

Alex Garcia

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Education

University of Florida

Aug 2021 – May 2023

Master's of Science in Astronomy

University of Illinois

Aug 2017 – May 2021

Bachelor's of Science in Engineering Physics

Bachelor's of Science in Astronomy - *distinction*

Teaching Experience

Course Instructor

qBraid

Summer 2021

Urbana, IL (*Remote*)

- Host lectures weekly on Quantum Computing intended for high school aged students interested in pursuing STEM education over the summer.
- Answer a variety of technical and non-technical questions regarding the course during a weekly office hour.

Tutor

Center for Academic Resources in Engineering – UIUC

Aug 2018 – May 2021

Urbana, IL

- Guided students towards success in various homework assignments in a number of different disciplines. Subjects included introductory mechanics, electricity & magnetism, quantum mechanics, thermodynamics, calculus, intro to python, differential equations, and linear algebra.
- Planned and led small group presentations for specific courses and present to students in order to help them succeed on exams.
- Analyzed the data on traffic of incoming students with python and created LaTeX reports of monthly attendance, broken up into several different categories.
- Created and maintained LaTeX worksheets for peer-led exam review sessions in several math and physics courses.

Visual Instructor

Lincoln-Way Marching Band

Aug 2018 – Aug 2021

Frankfort, IL

- Assisted on the field teaching students how to perfect and perform an eight-minute field show. Included teaching management of simultaneous demand and awareness.
- Worked within a group of staff members on lesson plans and communicated on how to most effectively budget and allocate time to improving the overall product.

Research Experience

Undergraduate Research Assistant

University of Illinois - Advisor: Yue Shen

Feb 2021 – May 2021

Urbana, IL

- Examined data from SDSS DR16Q and analyzed the spectra to determine physical information about the quasar.
- Reworked IDL scripts into Python and utilized FITS data to produce publication quality plots.

Undergraduate Research Assistant

University of Illinois - Advisor: Bryan Dunne

Aug 2020 – May 2021

Urbana, IL

- Created requests for telescope usage then obtain and processed FITS and TIF files into color images of the target.
- Collaborated with an international team with groups from several different institutions.

Work Experience

Registration Assistant

Grainger College of Engineering

Summer 2020, Summer 2021

Urbana, IL (*Remote*)

- Guide incoming undergraduate students on how to utilize registration interface as well as navigating course registration mandates.
- Interface with a team digitally and work together to standardize an approach to helping students with their issues registering.

Grader

University of Illinois Astronomy Department

Aug 2020 – May 2021

Urbana, IL

- **Courses:** Astr 100 - *Introduction to Astronomy* (FA2020), Astr 150 - *Killer Skies: Astro-Disasters* (FA2020), Astr 330 - *Extraterrestrial Life* (W2021, SP2021)
- Read over student's submissions of astrophysical information and determined where to assign and detract points based on a rubric and my own understanding of astrophysics.
- Communicated with the professor on due dates and finish work promptly, accurately and with comments for students on how to improve their submission.

Lecture Viewing Assistant

Grainger College of Engineering

Jan 2021 – Mar 2021

Urbana, IL

- Hosted sessions for students to come to campus and watch their live zoom lectures as a group.
- Created events on the college's website as well as analyzed and interpreted data on attendance of these sessions.

Technical Skills

Fluent: Python, L^AT_EX (including Tikz), Microsoft Office

Literate: R, HTML, CSS, Origin, Java/JavaScript

Honors and Awards

University of Illinois Tutor of the Year Finalist
University of Illinois Tutor of the Year Honorable Mention
Dean's List, College of Liberal Arts and Sciences
Dean's List, Grainger College of Engineering
Eagle Scout, Boy Scouts of America

Spring 2021
Spring 2021
Fall 2020
Spring 2018, 2019
April 2015

Activities

Fighting Illini Basketball Pep band
Bluecoats Drum and Bugle Corps
Madison Scouts Drum and Bugle Corps

November 2019 - March 2020
November 2018 - August 2020
November 2016 - August 2018