

## **EDUCATION**

### **MS in Astronomy**

University of Illinois Urbana-Champaign

August 2022

### **BS in Astronomy & Astrophysics**

The Ohio State University

May 2020

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

## **EXPERIENCE**

### **Software Development Intern**

Turnell Corp, St. Charles, MO

December 2022 - July 2023

- 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 handle requests, perform mass-energy balance calculations, & manage database interactions

### **Graduate Student Developer**

National Center for Supercomputing Applications, Urbana, IL

January 2022 - May 2022

- Helped develop cutout request form to access SPT-3G microwave maps using React.js & MUI
- Implemented a monitor via Uptime Kuma to maintain access to data services

### **Graduate Fellow**

Department of Astronomy, University of Illinois Urbana-Champaign, Urbana, IL

January 2021 - August 2022

- 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**

Department of Physics & Astronomy, The University of Utah, Salt Lake City, UT /

Department of Astronomy, The Ohio State University, Columbus, OH

May 2019 - May 2020

- 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
- Published a senior thesis

## **SKILLS**

*Programming Languages:* Python, JavaScript, HTML, CSS, C++

*Libraries & Frameworks:* pandas, numPy, astroPy, sciPy, matplotlib, seaborn, Flask, React.js, Material UI

*Software Systems:* Git, Mathematica, LaTeX

*Operating Systems:* Windows, Linux