

CALLARD Baptiste

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Looking for research position from October 2024 : PhD, intership, part/full-time position

EDUCATION

ENS Paris-Saclay · Master MVA (Mathématiques Vision Apprentissage) Paris, France
MSc. in Applied Mathematics & Artificial Intelligence; (grade: 18.6/20.0) Sep 2023 – sep 2024

- **World's top-ranked mathematics university (ARWU)** partnership with : ENS Ulm · Polytechnique · Centralesupélec · Dauphine PSL · Mines Paris · Paris Telecom Paris
- **Relevant coursework:** Advanced learning for text and graph data · Geometric data analysis · Time series learning · Object recognition and computer vision · Introduction to Probabilistic Graphical Models and Deep Generative Models · Convex optimization and application in machine learning · Generative models for images · Graphs in machine learning · Deep learning for medical imaging/in practice · Reinforcement Learning

INSA Rennes · Engineering school Rennes, France
MSc. in Applied Mathematics; GPA: 4.0/4.0 (valecditorian) Sep 2018 – sep 2023

- **Relevant coursework:** Probability · Statistics · Optimization · Graph Theory · Operational research · Deep Learning · Computer Vision · Cybersecurity

University of Klagenfurt Klagenfurt, Austria
MSc. exchange in Artificial Intelligence & Cybersecurity; GPA: 4.0/4.0 Mar 2022 – jul 2022

WORK EXPERIENCE

Valeo.ai (team): Research Internship Paris, France
Supervisors : Spyros Gidaris & Florent Bartoccioni April 2024 – October 2024, Intership

- Working on general representation learning of multi-view camera scenes with self-supervised methods to encompass semantic, geometric, dynamic and temporal information to solve downstream tasks towards a world-model.

Airbus Defence & Space: Research internship in Computer Vision Toulouse, France
Supervisors : Alexandre Mayerowitz & Laurent Gabet Feb 2023 – July 2023, Intership

- Conducted research, designed, fine-tuned, and assessed our novel segmentation and polygonization method for building footprints detection from very high quality satellite imagery.

Qohash: Research internship in Cybersecurity Montreal, Canada (Remote)
Supervisor : Julien Keutchayan Jul 2022 – Sep 2022, Intership

- Conducted research for designing a new unsupervised insider threat detection. We used an innovative temporal graph structure with graph embedding and deep learning methods, enhancing security.

Wizdeo: R&D in Data Scientist Rennes, France
Supervisor : Jordan Tremoureux Jul 2021 – Sep 2021, Internship

M2S Laboratory (ENS Rennes) Rennes, France
Researcher Assistant Part-time (3 hours/week)

SKILLS

Programming: Python · R · Julia · C · Latex · Neo4j · Linux · SQL · MongoDB · Git · Docker · GCP
Libraries: Pytorch · Pytorch Lightning · Keras · Sklearn · Statsmodels · Pandas · Numpy · Tensorboard · Plotly
Languages: French (Native), English (Professional : TOEIC 885)
Reviews, reports and posters : [drive](#)

PROJECTS

Challenge : Molecule retrieval with natural language [rank 1/122](#) (Polytechnique) / Image classification [rank 4/59](#) & [Github](#) (ENS-Ulm) / Video retrieval [rank 1/7](#) / [Github](#) / Semi-Supervised, Few-shot, novelty instance segmentation - Advanced level (College de France) [2/15](#) / Mutli-Modal Multiple Instance Learning [Github](#)

Learning : Soft-DTW [Github](#) / Generative Adversarial Model [Github](#) / Wasserstein Graph Alignment [Github](#) / Video Retrieval using image and text query [Github](#) / Optimal research : Shortest path with constraints Python [Github](#)

Personal : Clone a video game [Github](#) / Klein Attack [Github](#) / Length extension attack [Github](#)

RECOMMENDATIONS

Academic: J. LEDOUX (Director INSA) / P. Roph (Prof. Computer Vision) / **Internship:** see supervisors