020
  - *Major in Machine Learning*: Deep Learning (Computer Vision, NLP), Reinforcement Learning, MLOps practices (database architectures, Docker containerization, cloud computing).
  - *Minor in Advanced Mathematics*: Advanced statistics (non-parametric estimation, Bayesian statistics, stochastic algorithms) - High-performance and parallel computing - Modeling and analysis of multiphysics systems - Optimization.

- **Lycée Louis-le-Grand** — Paris, France
  Preparatory Classes — 2014 – 2016
  - *PCSI - PC**: Mathematics - Physics - Chemistry - Computer Science.

Technical stack

- **Programming**: Python as main language (various API and Frameworks / Libraries design); some C / Java programming; notions of C++ / HTML / JS.
- **Deep Learning frameworks**: PyTorch, Tensorflow, Keras.
- **DevOps**: Docker, FastAPI, Kubernetes, PostgreSQL/PostGIS, Gitlab CI/CD.
- **MLOps**: NVIDIA Triton, Wandb, ClearML.
- **Cloud Computing**: GCP, AWS.

Languages

- **French**: Native language.
- **English**: Full professional proficiency. *TOEFL ITP*: 633/677.

Personal Projects and Diverse Interests

- **Language Models Training**: RapGPT: Personal project consisting in training (from scratch) a Transformers-based language model to generate French Rap lyrics. Demo running on HF; weights also on HF; training code on GitHub.
- **Generative Models Finetuning**: Finetuning of several pretrained models, including Segment Anything and Stable Diffusion, by using adapters (LoRAs, IP-Adapter) on target layers; lecture of scientific articles, keeping up with the latest advancements in the field.
- **Rock Climbing / Mountaineering**: Experienced climber and mountaineer (over 15 years of practice).