

PIERSON LIPSCHULTZ

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Astronomy + Data Science

RESEARCH EXPERIENCE

College of DuPage

Honors Independent Study ◇ GitHub ◇ Publication

Glen Ellyn, IL

January 2025 – May 2025

- Authored a paper on mass transfer in binary stars; published in the COD Digital Commons.
- Integrated observational and simulated datasets to cross-validate trends in binary evolution.
- Built Python pipelines to compare ~1,000,000 simulated binaries with observed counterparts.
- Automated typesetting workflows in L^AT_EX to streamline figure and table generation.

CIERA, Northwestern University

REACH Further ◇ GitHub ◇ Visualizations

Evanston, IL

June 2024 – July 2024

- Collaborated with mentor Ilia Kiato on X-ray binary research.
- Cataloged simulation datasets using Python analysis tools.
- Developed Bokeh dashboards and a GitHub Pages site to analyze subpopulations.
- Reproduced natal-kick velocity results for MAXI J1305-704.
- Created explanatory visualizations of paper methods and results.

EDUCATION

University of Illinois Urbana–Champaign

Bachelor of Science in Astronomy & Data Science

Urbana–Champaign, IL

Expected May 2028

College of DuPage

Honors Scholar

Glen Ellyn, IL

August 2024 – May 2025

RESEARCH SKILLS

Blender

L^AT_EX

Python

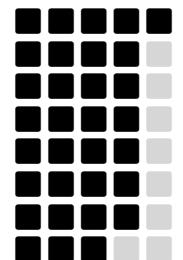
Pandas

Bokeh

Matplotlib

Git

Tinker



OUTREACH

President and Founder, COD Space Club

<https://codspace.club/>

Glen Ellyn, IL

January 2025 – May 2025

- Grew the club to ≈70 members across two semesters.

- Hosted outreach events, including a booth at STEMCON.

- Led observing nights and organized field trips to Fermilab and other sites.

Lead Ambassador, Stories of Space

<https://www.storiesofspace.com/>

Glen Ellyn, IL

February 2025 – Present

- Lead Mission 4 planning and execution.

- Coordinate large-scale collaborations across partner institutions.

- Market and encourage college student engagement with space initiatives.

Project Head, High Altitude Weather Balloon Collaboration

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

Glen Ellyn, IL

February 2025 – July 2025

- Coordinated large-scale collaborations across student teams.

- Marketed and promoted participation in space-related projects.

- Led Mission 4 workstream.

TALKS

Student Speaker, College of DuPage Glen Ellyn, IL
[COD Library Student Research Symposium](#) May 2025

- Presented an in-depth exploration of mass transfer in binary stars.

Guest Speaker, Northwest Suburban Astronomers Barrington, IL
<https://www.nsaclub.org/> February 2025

- Presented an overview of binary star properties, including X-ray binaries, mass transfer, and stellar evolution; audience ≈50.

PUBLICATIONS

Photography Glen Ellyn, IL
[Emulsion and Noise](#) September 2025

Mass Transfer in Binary Stars Glen Ellyn, IL
[Digital Commons](#) May 2025

Photography Glen Ellyn, IL
[Prairie Light Review](#) May 2025

PRESS

Student Spotlight, College of DuPage Glen Ellyn, IL
<https://www.cod.edu/about/stories/students/lipschultz.html> January 2025

STORIES of Space and College of DuPage students . . . weather balloon launch March 2025
[Daily Herald](#)

PROJECTS

Python Module for Graphing HR Diagrams of POSYDON Datasets May 2025 – Present
Independent Project ◊ [Example](#) ◊ [GitHub](#)

- Enables rapid creation of publication-ready HR diagrams in Matplotlib or Bokeh.
- Generates interactive HTML viewers for quick dataset exploration (*see link*).
- Balances out-of-the-box defaults with deep configuration options.

Custom Astrophotography Mounting Rig May 2025 – Present
Independent Project ◊ [Photos](#)

- Designed components in Fusion 360 and iterated via CAD.
- 3D-printed parts in high-strength materials for durable, long-term use.

ART

Photography December 2024 – Present
Independent and Academic ◊ [Photographs](#)

- Operate Sony and Canon DSLR workflows; multiple photographs published.

Astrophotography May 2024 – Present
Independent ◊ [Photographs](#)

- Assembled a custom rig for faint deep-sky imaging.
- Use tools including NINA, PixInsight, BXT, Siril, and PHD2.