

Aric Cutuli

School of Engineering and Applied Sciences · Columbia University
New York, NY, 10027 · aric.j.cutuli@columbia.edu · ajcutuli.github.io

Education

Columbia University

M.S. Financial Engineering

New York, NY

Sep 2022 – Dec 2023

University of California, Los Angeles

B.S. Mathematics/Economics, Specialization in Computing

Los Angeles, CA

Sep 2019 – Jun 2022

Research Experience

Columbia University

Research Assistant, *Center for Climate Systems Research*

New York, NY

Feb 2023 – Present

- Bayesian hierarchical regression and machine learning to develop improved models of human migration flows

AbleMarkets

Research Assistant

Remote

Dec 2021 – Mar 2022

- Developed internal whitepaper surveying the microstructure of decentralized exchanges

Professional Experience

Citigroup

Quantitative Summer Analyst, *Equities Central Risk*

New York, NY

Jun 2023 – Aug 2023

- Systematic order filtering using sentiment

Quantitative Summer Analyst, *AI Innovation Lab*

Jun 2022 – Aug 2022

- Language model fine-tuning for news data classification

Consulting Startup

Quantitative Developer

Remote

Dec 2021 – May 2022

- Created derivative pricing and risk management tools for trading bots

Edelman Financial Engines

Data Analyst Intern, *Fiduciary Quality Assurance*

Santa Clara, CA

Jun 2021 – Aug 2021

- Identification of fiduciary performance issues through statistical testing

Publications

In Prep

A Bayesian Hierarchical Framework for Modeling Migration Flows. **Aric Cutuli**, Upmanu Lall, Michael Puma, Emile Esmaili, Rachata Muneeppeerakul. 2023.

Technical Reports

Separation Capacity of Randomly Initialized DNNs. **Aric Cutuli**, Harold Haodong Miao, Weitao Zhu. 2023.

Invited Talks

** presenting contributor*

Aric Cutuli*, Upmanu Lall, Michael Puma, Emile Esmaili, Rachata Muneeppeerakul. 2023. A Bayesian Hierarchical Framework for Modeling Migration Flows. MURI Migration 2023 Annual Evaluation, Virtual.

Aric Cutuli*, Xia Li. 2022. Hawkes Processes in Finance. Directed Reading Program Student Colloquium, University of California, Los Angeles.

Teaching Experience

Teaching Assistant

- IEOR 4733 - Algorithmic Trading, *Spring 2023*

Awards, Fellowships, & Grants

University Grant, <i>University of California, Los Angeles</i>	\$ 45,000
Legacy Scholar, <i>Elks National Foundation</i>	\$ 4,000
IAHF Scholar, <i>Italian American Heritage Foundation</i>	\$ 1,000
Most Valuable Student Scholar, <i>CA-Hawaii Elks Association</i>	\$ 200

Professional Memberships

QWAFAXNEW

Americal Geophysical Union

Affiliations

UCLA Directed Reading Program, *Reading Group Lead*

UCLA Bruin Capital Management, Quant Division, *Cofounder*

Coursework

Mathematics — Stochastic Calculus, Optimization, Mathematics of Deep Learning, Linear Algebra, Real Analysis, Numerical Analysis, Stochastic Processes

Statistics — Time Series, Monte Carlo Simulations, High Dimensional Machine Learning, Algorithms, Object-oriented Programming, Quantitative Risk Management, Econometrics

Computer Science — Reinforcement Learning, Algorithms, Trading Systems

Skills

Programming Languages — Python, C++, Java, Go

Technical Libraries — scikit-learn, NumPy, NumPyro, Keras, PyTorch, Hugging Face, statsmodels, CVXPY

Developer Tools — q/kdb+, SQL