

Alexander Mendez

DATA SCIENTIST · ASTRONOMER

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Data Science Tools

Programming Python, SQL, IDL, Matlab, ~~TeX~~, Javascript, HTML+CSS, C++/ObjC, R
Tools Jupyter Notebook, matplotlib, numpy, pandas, git, GitHub, Docker, Linux, Django

Experience

Johns Hopkins University

Baltimore, Maryland

POSTDOCTORAL RESEARCH FELLOW

2014 - Now

- Developed clustering redshift technique to estimate the redshift distribution of photometrically detected sources.
- Estimated the redshift distribution for WISE, DECaLS, and SDSS objects.
- Predicted redshift uncertainty success rate for broadband-color manifold sampling techniques using Monte Carlo realizations.

University of California, San Diego

San Diego, California

GRADUATE STUDENT RESEARCHER

2009 - 2014

- Measured the 3D correlation-function of Active Galactic Nuclei identified using multi-wavelength observations.
- Observed and reduced astronomical observations using the Keck and Lick Telescopes.
- Created and published public data archive for the PRIMUS collaboration.
- Applied statistical tests, and modeled uncertainties of morphological measurements of galaxies in transition.

MXW LLC

San Diego, California

CO-FOUNDER

2010 - 2011

- Designed financial planning iOS Application.
- Built websites for academic institutions, including Center for Astronomy and Space Sciences.
- Constructed a CNC mill for rapid prototyping of electronics circuit boards and artwork.

Jet Propulsion Laboratory

Pasadena, California

UNDERGRADUATE RESEARCH FELLOW

2007

- Developed simulation for novel adaptive-optics laser communication system for earth-to-satellite communication.
- Built prototype of simulated communication system for laboratory testing.

Projects

Slice Structura

[Public website](#)

Slice Structura is a visualization of the large scale structure of galaxies back to the big bang. Open source mid 2016.

2015 - Now

timeRasp

[timeRasp repository](#)

Developer of timerasp, a python package to automate the capture and upload of timelapse videos.

2014 - Now

pyGRBL

[pyGRBL repository](#)

Developer of pyGRBL, a python package to run hobby CNC Mills using the GRBL shield.

2012 - Now

iSEDfit

[iSEDfit repository](#)

Contributor to iSEDfit, a IDL pipeline that estimates the stellar contribution to the spectral energy distribution of galaxies.

2012 - 2014

Education

PhD Physics

San Diego, California

UNIVERSITY OF CALIFORNIA, SAN DIEGO

2010 - 2014

MS Physics

San Diego, California

UNIVERSITY OF CALIFORNIA, SAN DIEGO

2008 - 2010

Bachelor of Science – College Honors in Astronomy

Seattle, Washington

UNIVERSITY OF WASHINGTON, SEATTLE

2003 - 2008

Double degree: Mathematics, Astronomy and Physics