Tom Veniat

Deep Learning Scientist

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EDUCATION

SORBONNE UNIVERSITÉ
PhD in Deep Learning
2021 | Paris, France

SORBONNE UNIVERSITÉ
MS in Data Science
2017 | Paris, France

UNIVERSITÉ NICE SOPHIA ANTIPOLIS
Ing. degree in Computer Science
2016 | Nice, Sophia-Antipolis, France

SKILLS

TECHNICAL
Languages
Python • C++ • Java • Shell • Web (Javascript, HTML5, CSS3...)

Frameworks
Pytorch • Tensorflow • ONNX • Ray

Tools
Git • Github • Conda • Docker
AWS • GCP • Azure • Unity

LANGUAGES
French - Native
English - Fluent

INTERESTS

I specialize in applying **Deep Learning** methods to **Computer Vision**, with a keen interest in enhancing neural systems' adaptability and performance over time.

My passion lies in exploring practical solutions to make models evolve over time, integrating new data, and leveraging existing knowledge for **efficient real-world problem-solving**.

My goal is to leverage my research and engineering skills to help bridge the gap between cutting-edge research and industrial applications.

DISTINCTIONS

Pépite Jury Member (National Org for student entrepreneurship)
2022 Pépite Prize winner with Reveality
Best Student paper Award ICASSP 2019

EXPERIENCE

REVEALITY | Co-founder & CTO
Jul 2021 – Today | Paris-Lyon, France
Development of AI-Powered creation tools for Augmented Reality.
Setup and tuning of **Detection**, **Segmentation** and tracking algorithms used in user-facing applications.

VISIONAIRY | ML Engineer
Mar 2023 – Nov 2023 | Saclay, France
I worked at the interface of the R&D and product teams and led the transfer of custom algorithms to ONNX for improved performance on **embedded devices** and streamline deployment.

SORBONNE UNIVERSITÉ | PhD Candidate
Sep 2017 – July 2021 | Paris, France | Manuscript | Defense
Worked with Prof. **L.Denoyer** and **M.A. Ranzato** on Meta-Learning and Neural Architecture Search for discovery of **resource-efficient Deep Neural Networks**.
Publication and Reviewer at top ML conferences (CVPR, ICLR, ICASSP, NeurIPS)
Teaching Assistant (Python, C, Java, Machine Learning, Software Eng, ...)

FACEBOOK | Research Intern
May 2019 – Sep 2019 | New York, USA
Internship in FAIR New York under the supervison of Marc'Aurelio Ranzato.
New evaluation methods and modular architectures for **Continual Learning** systems.
Published in ICLR 2021.

SORBONNE UNIVERSITÉ | Research Intern
Feb 2017 – Sep 2017 | Paris, France
Worked on Meta-Learning and Reinforcement Learning for automatic Deep Neural Networks architecture search. Article submitted to NIPS Conference.

PUBLICATIONS

EFFICIENT CONTINUAL LEARNING WITH MODULAR NETWORKS AND TASK-DRIVEN PRIORS
Tom Veniat, Ludovic Denoyer, Marc'Aurelio Ranzato
ICLR 2021 | CTrLBenchmark | MNTDP | Presentation
Introduces a benchmark allowing a fine-grained evaluation of the desirable transfer properties for Lifelong Learning agents.
Proposes a Modular Network outperforming existing approaches on most of the dimensions measured by the CTrL benchmark.

SANAS : STOCHASTIC ADAPTIVE NEURAL ARCHITECTURE SEARCH FOR KEYWORD SPOTTING
Tom Veniat, Olivier Schwander, Ludovic Denoyer
ICASSP 2019 - Oral - Best paper award | github.com/TomVeniat/SANAS
End-to-end learning of an adaptive deep neural network for efficient sequence classification.

LEARNING TIME/MEMORY-EFFICIENT DEEP ARCHITECTURES WITH BUDGETED SUPER NETWORKS
Tom Veniat, Ludovic Denoyer
CVPR 2018 | github.com/TomVeniat/BSN
Jointly learns the architecture and the parameters of a neural network respecting a specific cost constraint (energy, size, ...).