**QUALIFICATION STATEMENT**

Highly skilled researcher and data analyst with extensive experience in studying complex astronomical data and developing efficient algorithms, primarily in Python. Proven track record of adapting to fast-paced environments and delivering insightful analyses and solutions in both academic and professional settings through teaching and collaboration with diverse teams.

**RESEARCH EXPERIENCE**

**University of Wyoming** Laramie, WY

*Graduate Research Assistant* March 2021 – July 2022

* Analyzed 100 GB of Hubble Space Telescope images for PHANGS-HST project ($1.2 million grant), resulting in significant data insights which were added to the Mikulski Archive for Space Telescopes
* Developed seeded watershed algorithm in Python to measure physical properties of stellar clusters
* Enhanced data-sorting algorithm efficiency by 50%, optimizing processing time and resource usage
* Created detailed visualizations and topographical maps of 38 galaxies for multiple peer-reviewed publications
* Delivered weekly updates and comprehensive reports on research progress to stakeholders through scrums

**University of Arizona/NASA Space Grant** Tucson, AZ

*Undergraduate Research Assistant* August 2018 – May 2020

* Automated the detection of substructures in images of star-forming regions using Python, improving analysis speed
* Explored multi-dimensional parameter spaces to refine molecular cloud maps, enhancing precision
* Compared and validated pre-stellar core properties obtained from different watershed algorithm techniques

**PROFESSIONAL EXPERIENCE**

**Seattle Public Schools** Seattle, WA

*Substitute Teacher* September 2022 – Present

* Instruct “Precalculus” and “Math in Society” courses at Nova High School as long-term substitute teacher
* Created and maintain a comprehensive database of student accommodations for 250 students across 50 classes, as requested by the Nova Special Education team
* Deliver engaging, tailored lesson plans to over 100 students daily across grades K-12
* Collaborate with teachers district-wide to ensure seamless continuation of lessons on short notice

**Steward, Vatican Observatories** Tuscon, AZ

*Telescope Operator* August 2018 – March 2020

* Conducted week-long observational shifts for NASA’s Transiting Exoplanet Survey Satellite (TESS)
* Managed and directed observations of celestial objects by operating 21-inch telescope and Steward Observatory dome

**National Radio Astronomy Observatory** Charlottesville, VA

*Undergraduate Research Assistant* May 2018 – August 2018

* Analyzed GB-sized data cubes of radio images from the Green Bank Telescope using Python, delivering key insights
* Contributed to an Agile software development team, presenting findings through multimedia presentations effectively

**EDUCATION**

**University of Wyoming**  Laramie, WY

*Master of Science in Physics (GPA: 4.00)* May 2022

**University of Arizona, Honors College** Tucson, AZ

*Bachelor of Science in Physics and Astrophysics with Honors (GPA: 3.78)* May 2020

**TECHNICAL SKILLS**

Programming Languages: Python, C, SQL, HTML, Visual Basic, IRAF

Software/Libraries: GitHub, Microsoft Office, Jupyter, Anaconda (Pandas, NumPy, SciPy, Matplotlib)