Gabriela Torrini
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EDUCATION

MS in Astronomy *August 2022*
University of Illinois Urbana-Champaign

BS in Astronomy & Astrophysics *May 2020*
The Ohio State University

- Minor: Spanish
- *Magna cum laude* with Research Distinction

EXPERIENCE

Software Development Intern *December 2022 - July 2023*
Turnell Corp, St. Charles, MO

- Developed a full-stack, web-based pilot application to simulate & optimize cement production processes
- Created web forms for equipment flowsheets & optimization problems using React.js & MUI
- Built a Flask API to process requests, perform mass-energy balance calculations, & manage database interactions

Graduate Student Trainee *January 2022 - May 2022*
National Center for Supercomputing Applications, Urbana, IL

- Helped develop cutout request form to access microwave maps using React.js & MUI
- Researched monitoring strategies to maintain access to data services

Graduate Fellow *January 2021 - August 2022*
Department of Astronomy, University of Illinois Urbana-Champaign, Urbana, IL

- Performed optical variability selection to hunt for dwarf AGNS; analyzed 31,000 sources in DES deep field data using astroPy, pandas, sciPy, & numpy; identified 51 dwarf AGN candidates
- Measured the offset distribution of dwarf AGN candidates in the DES wide field; analyzed 6 seasons of DECam imaging data using astroPy, numPy, & pandas; Found no statistically significant offset fraction

Undergraduate Research Assistant *May 2019 - August 2020*
Department of Physics & Astronomy, The University of Utah, Salt Lake City, UT

- Optimized cosmic-ray background subtraction algorithm using pandas, numPy, & sciPy
- Processed 97 hours of VERITAS observational data
- Analyzed optimization factors such as gamma-ray shower shape, elevation, azimuth, and season; determined observing season to be the most critical factor

SKILLS

Programming Languages: Python, JavaScript, HTML, C++
Libraries & Frameworks: pandas, numPy, astroPy, sciPy, Flask, React.js, Material UI
Software Systems: Git, Mathematica, LaTeX
Operating Systems: Windows, Linux