

# RAY HAGIMOTO

## Computational Physicist

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### PROFILE

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Computational physics PhD student with 5 years of data analysis and Python programming experience, seeking quantitatively complex challenges in the financial industry. Presently using Monte Carlo simulations and Bayesian methods for statistical inference on cosmological data.

### EDUCATION

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**Rice University**, Houston, TX expected May 2025

*Doctor of Philosophy, Physics*

- GPA: 3.88
- Coursework includes computational physics (numerically solved partial differential equations using Python), probability theory, 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, III) and advanced physics (quantum mechanics, cosmology).

### SKILLS AND INTERESTS

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**Technical /Computer Skills:** *Python, Mathematica, UNIX, Numpy, Scipy, Pandas*

**Languages:** *Fluent English*

### EXPERIENCE

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**Rice University**, Houston, TX Aug 2020 – Present

*Graduate Researcher*

- Created a Python package to look for subtle statistical features in astrophysical data sets using Bayesian methods and Markov Chain Monte Carlo simulations. These methods have possible applications in finance.
- 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.
- Used high-performance cluster computing to run code in parallel.
- Prepared summary figures to deliver data analysis and results to collaborators.
- Published the team results *The Astrophysical Journal Letters* and presented findings at multiple conferences.

### LEADERSHIP & COMMUNITY INVOLVEMENT

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**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.
- Raised funding to send 4 club members to a national physics conference.

### SELECTED HONORS AND AWARDS

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- 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)