

Leah M. Fulmer

✉ leahmfulmer@gmail.com 🌐 leahmfulmer.github.io ☎ (608) 512-7566

Skills

Computational:

Software engineering; Python, JavaScript, HTML, CSS, SQL, Tableau, Microsoft, Lisp, L^AT_EX, Unix/Bash; data collection, cleaning, joining; data analysis and visualization; statistical and machine learning techniques.

Communication:

GitHub (git), journal publication, public speaking, poster presentation, collaboration with users, networking; communication with diverse stakeholders, program management, grant writing, fiscal responsibility, education.

Natural Healing:

Spiritual practice, daily meditation, Egoscue posture therapy, vision improvement, fertility awareness, sobriety.

World Languages:

English (native), Spanish (advanced: speaking, reading, writing).

Education

Launch School Core Curriculum for mastery in Full Stack Web Development	August 2024 - Present Madison, WI
Codecademy Certificate in Business Intelligence Data Analyst Career Path	January 2024 - June 2024 Madison, WI
University of Washington Master of Science in Astronomy	September 2018 - June 2021 Seattle, WA
University of Wisconsin-Madison Bachelor of Science in Astronomy-Physics & Spanish University of Chile & Pontifical Catholic University of Chile Council on International Educational Exchange Study Abroad <i>Academic Distinction, Honors in the Major, Departmental Prize in Astronomy, 3.82/4.00 Cumulative GPA</i>	September 2013 - May 2017 Madison, WI February 2016 - August 2016 Santiago, Chile

Professional Experience

BadgerBots Robotics Corporation Community Engagement Program Manager, Assistant Educator <i>Advisors: Johanna Taylor & Janelle Greene</i>	May 2022 - December 2023 Madison, WI
<ul style="list-style-type: none">• Lead all communication, coordination, and growth initiatives related to the BadgerBots Community Engagement Program, making robotics education accessible to students of underrepresented backgrounds.• Secured funding from both public grants and individual donations to support program activities.• Managed program budget and presented fiscal activity internally and externally through seasonal reports.• Designed original robotics curriculum; served as Assistant Educator during all educational instances.	
National Optical Astronomy Observatory, now NSF's NOIRLab Data Reduction Specialist <i>Advisors: Dr. Stephanie Juneau, Dr. Knut Olsen, & Dr. Mark Dickinson</i>	October 2017 - July 2018 Tucson, AZ
<ul style="list-style-type: none">• Processed and cleaned ("reduced") data from the ESO VLT Visible Imaging Multi-Object Spectrograph, producing a catalog of redshift measurements for our population of ~400 galaxies to use in future studies.• Synthesized public-facing scientific and technical tutorials to highlight the functionality of the Astro Data Lab's existing tools; tutorials written as Jupyter Notebooks directly querying the Astro Data Lab's archive.	

Research Experience

University of Washington September 2018 - June 2021
NSF Graduate Research Fellow Seattle, WA

Advisors: Prof. Daniela Huppenkothen and Prof. Mario Juric

- Explored automatic classification of time series data using machine learning techniques; placed particular focus on anomaly detection to efficiently access valuable data products from among billions of observations.

University of Wisconsin-Madison January 2014 - January 2020
Undergraduate Research Assistant Madison, WI

Advisor: Professor John (Jay) Gallagher, III

- Lead a photometric study of massive stars within the Small Magellanic Cloud Wing, revealing an erratic, popcorn-like mode of star formation despite an apparent lack of gaseous resources from which to form stars.
- Lead an analysis of the galaxy NGC 5523, constraining the timescales and masses of potential non-disruptive mergers between it and former companions, discovering a probable history of “isolation by annexation”.

Space Telescope Science Institute June 2017 - August 2017
Space Astronomy Summer Program Intern Baltimore, MD

Advisor: Dr. Mark Giuliano

- Created a dynamic visualization tool for the efficient analysis of Hubble Space Telescope and James Webb Space Telescope scheduling constraints, to ultimately streamline the process of space-based data acquisition.
- Collaborated closely with telescope schedulers (users) and quickly adapted the tool to match their feedback.

Yale University June 2015 - July 2016
Dorrit Hoffleit Undergraduate Research Scholar New Haven, CT

Advisor: Professor Jeffrey (Jeff) Kenney

- Joined and tidied ultraviolet-through-infrared photometric data for 50 galaxies within the Virgo Cluster.
- Modeled the observational data with theoretical spectral energy distributions and derived physical properties from these models, revealing a common stage of neutral gas accretion among infalling cluster galaxies.

Publications

- [1] *Testing massive star evolution, star-formation history, and feedback at low metallicity: Photometric analysis of OB stars in the SMC Wing* **Fulmer, Leah M.**; Gallagher, J. S.; Hamann, W. -R.; Oskinova, L. M.; Ramachandran, V., 2020, A&A, 633, A164. Reproduce analysis using Jupyter Notebooks: [Link to GitHub](#).
- [2] *NGC 5523: An isolated product of soft galaxy mergers?* **Fulmer, Leah M.**; Gallagher, J. S.; Kotulla, R., 2017, A&A, 598, 119.

Honors, Awards, & Societies

- NSF Graduate Research Fellowship : *National Science Foundation* 2020
- AAS Education and Professional Development Mini-Grant : *American Astronomical Society* 2018
- Doherty Award for Excellence in Astronomy : *UW-Madison Department of Astronomy* 2017
- Iron Cross Society : *Recognizing significant leadership and service at UW-Madison* 2016
- Phi Beta Kappa : *Alpha Chapter of Wisconsin* 2016

Talks, Workshops, & Community Service

- AAS Site Visit Team 2019 - 2023
Selected Member : American Astronomical Society : Ithaca, NY
- AstroSites: How to Build & Publish a Professional Website 2019
Selected Workshop & Published Webpage : 233rd AAS Meeting : Seattle, WA : [Link](#)
- “A Dynamic Visualization Tool for the Analysis of SPIKE Scheduling Constraints” 2017
Talk : Space Telescope Science Institute Summer Symposium : Baltimore, MD : [Link](#)