Sonia Mazelet

Paris, France
sonia.mazelet@polytechnique.edu linkedin.com/in/SoniaMazelet github.com/SoniaMaz8

Education

ENS Paris Saclay **Sep. 2022 – Sep. 2023**
MVA master's degree (Mathematics, Vision, Learning) *highest honours - 16.7/20 (3.7/4 GPA)*

ENS Paris Saclay **Sep. 2021 – Sep. 2022**
First year of master's degree in mathematics *high honours - 15.43/20*

ENS Paris Saclay **Sep. 2020 – Sep. 2021**
Bachelor's degree in mathematics *high honours - 14.57/20*

Lycée Condorcet (Paris) **Sep. 2017 – Sep. 2020**
Preparatory School - Intense preparation for the competitive entrance exams to «Grandes Écoles» *highest honours*

Relevant Coursework

- Convex optimization and applications in machine learning
- Geometric Data Analysis
- Computational Statistics
- Object recognition and artificial vision
- Computational optimal transport
- Graphs in Machine Learning
- Generative models for images
- Machine learning for time series
- Kernel methods for machine learning

Experience

UC Berkeley **Sep 2023 – June 2024**
Visiting student *Berkeley, California*

- Research on Vector Symbolic Architectures and Sparse Coding at the Redwood Center for Theoretical Neuroscience, under the supervision of Bruno Olshausen.

Polytechnique **April 2023 – July 2023**
Research internship *Palaiseau, France*

- Research project on Graph Neural Networks and Optimal Transport.
- Contribution to the open source Python library Python for Optimal Transport (POT). Creation of a Graph Neural Network module, implementation of a graph classification Graph Neural Network and an example of use.
- Creation and implementation of a node classification Graph Neural Network based on the Fused Gromov-Wasserstein optimal transport distance.

Oxford university **April 2022 – June 2022**
Research internship *Oxford, UK*

- Research project on stochastic processes applied to epidemics dynamics under the supervision of Alison Etheridge.

ENS Paris-Saclay **April 2021 – July 2021**
Research internship *Saclay, France*

- Research project on time series at the Borelli centre, under the supervision of Laurent Oudre.
- Implementation of an algorithm to detect patterns in time series using Dynamic Time Warping.

Awards/Scholarships

Deepmind scholarship recipient - DeepMind scholar. **Sep 2022 – Sep 2023**
Hadamard foundation scholarship recipient. **Sep 2021 – Sep 2022**

Technical Skills

Languages: Python (Numpy, Pytorch, Pandas, Matplotlib, POT)
Developer Tools: VS Code
Technologies/Frameworks: GitHub