

Alexander Mendez

DATA SCIENTIST

Palo Alto, California

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Data Science Tools

Languages Python, SQL, IDL, MATLAB, \LaTeX , R (some experience), Javascript (some experience), Java (some exposure)

Tools Jupyter Notebook, matplotlib, NumPy, Pandas, scipy, scikit-learn, git, GitHub, AWS, Flask, JQuery, Bootstrap

Experience

Insight Data Science

DATA SCIENCE FELLOW

Palo Alto, California

2016 - Now

- Consulted with YC startup [Truebill](#) to deliver a collaborative-filter recommendation engine for 700+ services to grow user base
- Identified two company user base changes to quantify effect of media exposure using Jupyter and 20GB PostgreSQL database

Johns Hopkins University

POSTDOCTORAL RESEARCH FELLOW

Baltimore, Maryland

2014 - 2016

- Developed clustering redshift technique in Python to estimate distances to 500 million astronomical objects (800GB)
- Predicted redshift success rate with novel manifold sampling techniques

University of California, San Diego

GRADUATE STUDENT RESEARCHER

San Diego, California

2009 - 2014

- Published the 3D correlation-function of supermassive black holes using custom multiprocessor Python code
- Created and published online public data archive containing 200K+ extragalactic redshifts for the astrophysics community

MXW LLC

CO-FOUNDER

San Diego, California

2010 - 2011

- Coded iOS app for financial portfolio rebalancing with near-live Django backend
- Built 10+ websites for academic institutions, including Center for Astronomy and Space Sciences
- Constructed a computerized mill (CNC) for rapid prototyping of electronics circuit boards and artwork
- Assembled hardware and computer vision programs using OpenCV to enable precise milling of circuit boards

Jet Propulsion Laboratory

UNDERGRADUATE RESEARCH FELLOW

Pasadena, California

2007

- Developed machine vision algorithm in MATLAB for adaptive-optics satellite communication system
- Fabricated communication system hardware for laboratory testing and verification

Projects

Into the Distant Sky

Into the Distant Sky is a visualization of the observed universe back to the big bang

ajmendez.github.io/distantstsky

2015 - Now

timeRasp

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

github.com/ajmendez/timerasp

2014 - Now

pyGRBL

Developer of pyGRBL, a python package to operate hobby Arduino CNC mills

github.com/ajmendez/PyGRBL

2012 - Now

Education

Ph.D. Physics

UNIVERSITY OF CALIFORNIA, SAN DIEGO

San Diego, California

2010 - 2014

M.S. Physics

UNIVERSITY OF CALIFORNIA, SAN DIEGO

San Diego, California

2008 - 2010

B.S. Mathematics & B.S. Astronomy and Physics

UNIVERSITY OF WASHINGTON, SEATTLE

Seattle, Washington

2003 - 2008

College Honors in Astronomy