

QUENTIN BOUNIOT

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EDUCATION

CEA-List, Université Paris-Saclay / Université Jean-Monnet, Saint-Étienne 2019-Present
PhD in Computer Science Paris, France

Thesis : "Few-Shot Learning : Application to Object Detection
and Semantic Instance Segmentation",
Advisor : Prof. Amaury Habrard

CentraleSupélec, Université Paris-Saclay 2015-2019
Engineering degree - M.Sc in Computer Science Paris, France
Majoring in Robotics and AI

Université de Lorraine 2018-2019
M.Sc in Computer Science Nancy, France
Majoring in Machine Learning, Vision and Robotics,
with High Honors (Magna Cum Laude) - rank 1/18

Higher School Preparatory Classes 2013-2015
Section Mathematics and Physics Bordeaux, France
Intensive preparatory course for national competitive exams to the *grandes écoles*.

Baccalauréat 2013
Major in Mathematics Tahiti, French Polynesia
with Highest Honors (Summa Cum Laude - *Mention Très bien*)

WORK EXPERIENCE

CEA-List, Université Paris-Saclay April - September 2019
AI Research Intern Paris, France

Studying the impact of adversarial examples on person re-identification systems.
Improving the robustness of person re-identification systems using deep learning.

SmartBuild Asia February - August 2018
Data Scientist Intern Kuala Lumpur, Malaysia

Automatic gathering of online complex data and matching with existing information.
Matching millions of unstructured sentences in both Malay and English to the construction project they
were referring to.
Summarization of web pages in a few sentences with high accuracy.

Orange France July 2017 - January 2018
Intern in the Department of Cognitive Computer Science Paris, France

Development of tools for Conversational Agents.
Architecture development for conversational agents that support collaborative learning.

TEACHING

Algorithms and complexity

2020-2022

Course Lecturer at CentraleSupélec, Université Paris-Saclay

Paris, France

First year Computer Science course for the main engineering track at CentraleSupélec.

Factory-AI for Deep Learning Purposes

2022

Tutorial at CEA-List, Université Paris-Saclay

Paris, France

Tutorial for several CEA-List laboratories on the use of the internal HPC cluster based on Slurm for deep learning experiments.

PUBLICATIONS

INTERNATIONAL CONFERENCE PROCEEDINGS

- **Quentin Bouniot**, Ievgen Redko, Romaric Audigier, Angélique Loesch, Amaury Habrard. "Improving Few-Shot Learning through Multi-task Representation Learning Theory." In *European Conference on Computer Vision (ECCV)*, 2022.
- **Quentin Bouniot** & Ievgen Redko. "Understanding Few-Shot Multi-Task Representation Learning Theory." In *International Conference on Learning Representations (ICLR) Blog Track*, 2022.
- **Quentin Bouniot**, Romaric Audigier, Angélique Loesch. "Optimal Transport as a Defense Against Adversarial Attacks." In *International Conference on Pattern Recognition (ICPR)*, 2020.
- **Quentin Bouniot**, Romaric Audigier, Angélique Loesch. "Vulnerability and Defense of Person Re-Identification Models to Adversarial Attacks." In *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*, 2020. (**DeepMind Travel Award**.)

WORKSHOPS

- **Quentin Bouniot**, Ievgen Redko, Romaric Audigier, Angélique Loesch, Amaury Habrard. "Putting Theory to Work : From Learning Bounds to Meta-Learning Algorithms." In *NeurIPS Workshop on Meta-Learning (MetaLearn)*, 2020.

NATIONAL CONFERENCES

- **Quentin Bouniot**, Ievgen Redko, Romaric Audigier, Angélique Loesch, Amaury Habrard. "Vers une meilleure compréhension des méthodes de méta-apprentissage à travers la théorie de l'apprentissage de représentations multi-tâches." In *Conférence sur l'Apprentissage Automatique (CAp)*, 2021. (**Oral Presentation**)

PROFESSIONAL SERVICES

PEER REVIEW

- ICML Workshop on Pre-training : Perspectives, Pitfalls, and Paths Forward, 2022
- International Conference on Automated Machine Learning (AutoML), 2022
- International Conference on Learning Representations (ICLR), 2022
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), Special Issue on *Learning with Fewer Labels in Computer Vision*, 2021
- Neural Information Processing Systems (NeurIPS), 2021
- International Conference on Machine Learning (ICML), 2021-2022
- International Conference on Artificial Intelligence and Statistics (AISTATS), 2021
- NeurIPS Workshop on Meta-Learning (MetaLearn), 2020-2022

INVITED TALKS

DataIA Workshop "Safety & AI"

CentraleSupélec, Université Paris-Saclay

23th September 2020

Paris, France

Presentation of our published work on adversarial attacks against Person Re-Identification systems and their defenses.

GdR ISIS - "Towards pragmatic learning in a context of limited labeled visual data"

Paris Nord

26th November 2021

Paris, France

Presentation of our work on improving Few-Shot Learning through Multi-task Representation Learning Theory.

TECHNICAL SKILLS

Computer Languages	Python, C++, Matlab, Java, Javascript
Machine Learning	Pytorch, Keras, Tensorflow, Scikit-Learn
HPC	Slurm
Systems	Unix, Windows, SQL, Git

LANGUAGES

French	Native Language
English	C1 - CentraleSupélec TOEFL ITP : 610/677
Japanese	A2

VOLUNTARY SERVICES

Supélec Rézo

Executive Board member

2015 - 2017

Paris, France

Management and maintenance of the IT and network infrastructure of the CentraleSupélec campus (about 1000 users).
Administrator of several servers.

CentraleSupélec Gaming club

President

2015 - 2017

Paris, France

Manage, organize and promote video-games events on the CentraleSupélec campus.

Student Gaming Network

Member

2015 - 2017

Paris, France

Federation of French students' associations of eSport.
Organize every year the *Student Gaming League*, an eSport tournament for students in France.