

JULIEN DENIZE

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EDUCATION

CEA List, Université Paris-Saclay / INSA Rouen, Normandie Université 2020 - today
PhD in Computer Science Palaiseau, France

Thesis: "Self-supervised representation learning and applications for image and video analysis".

Advisor: Prof. Romain Hérault.

Télécom SudParis, Institut Polytechnique de Paris 2017 - 2020
Engineering degree - MSc in Computer Science Evry, France

Major in Artificial Intelligence.

Preparatory classes, Lycée François-René De Chateaubriand 2015 - 2017
Major in Maths and Physics Rennes, France

Preparatory classes for highly competitive exams to enter the french *grandes écoles*.

Baccalauréat Scientifique, Lycée Emile Littré 2012 - 2015
Major in Computer Science Avranches, France

Highest honors (*Mention très bien*).

WORK EXPERIENCE

CEA List, Université Paris-Saclay 2020 - today
PhD Student Palaiseau, France

Proposed new state-of-the-art deep learning approaches for image and video self-supervised learning.
Developed an internal library in Pytorch for image and video Deep Learning experiments.

Member of the laboratory's committee for managing the living environment.

CEA List, Université Paris-Saclay March - September 2020
AI Research Intern Palaiseau - France

Applied state-of-the-art deep learning methods to perform cross-domain Person Re-identification.

Improved performance by leveraging Generative Adversarial Networks (GAN) and pseudo-labeling.

Continental June - September 2019
Data Scientist Intern Regensburg - Germany

Analyzed data in collaboration with experts and implemented machine learning algorithms to detect manufacturing anomalies and predict maintenance in Industry 4.0 factories.

Sprint Junior Entreprise September 2017 - March 2019
Technical Expert Evry, France

Managed technical projects (valued up to 15k€), from negotiation and recruitment to project execution.
Developed an accommodation web platform for a public institute in Symfony 4.

PROJECTS

Action Spotting for Soccer Matches 2023
Challenge SoccerNet

Finished 4th in an international challenge to detect with high precision actions in soccer matches.

- Hackathon GPU** 2023
Organized by the IDRIS and NVIDIA
 Optimized a library code to perform deep learning and reduced by 50% the training pipeline time.
- On Shelf Availability (OSA) Prediction** 2020
In collaboration with the startup Acuity-Data
 Analyzed data and implemented machine learning algorithms to predict OSA on 200 hypermarkets.

TEACHING

- Machine Learning Course** September 2022 - November 2022
Lecturer for the M2 BDMA at CentraleSupélec, Université Paris-Saclay
 Taught deep learning basics for computer vision, natural language processing, and generative Models.
- Factory-AI for Deep Learning Purposes** 2022
Trainer for SIALV laboratory, CEA List
 Taught how to effectively use the internal HPC cluster to optimize Deep Learning experiments.

PUBLICATIONS

International Conference Proceedings

- **Denize, Julien**, et al. "Similarity Contrastive Estimation for Self-Supervised Soft Contrastive Learning". In the *Proceedings of the IEEE/CVF Winter Conference on Applications 2023*.

Under review

- **Denize, Julien**, et al. "Similarity Contrastive Estimation for Image and Video Soft Contrastive Self-Supervised Learning". In *arXiv*, 2022.

National Conferences

- **Denize, Julien**, et al. "Estimation Contrastive de la Similarité pour un Apprentissage Flou Auto-Supervisé". In *Conférence sur l'Apprentissage Automatique (CAp)*, 2022.

TALKS

- Workshop Franco-Allemand "Computer Vision"** June 2022
Speaker for the DATAAI institute, Inria Domaine de Voluceau - Rocquencourt
 Presented our work "Similarity Contrastive Estimation for Self-Supervised Soft Contrastive Learning".

SKILLS

Technical Skills

Computer Languages	Python, Java, Javascript, Bash, C++
Machine Learning and Data Analysis	Pandas, Numpy, Scikit-Learn, Matplotlib,
Deep Learning	Pytorch, Tensorflow, Jax
HPC	Slurm
Systems	Unix, Windows, SQL, Git

Soft Skills

Project management, Communication, Teamwork, Autonomy.

Languages

Fluent in English (960 TOIEC), Basics in Spanish and German.