

# Zack Freeman

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## Education

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### University of Utah

*Expected Graduation May 2025*

Bachelor of Science: Computer Science

GPA: 3.90

Bachelor of Science: Physics with an emphasis in Astronomy and Astrophysics

GPA: 3.90

- Awarded Dean's List: 6 semesters
- Key Scholarships: Kahlert School of Computing (KSoC) Departmental Scholarship (merit based | \$5,000) – New Century Scholarship (merit based | \$4,000) – Trustees Scholarship (merit based | \$3,000) – Guodong Li Scholarship (merit based | \$3,000) – David S. Anderson Scholarship (merit based | \$2,000)
- Key Courses: Algorithms (IP) – Foundations of Data Analysis (IP) – Intro to Cosmology (IP) – Algorithms and Data Structures – Software Practice I & II – Differential Equations and Linear Algebra – Discrete Mathematics – Extragalactic Astrophysics – Intermediate Mechanics – Intro to Quantum and Relativity

## Experience

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### University of Utah

#### Research Assistant – Dr. Anil Seth

*May 2022 – Present*

- Searching for black hole microlensing events in a Hubble Space Telescope (HST) dataset of ~150,000 stars spanning 20 years of observations. This work includes algorithm development and optimization, parallelization of fitting code, and image processing.
- Paper expected by first quarter of 2024.

#### Undergraduate Student Advisory Committee (UgSAC) - KSoC

- President (*Fall 2022 – Present*) | Member (*Fall 2021 – Spring 2022*)
  - Write formal Retention, Promotion, and Tenure (RPT) reports for incoming and current KSoC faculty.
  - Serve as a liaison between students and faculty.

#### Learning Assistant – Foundations of Astronomy

*Fall 2022*

- Assisted in development and led ~30-person weekly discussions that involved introductory astrophysics topics, such as orbital mechanics and stellar evolution.
- Learning Assistant of the Year Nominee.

#### Physics and Astronomy (PANDA) Mentorship Program

- Committee Member *Fall 2022*
  - Designed activities that assisted mentors with teaching their mentees the soft skills needed to navigate the university experience.
  - Worked with a team of professors and students.
- Mentor *Spring 2022*
  - Assisted incoming Physics and Astronomy students with developing soft skills such as communication with professors, time management, etc.