Nicolas Michel

Postdoctoral Researcher
The University of Tokyo

Tokyo, Japan
github.com/Nicolas1203
090-7698-6901
nicolasmichel1203@gmail.com
nicolas1203.github.io

Professional Experiences (4+ years)

Nov 2024 - Nov 2026 **JSPS Postdoctoral Researcher**, *The University of Tokyo*, Tokyo, Japan
2 years JSPS Postdoctoral Fellowship in the YAMASAKI Lab. Research topics include Continual Learning, Knowledge Distillation, Image Generation. My recent research focuses on defining continual learning as learning from a continually introduced sequence foundation models rather than a sequence of data.

Jan 2024 - Aug 2024 **Teaching Assistant**, *Université Gustave Eiffel*, ESIEE Paris, France
8-months teaching contract. Machine Learning, Optimization and Computer Science.

May 2023 - Aug 2023 **Visiting Scientist**, *The University of Tokyo*, YAMASAKI Lab, Japan
3-month collaboration in the Computer Vision and Media Lab with Prof. Yamasaki. Subjects include Continual Learning, Mutual Learning, Adversarial Training and Image Generation.

Dec 2020 - Sept 2024 **Data Science Mentoring**, *OpenClassrooms*, Remote
Mentoring students on the Data Science course - OpenClassrooms & CentralSupélec. Management of data science projects and scientific follow-up. Projects include data processing, supervised and unsupervised learning, cloud model deployment (AWS).

Jan 2020 - Dec 2020 **Data Scientist**, *Faurecia*, Paris, France
Digital Services Factory (DSF) of Faurecia, one of the first global automotive suppliers worldwide. The DSF team, composed of 60 engineers aims to bring new AI skills. Specific involvements: ML applied to verbal aggressivity detection, DL applied to driver distraction detection and passenger presence detection. Model optimization. Inference on NVIDIA Jetson boards.

Oct 2018 - Dec 2019 **Research Engineer**, *Wassa*, Paris, France
Innovation team of Wassa, a digital company of 30 employees. The R&D team, composed of 4 researchers, ensures the quality of Wassa algorithms by using state-of-the-art CV techniques. Specific involvements: DL applied to Gender Recognition, Age Prediction and Object Detection. HoG for pedestrian detection, TS forecasting.

Apr 2018 - Sep 2018 **Deep Learning Intern**, *Orange DTSI*, Paris, France
Intern at Orange for 6 months in the innovation department. Objective: Implement and train a "Mirror chatbot" with DL and NLP techniques to talk with other chatbots at Orange and test them on different aspects to improve their effectiveness.

Sep 2017 - Mar 2018 **University-Industry joint project**, *So-net Media Networks*, Tokyo, Japan
Part-time research at So-net Media Networks (SMN), a SONY subsidiary of 1000 employees specialized in Online Advertising. Implementation and training of a DL model to classify advertisement images regarding their efficiency. Worked with a database of 40,000 images. This research was conducted in partnership with the University of Tokyo.

Education

PhD 2021 - 2024 **Laboratoire d'Informatique Gaspard-Monge (LIGM), Université Gustave Eiffel, ESIEE Paris, CNRS**
Online Continuous Image Classification with Memory-based Methods: Application to YouTube data. Supervisors: Jean-François Bercher, Giovanni Chierchia and Romain Negrel. Subjects of interest: Continual Learning, Image classification, Representation Learning, Knowledge Distillation, Online Learning, Probabilistic Modeling.

Engineering Degree 2014 - 2018 **Institut Mines-Télécom Atlantique (IMT Atlantique)**
Major: Computer Science for Decision Support. Optimization algorithms, OOP (Java), project management, statistics.

MSc studies **The University of Tokyo**
2017 - 2018 Exchange semester in the Information Science and Technology department. Integration of a research laboratory specialized in Computer Vision and Deep Learning. 1^{st} author of a research paper published in the Japanese Society of AI conference. GPA: 4.0.

MPSI/MP* **Fénelon Sainte-Marie**
2012-2014 Studies in Maths and Physics, preparing the entrance exam for engineering schools.

Publications - gscholar

In Progress - 2026 ***A Survey on Blurry Boundaries in Online Continual Learning***
N Michel, M Wang, J He, T Yamasaki

In Progress - 2026 ***Exploring the Limits of TTA Methods in Continual Learning Setups***
F Li Combeau, **N Michel**, T Yamasaki

In Progress - 2026 ***Distilling Synesthesia through Data Generation***
C Sbrolli, **N Michel**, T Yamasaki

Under Review - 2026 ***Continual Distillation of Teachers from Different Domains***
N Michel, M Wang, J He, T Yamasaki

Under Review - 2026 ***Online Prototypes and Class-Wise Hypergradients for Online Continual Learning with Pre-Trained Models***
N Michel, M Wang, J He, T Yamasaki

NeurIPSW - 2025 ***Exploring Continual Distillation of Teachers from Different Domains***
N Michel, M Wang, J He, T Yamasaki

NeurIPSW - 2025 ***Learning representations on Lp hyperspheres: The equivalence of loss functions in a MAP approach***
N Michel, G Chierchia, R Negrel, JF Bercher

NeurIPS - 2024 ***Dealing with Synthetic Data Contamination in Online Continual Learning***
M Wang, **N Michel**, J Mao, T Yamasaki

ICML - 2024 ***Rethinking Momentum Knowledge Distillation in Online Continual Learning***
N Michel, M Wang, L Xiao, T Yamasaki. Vienna, Austria

ICIP - 2024 ***Improving Adversarial Robustness in Continual Learning***
K Mukai, S Kumano, **N Michel**, L Xiao, T Yamasaki

CVPR - 2024 ***Improving Plasticity in Online Continual Learning via Collaborative Learning***
M Wang, **N Michel**, L Xiao, T Yamasaki. Seattle, USA.

AAAI - 2024 ***Learning Representations on the Unit Sphere: Investigating Angular Gaussian and von Mises-Fisher Distributions for Online Continual Learning***
N Michel, G Chierchia, R Negrel, JF Bercher. Vancouver, Canada.

BMVC - 2023 ***Domain-Aware Augmentations for Unsupervised Online General Continual Learning***
N Michel, R Negrel, G Chierchia, JF Bercher. Aberdeen, UK.

MIRU - 2023 ***New metrics for analyzing continual learners***
N Michel, G Chierchia, R Negrel, JF Bercher, T Yamasaki. Hamamatsu, Japan

ICIP - 2022 ***Contrastive Learning for Online Semi-Supervised General Continual Learning***
N Michel, R Negrel, G Chierchia, JF Bercher. Bordeaux, France.

JSAI - 2018 ***Banner Click Through Rate Classification Using Deep Neural Convolutional Network***
N Michel, H Sakata, K Kurita, T Yamasaki. Okinawa, Japan.

Teaching Experiences

2024 **L3 - Data Science**, *ESIEE Paris*
Data Science basics with python and sklearn (classification, clustering, PCA, etc.).

2024 **L3 - Optimisation and AI**, *ESIEE Paris*
Gradient Descent, Reinforcement Learning, Constrained Optimisation, python, numpy.

2024 **L3 - Optimisation and AI**, *ESIEE Paris*
Gradient Descent, Reinforcement Learning, Constrained Optimisation.

2024 **L3 - Introduction to Deep learning**, *ESIEE Paris*
Image Classification, Face Detection and Recognition, python, keras, tensorflow.

2024 **L3 - Project Supervisor**, *ESIEE Paris*
FootTracker: Analyzing soccer games videos to extract statistics given player positions.

2024 **L1 - OOP**, *ESIEE Paris*
Java OOP and polymorphism basics.

2024 **L1 - Micro-processor ARM**, *ESIEE Paris*
ARM assembly programming basics.

2023 **M1 - Project supervisor**, *ESIEE Paris*
YouTube DeepMetaData: predicting and storing the places and positions of people in YouTube videos.

2022 **M1 - Project supervisor**, *ESIEE Paris*
YouTube Catalogue: scraping and organizing YouTube video data.

2021 **M2 - Time Series & Machine Learning**, *ESIEE Paris*
Machine Learning concepts for times series forecasting (LSTM, transformers, etc.).

Skills

French Mothertongue
English Fluent *TOEIC 965/990 (Jan 2022)*
Japanese Intermediate ***Preparing** for JLPT N2 (expected June 2026)*
OS Windows, MacOS, Linux (Ubuntu, Debian, Fedora).
Tools VSCode, Docker, Jupyter, Weight&Biases, MARP, Scrum, AWS, Azure Devops.
Programming Python (PyTorch, Numpy, MXNet, OpenCV, sklearn, Keras, Tensorflow, JAX), Java, C/C++, Matlab, LaTeX, SQL, CUDA, AWS.¡

Interests

Sport Swimming, Badminton, Tennis, Hiking, Ski.
Other Dungeons & Dragons 5E (many generative AI applications), Video Games.