Gillen Brown

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Education

University of Michigan — Ann Arbor, MI
Ph.D. Astronomy and Astrophysics — May 2022

University of Missouri-Kansas City — Kansas City, MO
B.S. Physics with emphasis in Astronomy — May 2016
Minors in Mathematics and Computer Science
GPA: 4.0/4.0 (Summa Cum Laude)

Research Experience

University of Michigan — Ann Arbor, MI
Graduate Student Research Assistant — September 2016 — May 2022

- Used a Bayesian model to measure the radii of ∼6000 star clusters seen in Hubble Space Telescope images
- Statistically characterized the population of star cluster radii to test theories of star cluster evolution
- Developed a method to improve the computational efficiency of numerical simulations of galaxy formation
- Analyzed the properties of star clusters in numerical simulations of galaxy formation
- Presented work at local seminars and large scientific conferences (audiences from 5 to 100+ people)

University of Missouri-Kansas City — Kansas City, MO
Undergraduate Researcher — June 2014 – May 2016

- Developed an automated method to estimate the redshift of galaxy clusters

Leadership and Teamwork Experience

Michgan Dark Skies — Ann Arbor, MI
Co-coordinator — September 2019 — May 2022

- Coordinated the activities of this group with 100+ members working to prevent light pollution
- Worked with Central Student Government to pass a resolution encouraging U of M to reduce light pollution

University of Michigan — Ann Arbor, MI
Graduate Student Instructor — September 2017 — April 2021

- Facilitated lab sections for four introductory level astronomy courses (∼100 students per course)
- Sole instructor for 50 student course "Naked Eye Astronomy"
- Mentored 10 other graduate student instructors

University of Michigan Museum of Natural History — Ann Arbor, MI
Science Communication Fellow — May 2019 – March 2020

- Created hands-on activity for children demonstrating the amounts of different elements in the Universe
- Delivered multiple presentations on astronomy for museum visitors of all ages

Selected Awards

- **2020 Michigan Institute of Data Science: Basketball Data Madness Challenge** — Won a UM competition by extracting actionable insights from basketball player performance data
- **2021 Astronomy DEI Champion** — Awarded for helping form an antiracism reading group

Skills

Technical Skills: Python (including SciPy, NumPy, etc.), C/C++, Unix, LaTeX, git
Data Analysis: Statistics and probability, linear regression, Bayesian modeling, data visualization
Soft Skills: Technical writing, public speaking, critical thinking, problem solving