Théo Gigant

Deep Learning Engineer

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HuggingFace: gigant

Education

2022–2025 **Université Paris-Saclay - ED STIC**,
L2S - Centrale Supélec, PhD (CIFRE).
Representation of encoded features for extractive and abstractive summarization of multimodal content in French language

2018–2021 **Institut Polytechnique de Paris - Télécom SudParis**,
Statistical Modeling, Master of Science.
Applied Mathematics, Deep Learning

Experience

Jan 2022–Ongoing **Machine Learning Engineer**, Freelance, Paris.
- Implementing computer vision models for real world applications & teaching deep learning classes for Master's degree students
- People count application model deployment on NVIDIA's Jetson Nano

Jul 2021–Dec 2021 **Computer Vision Research Intern**, Huawei R&D Center, Helsinki.
Part of the Research & Development Computer Vision unit
- Developing and training deep learning models for Computer Vision and Multimodal applications
- Writing scripts for distributed training over 8 GPUs in Pytorch using HuggingFace's accelerate
- Scrapping and extraction of features from huge datasets (200+ GiB) with multimodal data (text / video / images)

Projects include :
- Multimodal model for highlight proposal in long videos
- Generative Adversarial Networks (GAN) for paired and unpaired image to image translation
- Video retrieval with image/text similarity using CLIP model (74% top-1 Accuracy, 96% top-10 Accuracy over 1024 queries)

Feb 2021–Jun 2021 **Machine Learning Engineer Intern**, JustAI, Paris.
- Building Proof of Concepts for applications using Deep Learning models in NLP using HuggingFace's transformers
- Writing data processing & data visualization algorithms in Python
- Trainer for courses about Deep Learning Fundamentals for developers & AI project management

Projects

Jan 2022–Ongoing **GAN-JAX [Code]**, *Self-motivated*.
- Implementation of various GAN models with the JAX-Flax framework
- Vanilla GAN, WGAN, Conditional GAN, InfoGAN, CycleGAN, CUT

Jan 2022– Feb 2022 **SOTA Romanian Speech Recognition Model [Model]**, *HuggingFace & OVHCloud*.
For HuggingFace's Robust Speech Recognition Challenge
- Finetuning a Wav2Vec2 model for Romanian Speech Recognition using HuggingFace's transformers
- Boosting the model with a 5-gram language model, using the `pyctcdecode` library
- The model achieved top-1 on the Leaderboard of the event in Romanian, and beat the previous State-of-the-art with a WER of 7.31% and a CER of 2.17% on the Common Voice 8.0 benchmark

July 2021 **T5-VAE [Demo]**, *HuggingFace & Google Cloud Platform*.
For HuggingFace's JAX/Flax Community Week Event
- Finetuning a T5 language model as a Variational AutoEncoder, for smooth text interpolations
- Code written with the JAX & Flax frameworks for Python
- Project ranked Top-15 on the event over 100+ projects

Skills

Languages	Python, Java, SQL, Bash, C
Frameworks	PyTorch, Tensorflow, Keras, JAX, Flax
ML libraries	transformers, accelerate, datasets, Weights&Biases, Gradio
Utilities	Anaconda, Git, Jupyter Notebook, OVHCloud
Spoken Languages	French (native), English (Full professional proficiency : 990/990 TOEIC)

Certifications

Oct 2020 **GAN Specialization [LINK]**, *DeepLearning.ai*.
3 courses, 10 weeks specialization to learn state-of-the-art deep learning techniques to build GAN models