

# Aric Cutuli

SCHOOL OF ENGINEERING AND APPLIED SCIENCES · COLUMBIA UNIVERSITY

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## Education

### Columbia University

New York, NY

MS FINANCIAL ENGINEERING

Sep 2022 - Dec 2023

- GPA: 3.7/4.0
- Concentration in Machine Learning

### University of California, Los Angeles

Los Angeles, CA

BS MATHEMATICS/ECONOMICS

Sep 2019 - Jun 2022

- GPA: 3.9/4.0
- Specialization in Computing

## Research Experience

### Columbia Climate School

New York, NY

ADVISOR: PROF. UPMANU LALL & DR. MICHAEL PUMA

Feb 2023 - Present

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

## Professional Experience

### Citigroup

New York, NY

QUANTITATIVE SUMMER ANALYST - EQUITIES CENTRAL RISK

Jun 2023 - Aug 2023

- Systematic order filtering using sentiment

### Citigroup

New York, NY

QUANTITATIVE SUMMER ANALYST - AI INNOVATION LAB

Jun 2022 - Aug 2022

- Language model fine-tuning for news data classification

### Consulting Startup

Remote

QUANTITATIVE DEVELOPER

Dec 2021 - May 2022

- Created derivative pricing and risk management tools for trading bots

### Edelman Financial Engines

Santa Clara, CA

DATA ANALYST INTERN

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 \_\_\_\_\_

2023 **Algorithmic Trading**, Lead Teaching Assistant

## Awards, Fellowships, & Grants \_\_\_\_\_

2019	<b>University Grant</b> , University of California, Los Angeles	\$ 45,000
	<b>Legacy Scholar</b> , Elks National Foundation	\$ 4,000
	<b>IAHF Scholar</b> , Italian American Heritage Foundation	\$ 1,000
	<b>Most Valuable Student</b> , California-Hawaii Elks Association	\$ 200

## Coursework & Skills \_\_\_\_\_

### COURSEWORK

Stochastic Calculus, Time Series, Optimization, Monte Carlo Simulations, Reinforcement Learning, Mathematics of Deep Learning, High Dimension Machine Learning, Algorithms, Trading Systems, Object-oriented Programming, Econometrics

### SKILLS

#### Programming Languages

Python, C++, Java, Go

#### Technical Libraries

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

#### Developer Tools

q/kdb+, SQL, Git, Docker

## Outreach & Professional Development \_\_\_\_\_

### AFFILIATIONS AND SERVICE

2021-2022 **UCLA Quantitative Trading Club**, Cofounder

2021 **UCLA Directed Reading Program**, Reading Group Lead

### PROFESSIONAL MEMBERSHIPS

QWAFAXNEW