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 Muneepeerakul. 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 Muneepeerakul. 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	**University Grant**, University of California, Los Angeles	*$ 45,000*
	Legacy Scholar, Elks National Foundation	*$ 4,000*
	IAHF Scholar, Italian American Heritage Foundation	*$ 1,000*
	Most Valuable Student, California-Hawaii Elks Association	*$ 200*

Coursework & Skills

Coursework

Stochastic Calculus, Time Series, Optimization, Monte Carlo Simulations, Reinforcement Learning, Mathematics of Deep Learning, High Dimensional Machine Learning, Algorithms, Object-oriented Programming, Trading Systems, Quantitative Risk Management, Econometrics, Linear Algebra, Real Analysis, Numerical Analysis, Stochastic Processes

Skills

Programming Languages

Python, C++, Java, Go

Technical Libraries

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

Developer Tools

q/kdb+, SQL

Outreach & Professional Development

Affiliations and Service

2021-2022 **UCLA Quantitative Trading Club**, Cofounder
2021 **UCLA Directed Reading Program**, Reading Group Lead

Professional Memberships

QWAFAxNEW