Mattéo **Eléouet**

Looking for PhD Position

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Education

Data Science Tech Institute — *Academic Results: **17.53** / 20.00*

Master of Science in Applied Mathematics — Machine Learning and Data Science

- Completed an English-taught curriculum with a strong focus on Machine Learning and Data Science, including advanced courses in Statistical & Probability Theory, Linear Algebra, and Convex Optimization.
- Mathematical foundations of statistical learning and uncertainty, causal inference for explainability.
- Learn in a variety of domains such as Natural Language Processing, Computer Vision, Python programming, R, Text Mining, and Data Analysis.

Sophia Antipolis, France - 2022 – 2024

Epitech — *Academic Results: **15.5** / 20.00*

Bachelor's Degree in Computer Science

- Graduated as Major de Promotion 1/16
- Focused on software engineering (C, C++, Java, JS frameworks), DevOps (Docker, Kubernetes), and low-level computing (Operating Systems, Computer Architecture).
- Low-level computing, including in-depth studies on Operating Systems and Computer Architecture, focusing on the fundamental workings and principles of computers.

Nice, France - 2021 – 2022

La Croix Rouge & ISEN — *Academic Results: **16.38** / 20.00*

Pre-engineering in Computer Science and Networking option to engineering school (BTS)

- 18.28 average mathematics — 17.2 average english — 19.5/20 end of the year project in Computer Science.

Brest, France - 2021 – 2022

Experience

Thales Alenia Space — *Cannes, France*

Computer Vision Research Engineer Apprentice — *Sep. 2022 - Sep. 2024*

- Image quality lab, Image restoration, Simulation optimisation.
- Attribution Analysis of image restoration of ConvNets and Visual Transformers. Conducted comprehensive research on image restoration techniques in deep learning with a focus on understanding and interpreting.
- Create special metrics and loss function for image quality
- Designed and implemented custom architectures with PyTorch, including GANs, Swin Transformers, Diffusion models and ConvNets. Employed advanced techniques such as knowledge distillation to optimize network efficiency and performance.
- Write scientific internal report

AzurIA at IRT Saint Exupéry — *Sophia Antipolis, France*

MLOps Apprentice — *Dec. 2021 - Sep. 2022*

- Conduct day-to-day project coordination, planning, and implementation (GitOps, doc, test, release, issues, Docker)
- Create deep learning model with PyTorch demonstrations for embedded system
- Create custom CUDA kernel with teams.

Thales — *Brest, France*

Research Intern — *June 2021 – Aug. 2021*

- Studying algebraic topology for data preprocessing (barcode, mathematical landscape, persistent homology)
- Reading the state of the art for image processing

Languages

English : C1 certified — 180/180 Cambridge LinguaSkill

French : Native Speaker

Certifications

Stanford : Machine Learning with Matlab, Andrew Ng

Imperial College London : Mathematics for ML

Inria : Machine Learning with Scikit-Learn

Personal Project

Introduction to Deep Learning (in french) *Github link*

Self-Published eBook *Expected May 2024*

- Authored a comprehensive guide exploring mathematics and underlying theories that form the bedrock of Deep Learning, ranging from perceptrons to transformer architectures, aimed at demystifying complex concepts for a broad audience.
- An educational toolkit that brings together a wide range of resources, including extensive downloadable content, detailed code snippets, comprehensive datasets and a case study repository, to enhance open learning.

Skills

Programming Python, C, C++, R, Matlab, Bash, PyTorch, SQL

Mathematics Numerical Optimization, Operations Research, Simulation on Mathematical Modelling, Probability & Statistics, Imaging, Signal Processing

References

- Laurène Glandus - Training supervitor - laurene.glandus@thalesaleniaspace.com
- Marjorie Belezzi - Training supervitor - marjorie.belezzi@thalesaleniaspace.com
- Hanna Abi Akl - School mentor - hanna.abi-akl@dsti.institute