

# Émile Esmaili

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## EDUCATION

<b>Columbia University</b> <i>M.A. in Applied Statistics &amp; Data Science (QMSS) – GPA: 4.08/4.0</i>	New York, NY <i>Dec 2023</i>
<b>Sorbonne Université (Pierre et Marie Curie Paris VI)</b> <i>BSc. in Mathematics</i>	Paris, France <i>June 2024</i>
<b>PSL Research University (Paris-Dauphine)</b> <i>MSc. in Financial Engineering - BSc. in Economics</i>	Paris, France <i>Sept 2020</i>

## RESEARCH EXPERIENCE

<b>Columbia University &amp; NASA Goddard Institute for Space Studies</b> <i>Research Intern</i>	New York, NY <i>Fall 2022 &amp; Summer 2023</i>
<ul style="list-style-type: none"><li>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.</li><li>Topic: Using hierarchical Bayesian models to explore the driving factors of global migration and develop improved probabilistic projections of bilateral migration flows</li></ul>	

## WORK EXPERIENCE

<b>Memorial Sloan Kettering Cancer Center &amp; Columbia University</b> <i>Practicum Data Scientist (Capstone Project)</i>	New York, NY <i>Jan 2023 – May 2023</i>
<ul style="list-style-type: none"><li>Researched drivers of lower grade brain glioma using machine learning and survival models</li><li>Worked on an image segmentation model for IHC staining based on MSK's proprietary DeepLIIF model</li></ul>	
<b>Ekimetrics</b> <i>Data Scientist</i>	Paris, France <i>Sep 2021 – May 2022</i>
<ul style="list-style-type: none"><li>Developed a web-app prototype from scratch that incorporates natural language processing (NLP) tools to detect investment opportunities</li></ul>	

## TEACHING EXPERIENCE

<b>Columbia University</b> <i>Teaching Assistant - Projects in Advanced Machine Learning (GR5074)</i>	New York, NY <i>Jan 2023 – May 2023</i>
<ul style="list-style-type: none"><li>Held weekly recitations and office hours covering the basics of applied deep learning and graded homeworks</li></ul>	

## SKILLS

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

## RELEVANT COURSEWORK

**Analysis:** Topology, Functional Analysis, Complex Analysis, Measure Theory  
**Algebra:** Linear Algebra, Bilinear Algebra, Abstract Algebra  
**Applied Mathematics:** Convex Optimization, Differential Equations, Numerical Analysis  
**Other:** Number Theory, Graph Theory & Combinatorics  
**Machine/Deep Learning:** Deep Learning for Computer Vision, Machine Learning, Reinforcement Learning, Speech Recognition  
**Probability & Statistics:** Probability Theory, Statistics, Econometrics, Stochastic Calculus