

NAYLYNN TAÑÓN REYES

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EDUCATION

Smith College | Bachelor's | **Major — Computer Science** GPA 3.56 | 2020 — expected May 2023
San Diego Mesa College | Associate's | **Major — Physics** GPA 3.87 | Aug 2015 — Dec 2017

TECHNICAL SKILLS

Python | Java | Git | Data Analysis | Data Extraction | Data Mining | Project Management | Technical Documentation

WORK & INTERNSHIP EXPERIENCE

Research Assistant | **MIT — Massachusetts Institute of Technology** Dec 2020 — present

- Analyze light-curves of potential exoplanet transits, using Gaussian fittings, and measure their central transit time using various Python packages such as Numpy, Pandas and Matplotlib
- Predict all possible transit periods and future transit times using MCMC then request observing time at telescopes
- Compare findings to predictions, then confirm if planets exist in the system and study them for habitability on the next mission

Research Support Associate | **NASA Exoplanet Science Institute at Caltech** June 2018 — Sep 2020

- Extracted data from the scientific literature of exoplanets found using direct imaging and gravitational microlensing techniques
- Vetted and added data to the NASA Exoplanet Archive using SQL scripts
- Created the first and only comprehensive database for planets found using the gravitational microlensing method which is used by the science community for research purposes and future project proposals

Researcher | **Harvard & Smithsonian Center for Astrophysics** June 2019 — Aug 2019

- Identified a newly discovered Si X infrared emission line in the Sun's corona and used Gaussian fitting, with IDL, to find the intensity gradient as we observed away from the solar limb
- Showed we had an understanding of the atomic physics of the Si X ion by comparing photoexcited and collisional models which would help better predict solar flares that endanger Earth's magnetic field

Astrophysics Intern | **NASA — National Aeronautics & Space Administration** Feb 2019 — May 2019

- Analyzed hundreds of light-curve data files of low mass stars, using Python packages, to identify stellar flare rates
- Selected high radiation stars that needed flare signature models to predict if planet habitability was possible despite radiation

Data Science Intern | **NASA — National Aeronautics & Space Administration** Oct 2018 — Jan 2019

- Wrote code to identify which NASA documents should be archived at National Archives using machine learning and NLP
- Found the smallest training size to achieve a 90% accuracy rate with Python's NumPy, Pandas and Scikit-Learn packages

HONORS & AWARDS

Caltech WAVE Research Fellow | Caltech — California Institute of Technology 2018

STEM Community Scholar | San Diego Mesa College 2018

Academic Achievement Award | San Diego Mesa College 2018

NASA Community College Aerospace Scholar | NASA — National Aeronautics & Space Administration 2017

Dean's List | San Diego Community College District 2015-17

Phi Theta Kappa Honors Society | San Diego Mesa College 2016

EXTRACURRICULARS

Member — Smithies in Computer Science 2020-21

President — Society for Advancement of Chicanos/Hispanics and Native Americans in Science at Mesa College 2017-18

Member — Computer Science Club at Mesa College 2017-18

Software Team Member — San Diego City College Robotics Club 2018

PUBLICATIONS

The First Habitable Zone Earth-sized Planet from TESS. I: Validation of the TOI-700 System | Gilbert, E.G., et al. 2020

The L 98-59 System: Three Transiting, Terrestrial-Sized Planets Orbiting a Nearby M-dwarf | Kostov, V.B., et al. 2019

PRESENTATIONS

Colloquium | MIT | *Constructing a Comprehensive Database of Exoplanets Discovered with Gravitational Microlensing* 2018

Research Poster | MIT | *Multiwavelength Observations of M Dwarfs Flares Simultaneous with TESS* 2018