Grégoire PETIT, PhD student

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As a student with a passion for theoretical science, I chose to pursue demanding studies which combine *Computer science*, *Mathematics* and *Signal Processing*, before specializing in *Machine Learning*, and pursuing a PhD in *Continual Learning*: *Exemplar-Free Class-Incremental Learning*.

Available for work from January 2024

EXPERIENCE

3-year PhD contract at **CEA TECH**   2020-2023
    AI / Machine Learning / Deep Learning / Dynamic Data
    Exemplar-Free Class-Incremental Learning.
    Supervision of a graduate intern for 6 months.

Teaching Assistant at **ÉCOLE DES PONTS PARISTECH & CENTRALESUPELEC**   2022-2023
    Machine Learning for Master of Engineering students
    Deep Learning for Master of Engineering students

Teaching Assistant at **ÉCOLE DES PONTS PARISTECH, CENTRALESUPELEC & TÉLÉCOM PARIS**   2021-2022
    Machine Learning for Master of Engineering students
    Deep Learning for Master of Engineering students
    Machine Learning for Master 2 Data and Artificial Intelligence students

6-month internship at **AIR FRANCE**   2020
    AI / Machine Learning / Computer vision around voice and face analysis issues.

EDUCATION

PhD   2020-2023, *France*
École des Ponts ParisTech, IMAGINE lab
    AI / Machine Learning / Deep Learning / Dynamic Data
    Exemplar-Free Class-Incremental Learning.

Master of Science in Computer Science (specialization Machine Learning). GPA: 4.0/4.0   2019-2020, *USA*
Georgia Institute of Technology
    Master of Science in Computer Science, specialization Machine Learning.
    Fall2019: Machine Learning, Machine Learning for Robotics, Computer Vision, Introduction to Graduate Algorithm.
    Fall2020: Data and Visual Analytics, Master's Project option (ConvLSTM)
    Inducted in the Honor Society

Master of Engineering in Information Technology, Télécom Bretagne. GPA: 3.53/4.0   2017-2019, *France*
IMT Atlantique
    General Engineering Program (Télécom Bretagne degree), in IT.
    Admission through the national competitive examination for admission to the French "Grandes Écoles".

SKILLS

🇫🇷 Native Speaker	Languages & Systems:	Python	MySQL	C++
🇺🇸 Professional Proficiency		LaTeX	Bash	MATLAB
🇩🇪 Conversational level		SLURM	git	
🇷🇺 Basic level				
🇪🇸 Basic level	Frameworks:	PyTorch	TensorFlow	NumPy
		pandas	scikit-learn	JAX

Soft skills: Leadership, Management, Autonomy, Dedication

ACADEMIC RESEARCH

1 first author article in review process   Will be revealed when the peer review process is finished

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PlaStIL: Plastic and Stable Memory-Free Class-Incremental Learning   2023
Second Conference on Lifelong Learning Agents (CoLLAs)

Petit Grégoire, *Popescu Adrian, Belouadah Eden, Picard David and Delezoide Bertrand*

PlaStIL combines a fixed feature extractor and small model tops to improve the balance between stability and plasticity

FeTrIL: Feature Translation for Exemplar-Free Class-Incremental Learning   2023
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)

Petit Grégoire, *Popescu Adrian, Schindler Hugo, Picard David and Delezoide Bertrand*

FeTrIL combines a fixed feature extractor and a pseudo-features generator to improve the balance between stability and plasticity

AdvisIL: A Class-Incremental Learning Advisor   2023
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)

Feillet Eva, **Petit Grégoire**, *Popescu Adrian, Reyboz Marina and Hudelot Céline*

AdvisIL recommends an adapted pair based on user-provided incremental process characteristics

PROJECTS

Double reed bassoon with 3D printing technologies at **CONSERVATOIRE DE BREST**   2019

4-month group project. Development and prototyping. Project management manager in a multicultural team of 5 people. Research Award (delivered by the university).

Dental healthcare with 3D printing methods at **TEAMSOC21**   2019

4-month group project. Creation of a startup in a European context. Team of 3 European people.

Creation of an application at **BRITTANY FERRIES**   2018

4-month group project. Creation of an application to give information to ferry passengers about cultural sites. Responsible for the business model, the communication and the ethical aspect of our product. In a multicultural team of 8 people.

Renovation of two broken 3D printers at **IMT ATLANTIQUE - DEVELOPMENT PROJECT**   2018

4-month group project. Hardware and software. Creation of an autocalibration method.

Creation of a vegetable garden at **IMT ATLANTIQUE - SUSTAINABLE DEVELOPMENT PROJECT**   2018

4-month group project. Creation of a vegetable garden on the Brest campus. "Action of the Year" award, IMT Atlantique, Brest campus (delivered by the university).

Creation of a robot at **IMT ATLANTIQUE - ROBOTICS PROJECT**   2017

2-month group project. Creation of a robot, driven with an Android application by Bluetooth, which communicates with the external environment by RFID. Equipment set-up and IT development, in a team of 9 people. Manager of hardware-software coordination.

SERVICES

Co-founder, CTO at **ICARE**   2021

Development of a platform to facilitate investment in corporate social responsibility.

Board Member, responsible for the TVonIP project at **RESEL**   2017-2019

Maintenance of the campuses' internet service provider (ResEl), which also provides other services (TV on IP, FTP indexer, mailing lists for the clubs/associations of the school, websites, etc.). Over 800 subscribers at the beginning of the school year in 2018.

Board Member, president at **MARCHING BAND OF THE BREST CAMPUS**   2017-2019

Recreated after a break of a year (officialization, organization, finding funding, repairing existing instruments, saxophone teaching).