

Émile Esmaili

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EDUCATION

Columbia University <i>M.A. in Applied Statistics & Data Science (QMSS)</i>	New York, NY <i>Dec 2023</i>
Sorbonne Université <i>BSc. in Mathematics courses</i>	Paris, France <i>Jun 2023</i>
PSL Research University (Paris-Dauphine) <i>MSc. in Financial Engineering</i>	Paris, France <i>Sept 2020</i>
PSL Research University (Paris-Dauphine) <i>BSc. in Economics</i>	Paris, France <i>Jun 2017</i>

RESEARCH EXPERIENCE

NASA Goddard Institute for Space Studies <i>Research Intern</i>	New York, NY <i>Sep 2022 – Jan 2023</i>
<ul style="list-style-type: none">Graduate research assistant at NASA GISS and Columbia University's Department of Earth and Environmental Engineering, jointly supervised by Prof. Upmanu Lall and Dr. Michael Puma.Topic: Using hierarchical Bayesian models to explore the driving factors of global migration and develop improved probabilistic projections of bilateral migration flows	

WORK EXPERIENCE

Ekimetrics <i>Data Scientist</i>	Paris, France <i>Sep 2021 – Apr 2022</i>
<ul style="list-style-type: none">Developed a web-app prototype for a world-leading investment bank that incorporates clustering, web-scraping and NLP to analyze private firms (tech stack: Python, Git, Streamlit)Used pre-trained NLP models (transformers, embeddings, NER) for sentiment analysis of company news	
Natixis Global Markets Research <i>Quantitative FX Research Intern</i>	Paris, France <i>Sep 2020 – Apr 2021</i>
<ul style="list-style-type: none">Researched portfolio optimization with cryptocurrencies using constrained optimization and machine learningImplemented statistical arbitrage on yield curves	

TEACHING EXPERIENCE

Columbia University <i>Teaching Assistant</i>	New York, NY <i>Jan 2023 – May 2023</i>
<ul style="list-style-type: none">Graduate Teaching assistant for the GR5074: Projects in Advanced Machine Learning class	

SKILLS

Programming: Python, MATLAB, R
Frameworks: PyTorch, Keras, Scikit-learn, PyMC, CVX, Git
Natural Languages: French (Native), Farsi (Native), English (Professional), German (Elementary)

RELEVANT COURSEWORK

Analysis: Topology, Series, Lebesgue Integration
Algebra: Linear Algebra, Bilinear Algebra, Abstract Algebra
Applied Mathematics: Convex Optimization, Differential Equations
Other: Number Theory, Graph Theory & Combinatorics
Machine/Deep Learning: Deep Learning for Computer Vision, Machine Learning, Reinforcement Learning
Probability & Statistics: Probability Theory, Statistics, Econometrics