MONTE Charles
Télécom Paris/Master MVA - AI/Computer Vision

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Masters Student at the Master MVA, looking for an end of studies internship starting April 2025. My research interests focus mainly on Deep Learning and its applications to Computer Vision, through multimodal LLMs and transformers.

Education

From September 2024 to September 2025

ENS Paris-Saclay
Master MVA Paris

Computational statistics, Robotics, Geometric Data Analysis, Convex Optimization, Reinforcement Learning, Deep Learning for Signal Processing, Representation Learning, Deep Learning for Medical Imaging, LLM, Generative models

From September 2021 to September 2025

Télécom Paris - Institut Polytechnique de Paris
Engineering Degree Palaiseau

- **Image Processing and Computer Vision** : Image processing, 3D Reconstruction, Computer Vision, Deep Learning (MAJOR)
- **Signal Processing for Artifical Intelligence** : Statistical learning, Signal processing, Data processing, Big data, optimization, statistics (MINOR)
- **1st year:** 3.64/4 GPA
- **2nd year**: 4/4 GPA

From September 2019 to June 2021

Lycée Saint-Louis
Preparatory classes Paris 5

MPSI then MP* : Mathematics, Physics and Engineering

Projects – Research Experience

From May 2023 to June 2023

Variational Auto-Encoders for cardiac shape modeling
Télécom Paris Palaiseau

One month end of year project carried out in groups of 3. Implementation and training of a Variational Auto Encoder for Cardiac MRI segmentations. Our goal was to explore the latent space and understand its modelisation of the cardiac anatomy.

From March 2023 to May 2023

Prediction of cardiac pathologies
Télécom Paris Palaiseau

Two months project carried out alone. Implementation of Machine Learning algorithms to classify heart MRIs in five different classes all leading to a different diagnosis.

Experience

From January 2024 to July 2024

Internship - Data Science & Deep Learning
Sopra Steria Real Estate Software Paris, La Défense

Development of NLP models to use in chatbots geared towards customer interaction :

- **Finetuning of open source LLMs :** Database creation, choice of a suitable model through benchmarks
- Use of **LLMs to generate proprietary APIs calls**
- **NER and Intent Classification** with transformers finetuning (BERT)

From July 2023 to December 2023

Research Internship - Data Science & Deep Learning
Spimed-AI Paris

Development of Computer Vision and Deep Learning algorithms to automatically classify coronary lesions using CT-scans:

- **Developement of deep learning algorithms :** self-supervised contrastive learning, classification of coronary images (InceptionNet, Multi-Axis Vision Transformer), segmentation of coronaries on 2D and 3D CT-scans (UNet)
- **Computer Vision :** MPR generation, 2D and 3D segmentation

Skills and Interests

Languages
French (Native), English (bilingual, **TOEFL 117/120**), Spanish (B2), Chinese (B1)

Computer Sciences
Python (TensorFlow, pandas, OpenCV, PyTorch, scikit-image, scipy, scikit-learn, huggingface...), Java/C++, LaTeX, Docker, Git

School associative work
School bar association's Co-manager (Management of a team of 20 people, Organisation of weekly events)

Hobbies
Swimming, Cooking, Golf, Video Games, Audio-visual art, Drawing