Yassine Machta

machtayassine@gmail.com · GitHub · LinkedIn · Personal Page

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*
  - 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 link to come, but for now : Article 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 7, 2024.
Underlined text indicates clickable links.
For the latest version, click here.