Yassine Machta

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Education

- **ENSAE Paris** 2021–2025
  Engineering Curriculum: Data Science, Statistics and Learning. GPA: 3.8

- **Institut Polytechnique de Paris** 2024–2025
  Masters 2 Data Science

Work Experience

- **Research Intern** Sony R&D, Stuttgart
  Jan 2024 – Jun 2024 Supervised by: *Facius, Z and Franchesci, R Letter of Recommendation*

  – Conducted experiments to benchmark the impact of uncontrolled environments on 3D reconstruction.

  – Developed an automated pipeline for image preprocessing and 3D reconstruction.

  – Created a web app to streamline mesh alignment and quality evaluation for engineering teams.

- **Research Intern** Inria - SIMBIOTX, Saclay
  May 2023 – Nov 2023 Supervised by: *Ali, O and Vignon-Clementel, I.*

  – Implemented topology-preserving losses for accurate 3D vessel segmentation.

  – Performed statistical analysis of vessel tree morphometry and trained models on perfusion volumes.

  – Published to MICCAI 2024 (ADSMI workshop), presented at poster session.

- **Data Science Intern** Cour des Comptes, Paris
  Jun 2022 – Sep 2022 Supervised by: *Grignon, P*

  – Conducted a data analysis project in R to create an overview of the French Airport Network.

  – Utilized descriptive statistics and cartography for data visualization.

Skills

- **Programming Languages:** Python (PyTorch, Scikit-learn/image, Selenium, pandas, Numpy, matplotlib), Git, Slurm, Linux. Learning C++, Godot, and some JS/CSS.

Projects and Labs

- Reimplemented "Unsupervised Multi Modal Translation" as a project to get familiar with transformers and multi modality.

- Built Monte Carlo simulations for Lotka-Volterra models and conducted time series forecasting.

- Labs: Finetuning LLMs using LoRA and DPO

- Experimenting with RL in Godot engine

Publications

- **Machta, Y.**, Ali, O., Facque, A., Vlascenau A., Hakkakian, K., Golse N., Vignon-Clementel, I. (2024). "Improving 3D Liver Vessel Segmentation through Topology Preservation." In *MICCAI ADSMI Workshop*, 2024. (Arxiv and Poster)

- *Hopefully more to come!*

Extracurricular Activities

- **ENSAE English Debating Team** 2022–2023
  FDA Tournament Winner
- **Sports and Student Councils** 2022–2023
  Organized various events and activities at ENSAE Paris.

Languages

- **Arabic**: Native

- **French**: Native

- **English**: C1

- **Spanish**: A2

Last built on November 29, 2024.
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