

# EMILE ESMAILI

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## EDUCATION

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### Princeton University

*expected 2030*

Ph.D. in Science, Technology, and Environmental Policy (STEP)

Advisors: Prof. Michael Oppenheimer, Prof. Filiz Garip

### Columbia University

M.A. in Quantitative Methods in the Social Sciences (QMSS)

### Sorbonne Université

B.S. in Mathematics

### Université Paris-Dauphine – PSL Research University

M.S. in Financial Engineering, B.S. in Economics

## PUBLICATIONS

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### Working Papers

- *El Niño amplified food insecurity in Early Modern Europe.* **Emile Esmaili**, Michael J. Puma, Francis Ludlow, Eva Jobbova, Janavi Kumar, Poul Holm, Fredrik Charpentier Ljungqvist, Johannes Rom Dahl, John Alphonsus Matthews and Andrea Seim.
- *Improving subseasonal Indian summer monsoon rainfall forecasts with U-Net calibration.* **Emile Esmaili**, Andrew W. Robertson, Muhammad Azhar Ehsan, Bohar Singh, Aaron Kaplan, Avijit Dey, Susmitha Joseph. *Under review*
- *A Bayesian hierarchical framework for modeling migration flows.* Aric Cutuli, Upmanu Lall, Michael J. Puma, **Emile Esmaili**, Rachata Muneeppeerakul. arXiv:2412.01242

### Selected Works in Progress

- *Droughts in Middle East/Arabian Peninsula: spatiotemporal variability, teleconnections, and seasonal forecasts.* Muhammad Azhar Ehsan, **Emile Esmaili**, Andrew W. Robertson et al.
- *Warfare ignited contagion dynamics in Early Modern Europe.* **Emile Esmaili**, Michael J. Puma, Francis Ludlow, Eva Jobbova, Poul Holm arXiv:2411.18978

## RESEARCH EXPERIENCE

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### Research Scientist

Jan 2024 – Jul 2025

NASA Goddard Institute for Space Studies (NASA GISS) / Columbia Climate School

## TEACHING EXPERIENCE

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### Instructor

Fall 2023

QMSS Math Camp, Columbia University

### Teaching Assistant

Fall 2023

GR5073: Machine Learning for the Social Sciences, Columbia University

### Teaching Assistant

Spring 2023

GR5074: Advanced Projects in Machine Learning, Columbia University

## SKILLS

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**Programming Languages**

Python, R, MATLAB

**Natural Languages**

French, English, Farsi