

Cassidy Metzger

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EDUCATION

Washington University in St. Louis

Bachelor of Arts in Astrophysics
Minor in Writing
Cumulative GPA: 3.84/4.00

St. Louis, MO
08/2021 - 05/2025

EXPERIENCE

Errando lab

Undergraduate researcher

St. Louis, MO
08/2022 – Present

- Analysis of multi-wavelength data from various satellites (WISE, ROSAT, Swift, eROSITA) with a specialization in X-ray-emitting objects
- Data visualization using **Python**
- Communicating and sharing the lab's work with other scientists and the general public via presentations, talks, and papers

The Learning Center

Physics Peer-Led Team Learning (PLTL) Leader

St. Louis, MO
09/2022 — Present

- Meet weekly for two hours with other Physics PLTL leaders to prepare for the week's session by working through problems, reviewing content, and discussing teaching strategies
- Meet with ~ 10 Physics students for two hours once a week. Help them work through a packet of problems while facilitating discussion amongst them and reviewing class concepts
- Help students learn good study habits and techniques for learning physics that work for them and connect them to additional resources as necessary

Mentor for Physics 191/192

Summer 2023; Summer 2024

- Help students work through homework questions and class concepts during office hours for two hours a week
- Work one-on-one with individual students as scheduled

WashU Physics Department

Physics 191/192 Recitation Leader

St. Louis, MO
01/2023 — Present

- Meet for one hour weekly with other recitation leaders to prepare for the week's session by working through problems, reviewing content, and designing teaching strategies for various topics
- Meet with ~ 30 students for one hour a week to assist them with the assigned problems and answer questions as necessary
- Grade students' assignments

Society of Physics Students

President

St. Louis, MO
01/2024 — Present

- Previously the Vice President from 01/2023 - 01/2024
- Direct a board of 5 members and oversee two additional committees
- Host educational and social events for students in the Physics department
- Facilitate communication between the student body and the professors
- Run a social media account advertising events (@washu_sps)

PROJECTS

An All-Sky Survey of TeV-emitting BL Lac Objects

Primary researcher

St. Louis, MO
02/2023 — Present

- Using the previous all-sky surveys WISE and eROSITA, this project uses the infrared (IR) and X-ray wavelengths to detect blazars (supermassive black holes that emit polarized streams of particles) capable of reaching TeV energies
- Developed a **Python**-based algorithm to perform this function
- Conducted data analysis on the algorithm's findings

Studying Accretion onto an Intermediate Mass Black Hole (IMBH)

Primary researcher

St. Louis, MO
09/2022 — 01/2023

- Compiled X-ray data from the Swift Observatory's XRT telescope from 2011-2019
- Utilized **PyXspec** to produce a spectrum for each observation in order to produce a light curve in **Python**
- Calculated the long-term fractional variability of the IMBH

AWARDS

McDonnell Center for Space Sciences Fellowship

A fellowship to conduct research at Washington University containing a \$5,000 award

St. Louis, MO

SU2023, SU2024

First place at the Washington University Physics Research Symposium

A poster competition among the graduate and undergraduate students in the physics department.

St. Louis, MO

11/2023

Spoke at the Washington University Undergraduate Research Symposium

One of 30 students chosen to give a brief talk at the symposium.

St. Louis, MO

10/2023

Dean's List

Maintained a GPA greater than 3.6 while completing at least 14 units of graded work

St. Louis, MO

FL2021, FL2022, SP2023, FL2023

Don Deia "Heart of the Plate" Scholarship

Athletic accomplishment for softball

Oak Park, IL

05/2021

SKILLS

Programming: Java, MATLAB, Python, C++, Shell Script

Visit my Github.

Soft Skills: Science communication, mentoring/teaching, leadership, organization, event planning, graphic design

You can see some of my graphic design work here.