

Marta López-Rauhut

Second year PhD student

Passionate about understanding the inner workings of classical computers, and optimizing resource usage for AI applications.

Contact

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- 48 Av. Gabriel Péri
93160 Noisy-le-Grand, France

Languages

Spanish - *Native*
Polish - *Native*
English - *Proficient*
French - *Intermediate*
Chinese - *Basic*

Technologies

PyTorch OpenGL
C/C++ CUDA

Qualities

Creative Versatile
Reliable Ambitious

Interests

Reading Handcrafts

Education

PhD: **The Environmental Impact of ML Practices**
ENPC, IPP - Paris, France

October 2024 - present

Discovering best practices for Machine Learning research and development from an environmental point of view.

Affiliations: Imagine, LISN

Advisors: Loïc Landrieu, Mathieu Aubry, Anne-Laure Ligozat

Master's Degree in **Imaging Sciences**

Gustave Eiffel University - Paris, France

September 2023 - September 2024

Bézout excellence program.

Relevant coursework: GPGPU Programming, Signal Processing, Advanced Artificial Intelligence, Advanced Data Science

Bachelor's Degree in **Computer Engineering**

University of Cantabria - Santander, Spain

September 2019 - July 2023

Specialized in Computer Science.

Extraordinary Prize for the best academic record.

Relevant coursework: Machine Learning and Data Mining, Natural Language Processing

Research Experience

École Nationale des Ponts et Chaussées

Paris, France

April 2024 - September 2024

Research Intern

Created a dataset and trained baselines for segmenting historical maps in supervised and weakly-supervised settings.

- Built a multi-temporal **historical map dataset** of France between the 18th and 21st centuries
- Leveraged **CycleGAN** to homogenize historical and modern map styles

Undergraduate Thesis: Intelligent Energy-Aware Task Scheduler for HPC Systems

February 2023 - July 2023

Researched **Deep Reinforcement Learning** techniques to tackle the scheduling problem in **High-Performance Computing** (HPC) systems, with a focus on reducing **energy consumption**.

Publications

López-Rauhut, M., Zhou, H., Aubry, M., & Landrieu, L. (2025). Segmenting France across four centuries. International Conference on Document Analysis and Recognition (pp. 3-22).

López, M., Stafford, E., & Bosque, J. L. (2025). Intelligent energy pairing scheduler (InEPS) for heterogeneous HPC clusters. The Journal of Supercomputing, 81(2).