

Gillen Brown

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Education

University of Michigan Ph.D. Astronomy and Astrophysics GPA: 4.0/4.0	Ann Arbor, MI April 2022
University of Missouri-Kansas City B.S. Physics with emphasis in Astronomy Minors in Mathematics and Computer Science GPA: 4.0/4.0 (Summa Cum Laude)	Kansas City, MO May 2016

Research Experience

University of Michigan <i>Graduate Student Research Assistant</i>	Ann Arbor, MI September 2016 — April 2022
<ul style="list-style-type: none">• Performed astrophysics research resulting in four peer-reviewed publications• Used Python to analyze astrophysical data of several kinds, including tables, images, and volumetric data• Created 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 <i>Undergraduate Researcher</i>	Kansas City, MO June 2014 – August 2016
<ul style="list-style-type: none">• Used Python to analyze astrophysical images and tabular data• Developed an automated method to estimate the redshift of galaxy clusters	

Leadership and Teamwork Experience

Michigan Dark Skies <i>Co-coordinator</i>	Ann Arbor, MI September 2019 — April 2022
<ul style="list-style-type: none">• 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 Museum of Natural History <i>Science Communication Fellow</i>	Ann Arbor, MI May 2019 – March 2020
<ul style="list-style-type: none">• 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