

ALONDRA J. ÁLVAREZ CASTRO

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PERSONAL INFORMATION

D.O.B.: 26 August, 2002

Languages : Spanish, English

Member of *El Círculo Astrofísico de Puerto Rico*

EDUCATION

University of Puerto Rico, Río Piedras campus (UPRRP)

5th year B.S in Physics - Minor in CS

Physics Department

August 2020 - Present

Expected graduation: 2026

GPA: 3.8

RELEVANT COURSEWORK

Physics

Mechanics - Electromagnetism - Microsatellites

Mathematics

Calculus 1-3

Computer Science

Data Structures

Environmental Sciences

EXPERIENCE

Research Assistant

NASA EPSCoR, UPR Río Piedras campus

Mentor: Mayra Lebrón

August 2022 - Present

Worked with a mentor and a partner on a research project to analyze raw data from the SPITZER Telescope, constructing manageable material to search for galaxies in the Zone of Avoidance.

Physics and Astronomy REU, University of Utah

Mentor: Gail Zasowski

Summer 2023 - Fall 2023

Worked with a mentor and graduate student on a research project using nir-infrared spectral data from APOGEE to analyze the chemodynamics of dwarf galaxies of the Andromeda galaxy.

Space Telescope Science Institute Colaboration

Mentor: Nicolas Flagey and Alejandro Noriega

Summer 2024 - Fall 2024

Worked with mentors to develop a python program designed to remove Point Spread Functions (PSF) from point sources in astronomical data from JWST NIRCам with the purpose of studying the ISM dynamics in the Pleiades.

TECHNICAL SKILLS

- Proficient in Python, especially Jupyter Notebook, and C++
- Database Searches
- Research and Analysis
- Educational Outreach
- Mathematical problem solving
- Intermediate level management of GIS data (Planet, Google Earth Engine)

PRESENTATIONS

Poster Sessions

<i>CARSE</i>	<i>UPRM - Fall 2023</i>
<i>University of Utah Summer REU Showcase</i>	<i>Summer 2023</i>
<i>AAS meeting</i>	<i>New Orleans - January 2024</i>
<i>CARSE</i>	<i>UPRM - Fall 2024</i>

Slide Shows

<i>PRISM - Junior Tech</i>	<i>UPRB - April 2023</i>
<i>Summer Internship showcase</i>	<i>UPRRp - September 2023</i>
<i>NASA EPSCoR Annual Report Meeting</i>	<i>UPRRp- August 2023</i>
<i>NASA EPSCoR Astronomy Workshop</i>	<i>Summer 2024</i>
<i>NASA EPSCoR Annual Report Meeting</i>	<i>UPRRp - August 2024</i>
<i>NASA EPSCoR</i>	<i>Molecular Institute - December 2024</i>
<i>MILO Academy Showcase</i>	<i>PR TRUST - December 6, 2024</i>

CONFERENCES

<i>American Astronomical Society (AAS) Winter Meeting</i>	<i>New Orleans - 2024</i>
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PUBLICATIONS

<i>Measuring the Chemodynamics and Ages of the M32 and M110 Dwarf Galaxies with APOGEE - AAS Note</i>	<i>April 2024</i>
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WORKSHOPS

<i>LaTeX Workshop</i>	<i>UPRRP - Summer 2023</i>
<i>Solar Eclipse Workshop</i>	<i>UPRRP - Fall 2023</i>
<i>NASA EPSCoR Astronomy Workshop</i>	<i>UPRRP - Summer 2024</i>

CERTIFICATIONS

<i>Simposio de Aerobiología</i>	<i>May 2024</i>
<i>MILO Academy: Climate Action Hero Completion</i>	<i>Summer - Fall 2024</i>

AWARDS

<i>4th place of MILO Academy Showcase</i>	<i>December 2024</i>
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