





# Yassine Machta

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 [GitHub](#)  [LinkedIn](#)  [machtayassine@gmail.com](mailto:machtayassine@gmail.com)  [Personal page](#)

## Education

<b>ENSAE Paris</b> <i>Engineering Curriculum: Data Science, Statistics and Learning. GPA: 3.8</i>	2021-2025
<b>Institut Polytechnique de Paris</b> <i>Masters 2 Data Science</i>	2024-2025

## Work Experience

**Research Intern** | [Sony R&D](#) | [Letter of recommendation](#) Stuttgart, January 2024 - June 2024

- \* Conducting experiments to understand and benchmark the impact of uncontrolled environments and the properties of images on 3D reconstruction out of 2D images.
- \* Created a fully automatic pipeline from image preprocessing, to 3D object reconstruction, and automatic mesh processing for evaluation purposes.
- \* Deployed a webapp to visualize and automate mesh alignment and comparison tasks.

**Supervised by** [Faciuss, Z](#) and [Francheschi, R](#)

**Research Intern** | [Inria - SIMBIOTX](#) | *Pytorch, 3D, Image processing, Segmentation* Paris, May 2023 - November 2023

- \* Implemented and benchmarked the impact of Topology preserving losses on improving accurate 3D liver vessel segmentation and connectedness.
- \* Developed an image processing algorithm to transform single label vessel datasets into two-label datasets separating the portal and hepatic trees.
- \* Conducted a comprehensive statistical analysis of the morphometry of the obtained vessel trees while training a network to recognize perfusion volumes of the vessels. Wrote and submitted my first paper to MICCAI 2024 accepted to ADSMI workshop.

**Supervised by** [Ali, O](#) and [Vignon-Clementel, I.](#)

**Data Science Intern** | [Cour Des Comptes](#) | *R, Sphinx* Paris, June 2022 - September 2022

- \* Conducted comprehensive data analysis on R, utilizing cartography and descriptive statistics techniques to create an overview of the French Airport Network.

**Supervised by** [Grignon, P](#)

## Skills

**Programming:** Python (PyTorch, Scikit learn/image, Selenium, pandas, Numpy, matplotlib), Git, Slurm, Linux.  
learning C++, Godot and a bit of JS/CSS

## Projects

- Paper reimplementing "Unsupervised Multi Modal Translation". Recipe generator and supermarket recommender according to fridge inventory, spatial proximity to supermarkets and diet, Time series forecasting, Monte Carlo simulations of the Lotka-Volterra model.
- Swarm intelligence search and rescue competition to experiment with multi agent reinforcement learning and trying to apply it to a personal game development project

## Clubs

ENSAE English Debating Team | *2022-2023*  
[Winners](#) of the 2023 Grandes Ecoles [FDA](#) Tournament

**IP Paris Racing Team** | *2023-present*  
I joined the **Driverless** team to deepen my skills in computer vision and model deployment.

## Languages

- **Arabic** (Native)
- **French** (Native)
- **English** (C1)
- **Spanish** (A2)