Max Muzeau

Phd student in earth observation and computer vision

Contact

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Programmation:

- Python (daily use)
  - Pytorch (daily use)
  - TensorFlow
- MATLAB (used a lot for projects)
- C++ (good level)

Languages:

- French (mother tongue)
- English (C1)
  Toeic : 940

Passions:

- Deep learning
- Music (production, guitar)

Experiences

PhD student
ONERA - Centralesupelec | 10/2021 - now

- Anomaly detection schemes in remote sensing data using :
  - Self supervised learning algorithm for computer vision
  - Contrastive learning with transformers
  - Remote sensing (SAR) data processing and analysis
  - Statistical methods (a contrario, MLE) and robust estimation
  - Redaction of multiple scientific articles

Informatic teacher
IUT Orsay | 01/2022 - 11/2023

- Teaching basics of python and algorthmic

SAR imagery research internship
Télécom Paris| 03/2021 - 08/2021

- SAR denoising with deep learning and signal processing
- Activity monitoring of an island with Sentinel 1 images in collaboration with the CNES

Artificial intelligence consulting
Lanteas| 08/2020 - 02/2021

- Creation of a deep learning algorithm to predict the profit of municipalities

Education

Summer school on deep learning
University of Bari | 04/2023

- Course about various state of the art deep learning methods : LLM (chatgpt like models), Vision Transformer, Graph neural networks, Networks calibration, remote sensing monitoring …

Master OIVM - AIMA
Jean Monnet University | 2020-2021

- Advanced imaging : Synthetic aperture radar, hyperspectral, LIDAR, thermal

Engineering school
Télécom Saint-Etienne | 2018-2021

- Computer vision / deep learning (segmentation, classification, CNN's…)
- Signal processing, Bayesian estimator, inverse problem
- 3D reconstruction, tomography

Two year under graduate intensive course
Jacques Amyot, Melun | 2016-2018

- Sciences (maths, physics, chemistry)

Publications

- E. Dalsasso, L. Denis, M. Muzeau and F. Tupin, "Self-supervised training strategies for SAR image despeckling with deep neural networks," EUSAR
- M. Muzeau, C. Ren, S. Angelliaume, M. Dactu and J. Ovarlez, "Détection d'anomalies en SAR basée sur les réseaux génératifs". GRETSI
- M. Muzeau, C. Ren, S. Angelliaume, M. Dactu and J. Ovarlez, "Self-Supervised Learning Based Anomaly Detection in Synthetic Aperture Radar Imaging". OJ-SP/ICASSP
- M. Muzeau, C. Ren, S. Angelliaume, M. Dactu and J. Ovarlez, "Self-supervised SAR anomaly detection guided with RX detector". IGARSS
- M. Muzeau, C. Ren, M. Dactu and J. Ovarlez, "Apprentissage auto-supervisé guidé statistiquement pour la détection d'anomalies en imagerie SAR". GRETSI
- M. Muzeau, C. Ren, J.Fix, F.Brigui and J. Ovarlez, "On the impact of despeckling for supervised SAR super-resolution". EUSAR