

Oussama ZEKRI

M2 MVA Student

"Normalien" Student Researcher

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EXPERIENCE

• Huawei AI Research

Mar 2024 - present

Research Intern

Paris, France

– Supervisors : Dr. Ievgen Redko

• System Optimization Laboratory, University of Kyoto

Apr 2023 - Jul 2023

Research Intern

Kyoto, Japan

– Subject : Convergence analysis under consistent error bounds.

– New contributions to convex optimization. A journal paper is currently being published.

– Supervisors : Dr. Ellen Hidemi Fukuda & Dr. Bruno Figueira Lourenço.

• Centre Borelli, ENS Paris-Saclay

Mar 2022 - Jul 2022

Research Intern

Gif-sur-Yvette, France

– Subject : Similarity measures between time series inspired by optimal transport.

– Creation of tools for identification of spatio-temporal similarities, trained on real data from rehabilitation patients.

– Supervisors : Dr Laurent Oudre (Centre Borelli) & Thibaut Germain.

EDUCATION

• ENS Paris-Saclay, Gif-sur-Yvette

Sep 2023 - Present

Master's Degree, M2 MVA, Mathematics and Applications

– Courses in Europe's leading MsC in ML, taught by top-level researchers.

– Relevant coursework : Statistical learning, Optimal Transport, Convex optimization, Distributed and Large-Scale Computing Optimization, Kernel Methods, Deep Learning in Practice...

• Ecole Polytechnique, ENS & Univ. Paris-Saclay, Palaiseau

Sep 2021 - Aug 2023

Master's Degree, Pure & Applied Mathematics.

– Mathematics courses of a very high standard, which enabled me to acquire solid skills.

– Courses are given in collaboration with Université Paris-Saclay and Ecole Polytechnique.

– Relevant coursework : Functional Analysis, Optimization and Numerical Optimization, Advanced Probabilities, Statistics, Learning and Stochastic Simulation...

• CPGE Lycée Thiers, Marseille

Sep 2018 - Aug 2021

Bachelor of Science, Mathematics & Physics, PCSI-PSI*

– Advanced undergraduate courses leading to entrance exams for France's leading Scientific and Engineering schools.

TEACHING AND JURY ACTIVITIES

• HEC Paris

2024

Jury member in Mathematics

Jouy-en-Josas, France

– Member of the jury for the mathematics entrance examination to France's most selective business school.

– Written and oral examination of candidates.

• Lycée Louis-Le-Grand, Lycée Turgot

Sep 2022 - Present

Teaching Assistant & Oral Examiner in Mathematics

Paris, France

– Courses and oral examinations "Khôlles" given to students in French "Classes Prépas".

– Institutions frequented : Lycée Louis-Le-Grand PC*1 & Lycée Turgot PCSI.

PROJECTS

– **Optimal Transport** : JAX implementation and development of new ideas on the paper *Learning costs from structured Monge Displacements*, M. Klein et al., advised by Prof. Gabriel Peyré.

– **PET Metabolic Imaging** : Working in pairs with the nuclear medicine physicians Arnaud Berenbaum and Florent Besson. Fine-tuning the very recent SSM model *U-Mamba*, for PET automatic segmentation.

– **Convolutional Kernel Network** : From-scratch implementation, in Python and CUDA, of the CKN architecture introduced by Dr. Julien Mairal in *End-to-End Kernel Learning with Supervised Convolutional Kernel Networks*, J. Mairal.

AWARDS & GRANTS

– **Grant and title** : 4-year grant (~ 63k €), as a reward for my admission to the ENS and obtaining the grade of trainee civil servant.

– **Academic achievement** : Ranked in the top 200 out of more than 8,000 candidates for the ENS entrance exam (top 2.5%).

SKILLS & LANGUAGE

– **Code** : Proficient in Python, Latex, SQL...

– **Languages** : French (native), English (Cambridge CAE C1 certificate), Spanish (intermediate), Japanese (basics).