PIERSON LIPSCHULTZ

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RESEARCH EXPERIENCE

College of DuPage

Glen Ellyn, IL

Honors Independent Study ⋄ GitHub ⋄ Publication

01/2025 - 5/2025

- onors independent study & Gitt tub & Fublication
- Combined observational and simulated data
- Used Python to compare a dataset of a million simulated binaries with their observed counterparts
- Utilized LATEX to allow for greater efficiency
- Published in the Digital Commons

CIERA, Northwestern University

Evanston, IL

REACH Further & GitHub & Visualizaions

06/2024 - 07/2024

- o Worked with mentor Ilia Kiato assisting with research
- Project one: Researched and cataloged X-ray binary simulation data using python tools.
- Developed a system for analyzing subpopulations using Bokeh and a GitHub Site.

• Wrote a paper discussing the processes of mass transfer in binary stars

- Project two: Researched natal kick velocities in Black Holes, recreating the results of the paper A Black Hole Kicked At Birth: MAXI J1305-704.
- Created visualizations of the processes of the paper.

EDUCATION

College of DuPage

Glen Ellyn, IL

Honors Scholar

08/2024 - 5/2025

RESEARCH SKILLS

Blender

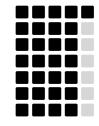
LATEX

Python

Pandas

Bokeh Matplotlib

Git



Outreach

President and Founder, COD Space Club

Glen Ellyn, IL

https://codspace.club/

01/2025 - Current

- Grew club to \approx 70 members in 2 semesters
- Hosted numerous outreach events including a booth STEMCON
- Observing nights and field trips to places including Fermilab

Lead Ambassador, Stories of Space

Glen Ellyn, IL

08/24 - current

o In charge of mission 4

https://www.storiesofspace.com/

- Helping coordinate large scale collaborations
- o Marketed and encouraged college student engagement with space.

Project Head, High Altitude Weather Balloon Collaboration

Glen Ellyn, IL

https://sites.google.com/view/stories-of-space-project/

01/2025 - current

- Helping coordinate large scale collaborations
 - o Marketed and encouraged college student engagement with space.
 - Currently working in charge of Mission 4

Guest Speaker, Northwest Suburban Astronomers

Barrington, IL

COD Library Student Research Symposium

2/7/2025

- o Presented an overview of binary star properties, including X-Ray binaries, mass transfer, and stellar evolution
- Audience of ≈ 50 people.

Student Speaker, College of Dupage

Glen Ellyn, IL

https://www.nsaclub.org/

2/7/2025

- o Presented an overview of binary star properties, including X-Ray binaries, mass transfer, and stellar evolution
- Audience of ≈ 50 people.

Publications

Mass Transfer in Binary Stars

Glen Ellyn, IL

Digital Commons

Clan Ellym II

Photography
Prairie Light Review

Glen Ellyn, IL

5/2025

5/25

Press

Student Spotlight, College of DuPage

Glen Ellyn, IL

https://www.cod.edu/about/stories/students/lipschultz.html

1/25

STORIES of Space and College of DuPage students ... weather balloon launch

Daily Herald

3/26/25

PROJECTS

{WIP} Phython Module for graphing HR diagrams of POSYDON Datasets

Independent Project & GitHub

5/25 - Current

- Allows user to easily create elegant and publishing ready graphs in either Matplotlib or Bokeh
- Creates HTML viewing files to allow the user to quickly understand a dataset (see link)
- Written for an out-of-the-box solution while still allowing deep configuration

Custom Astrophotography Mounting Rig

Independent Project <> Photos

5/25 - Current

- Custom designed in CAD software (Fusion360)
- o 3D printed in high-strength materials to allow for long-term use

Art

Astrophotography

Independent \diamond Photographs

1/24 - Current

- o Custom assembled rig for taking pictures of faint deep sky objects
- Experienced with various AP tools, including NINA, PixInsight, BXT, Siril, PHD2, and more

Photography

Independent and Academic

Photographs

12/24 - Current

- Experienced with Sony and Canon DSLRs
- Multiple photographs published