HABIBI Mohammed-Yassine

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Looking for a research internship from April 2025.

Expected graduation from the MVA Master : 2025 | Member of the French "Corps des IPEF"

EDUCATION

2024 - 2025 | Master 2 - Mathematics, Vision, Learning (MVA) *ENS Paris-Saclay, France*

Reinforcement learning, Convex optimisation, Computational statistics, Geometric data analysis, Geometric deep learning & geometry processing, Stopping times and online algorithms.

2021 - 2024 | Master of Science in Applied Mathematics *École Polytechnique, France*

Stochastic calculous, Monte-Carlo methods, Optimization and control, Statistical Learning Theory, Data Analysis, Regression and Classification, Random models for biology and ecology, Random and statistical process modeling

2019 - 2021 | Bachelor's degree / Classes préparatoires *Lycée Sainte-Geneviève, Versailles, France*

Top 25 over 150 students. Majored in mathematics, physics, and computer science. Conducted a project on crowd dynamics.

RESEARCH INTERNSHIPS AND PROJECTS

04/2024 - 07/2024 | Deep Learning and ABC for parameter inference *Columbia University, United States*
Research internship supervised by Dr. Simon Tavaré (Herbert and Florence Irving Institute for Cancer Dynamics)

Infered parameters of finite sites evolutionary models to fit them to specific cancer data. Applied Deep Learning framework to summarize genomic data observed in a sample of cells & Random Forest Approximate Bayesian Computation (RF-ABC) to infer multivariate vectors of parameters from the summarized genomic data.

09/2023 - 03/2024 | Applying Machine Learning to Weather Forecasting *École Polytechnique, France*
Research project supervised by Pr. Julien Chiquet

Compared and experimented with logistic regression, random forest, XGB, LSTM, CNN to predict rainfall and train a classification model.

09/2023 - 12/2023 | Nanoparticles synthesis & H_2 production *École Polytechnique, France*
Research project supervised by Pr. Grégory Danoun

Nanoparticle synthesis of ZnO and CdS, photocatalytic reactions for hydrogen production from waste.

11/2022 - 02/2023 | Sound Wave Propagation and Invisibility Geometries *École Polytechnique, France*
Research project supervised by Pr. Lucas Chesnel

Studied the dependence of a PDE solution on the geometry to determine conditions to inhibit reflection or achieve perfect transmission.

PROFESSIONAL EXPERIENCES

Managing Application's Problem *Eurofins, Hamburg, Germany*
June 2023 - August 2023
Analyzed error logs, identified problems, maintained backlog, and created KPIs dashboards for the eurofins network of analysis laboratories.

Teaching Assistant in Mathematics *Lycée Sainte-Geneviève, Versailles, France*
September 2022 - June 2023
Advised and evaluated students preparing for the entrance exams of French engineering schools.

SKILLS AND INTERESTS

Languages	Computing Skills	Interests
🏴 French: Native Speaker	Python, Java, C++, OCaml	Violin – 8 years of Conservatory / 10
🏴 English: Proficient	LaTeX, Pytorch, Tensorflow, Scikit-	years of orchestra
🏴 Chinese: Intermediate	learn, Pandas, Seaborn	Running and Cycling
🏴 Arabic: Intermediate		Choir