MICHAEL RAY

Accomplished student with more than four years of research experience now looking to move into the data science industry

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EXPERIENCE

Research Assistant

Supervised by Dr. Rosalba Perna

May 2021 – Present Stony Brook University

- I work on problems in computational astrophysics. This work has allowed me to improve my data analysis and programming skills. I use Python daily in order to perform data analysis.

Research Assistant

Supervised by Dr. Philip Argyres

March 2020 – Aug 2021 University of Cincinnati

- I worked on problems in quantum field theory. This work allowed me to greatly improve my mathematical skills and abstract thinking skills.

Research Assistant

Supervised by Dr. Colin Bischoff

Jan 2018 – March 2020 University of Cincinnati

- This work was in observational cosmology. I built (from scratch) a data pipeline in Python to take in astronomical data and output a "cleaned" version of the data. This developed my programming skills and taught me how to use object-oriented programming to modularize code.

AWARDS

- **Fellowships:**
  NDSEG Fellowship (2022, 4% acceptance rate, declined to pursue career in data science); SBU Fellowship (2021-22); Joiner Fellowship (2020, to conduct summer research)
- **Scholarships (16 total merit-based from 2017-21):**
  UC Welsh University Scholarship (2020-21); Maita Levine Scholarship (2020-21); Jeanne Gulden Endowed Physics Prize (2020-21); Mary Jane Toepfer Scholarship (2020-21); Sarah Blank Greenholz Scholarship (2019-20); Physics Alumni Endowed Scholarship (2019-20); UC Physics Scholarship (awarded 3 separate times from 2018-21); I Know I Can Founder's Scholarship (2017-21); Cincinnatus University Scholarship (2017-21); UC Arts and Sciences Scholarship (awarded two separate times from 2017-19); Columbus Dispatch Scholar Athlete Award (2017-18); Clintonville Rotary Scholarship (2017-18); Whetstone High School Athletic Boosters Scholarship (2017-18)
- **Miscellaneous:**
  UC Sophomore Achievement Award in Physics; Dean's List (every semester of undergrad); Member of Sigma Pi Sigma physics honor society; Member of Phi Beta Kappa academic honor society; Eagle Scout

SKILLS

- **Programming**
  Python (5 years), Linux/Command Line (4 years), C++(6 months), object-oriented programming
- **Version Control**
  Git/GitHub

EDUCATION

M.A. Physics

Stony Brook University

Aug 2021 – Dec 2022

B.S. Physics; B.S. Mathematics (double major)

University of Cincinnati

Aug 2017 – May 2021

- 3.98/4.0 cumulative GPA

DOCUMENTED WORKS

Mathematics Undergraduate Thesis

- April 2021
- Supervised by Dr. David Herron
- https://michaelray1.github.io/assets/Math_Capstone_FD.pdf

Physics Undergraduate Thesis

- Dec. 7, 2020
- Supervised by Dr. Philip Argyres
- Paper: https://michaelray1.github.io/assets/Senior_capstone_physics.pdf
- Poster: https://michaelray1.github.io/assets/Capstone_poster_physics.pdf

CMB Data Analysis Poster

- Jan. 2020
- Won second place in undergraduate division of UC Physics poster competition
- https://journals.uc.edu/index.php/Undergradshowcase/article/view/4117/3124

CMB-S4 Internal Logbook Posting

- Sep. 16, 2019
- Posted to large scientific collaboration logbook. Authored by myself under the supervision of Dr. Colin Bischoff
- https://cmb-s4.uchicago.edu/wiki/index.php/PureB_by_Messenger_Method

INTERESTS

Technical

- Data science, machine learning and deep learning.
- Computational techniques as applied to a plethora of fields including but not limited to finance, business, technology, physics, and astronomy.

Hobbies

- Snowboarding, playing guitar, travelling, reading