

**JAMES LILLY**  
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## **EDUCATION**

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**University of Wyoming** Laramie, WY  
*Master of Science in Physics* May 2022  
Cumulative GPA: 4.00/4.00

**University of Arizona (UA), Honors College** Tucson, AZ  
*Bachelor of Science in Physics and Astrophysics with Honors* May 2020  
Cumulative GPA: 3.78/4.00

## **TECHNICAL SKILLS**

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Programming Languages: Python, C, HTML, Visual Basic, IRAF, SQL  
Software/Libraries: Git, Microsoft Office Suite, Terminal, LaTeX, Anaconda, Zoom  
Operating Systems: Windows, Unix, Linux

## **PROJECTS/RESEARCH**

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**University of Wyoming** Laramie, WY  
*Graduate Research Assistant* March 2021 – July 2022

- Spearheaded development of Python pipeline to analyze Hubble Space Telescope (HST) data
- Identified stellar associations and analyzed their properties as part of global PHANGS collaboration
- Facilitated data collection and analysis in Python and Excel for peer-reviewed research publications ([Lee et al. 2021](#), [Turner et al. 2022](#), [Larson et al. 2022](#), [Whitmore et al. 2023](#), Scibelli et al. 2023)
- Delivered weekly verbal and written reports to variety of stakeholders on key research initiatives

**University of Arizona/NASA Space Grant** Tucson, AZ  
*Undergraduate Research Assistant* Aug 2018 – May 2020

- Analyzed hierarchical structure of molecular clouds within the Milky Way Galaxy using Python
- Evaluated radio astronomy observations with Python to determine properties of prestellar cores

## **WORK EXPERIENCE**

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**Seattle Public Schools** Seattle, WA  
*Substitute Teacher* September 2022 – Present

- Shepherded “Precalculus” and “Math in Society” classes at Nova High School as long-term substitute
- Developed and presented tailored lesson plans to groups of 10+ students in grades 2-8 and 11-12
- Collaborated with teachers to ensure seamless continuation of lessons on short notice

**University of Wyoming** Laramie, WY  
*Graduate Teaching Assistant* Aug 2020 – May 2021

- Guided weekly in-person problem-solving sessions and online labs for undergraduate physics courses
- Collaborated with lab coordinator to prepare course learning materials and troubleshoot experiments

**Vatican Observatory Foundation** Mt. Graham, AZ  
*Telescope Operator* Jun 2019 – Aug 2019

- Facilitated observations for NASA’s Transiting Exoplanet Survey Satellite (TESS) at the Vatican Advanced Technology Telescope (VATT)
- Coordinated operational procedures with remote observers and 3 other telescope technicians