

RAY HAGIMOTO

Computational Physicist

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PROFILE

Computational physics PhD with 5 years of data analysis and Python programming experience. Seeking quantitatively complex challenges in finance. Experienced with Monte Carlo simulations and statistical inference on real data.

EDUCATION

Rice University, Houston, TX graduated Dec 2024
Doctor of Philosophy, Physics

- GPA: 3.90
- Coursework includes computational physics (Python), probability theory, and quantum field theory.

University of Texas at San Antonio, San Antonio, TX graduated May 2020
Bachelor of Science, Physics

- GPA: 4.00
- Coursework includes mathematics (linear algebra; calculus I, II, II) and advanced physics.

SKILLS AND INTERESTS

Technical /Computer Skills: *Python, jupyter, git, UNIX/Linux, Numpy, Pandas, LightGBM, shap, scikit-learn, machine learning*

EXPERIENCE

Susquehanna International Group, Bala Cynwyd, PA June 2024 – Aug 2024
Quantitative Researcher PhD Intern

- Participated in 10-week quantitative finance internship at the largest US equity options market-making firm.
- Performed data analysis on financial time series data and developed a trading strategy in a simulated environment.
- Used Shapley values to aid in feature engineering and trained a boosted decision tree model for my trading signal.

Rice University, Houston, TX Aug 2020 – Dec 2024
Graduate Researcher

- Trained convolutional neural networks to perform parameter estimation on cosmological data
- Created a Python package to find statistical features in astrophysical data sets using Bayesian methods and Markov Chain Monte Carlo simulations.
- Wrote custom scripts for data visualization by extending and adapting ArviZ source code.

University of Chicago, Chicago, IL June 2019 – September 2019
Undergraduate Summer Researcher

- Wrote a Python program to calculate two-point correlation functions for an astrophysical data set.
- Published team's results *The Astrophysical Journal Letters* and presented findings at multiple conferences.

LEADERSHIP & COMMUNITY INVOLVEMENT

Physics Graduate Student Association at Rice University, Houston, TX 2022 – 2023
Vice President

- Organized professional development workshops and social events.
- Liaised closely with other officers, professors, and external organizations.
- Mentored incoming graduate students.

Society of Physics Students at UTSA, San Antonio, TX 2019 – 2020
Vice President

- Organized club meetings, fundraising activities, and social events.
- Created a mentor-mentee program to improve support for undergraduate students.

SELECTED HONORS AND AWARDS

- NSF Graduate Research Fellowship Program Honorable Mention 2021
- Rice University Dean's Fellowship 2020
- Distinguished Presidential Scholarship, University of Texas at San Antonio (2016 – 2020)