

Rory Hartong-Redden

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Summary

machine learning, data science, physics, software development

Skills Summary

Languages: Python, MATLAB

Dev Tools: Git, Heroku, PyCharm, AWS

Data: SQL, PostgreSQL, HDF5

ML: Neural Networks, Decision Trees

Python Stack: Conda, Keras, matplotlib, NumPy, Pandas, PyTables, scikit-learn, SQLAlchemy

Work Experience

- **Startup.ML** San Francisco, CA
Machine Learning Fellow Dec 2015–Apr 2016
 - Developed a production FinTech data pipeline for currency trading using industry-standard machine learning methods
 - Investigating how Reinforcement Learning can be leveraged to revolutionize algorithmic trading
 - **Harold Washington College** Chicago, IL
Adjunct Faculty Feb 2015–May 2015
 - Incorporated the latest discoveries in astronomy and the new *Cosmos* into my lessons
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Projects

- **Kaggle** San Francisco, CA
Home May 2015–Present
 - Coded a deep residual convolution network in Keras/TensorFlow for multi-label classification for the Yelp Kaggle competition [yelp_kaggle repository]
 - **Master's Thesis: Krechetnikov Fluid Physics Lab** Santa Barbara, CA
Research Assistant Dec 2013–Jun 2014
 - Incorporated a recent image processing technique for cheap 3D high speed mm-resolution measurement over a surface area of 225 cm² [profilometry repository]
 - **Transient Optical Sky Survey** Santa Barbara, CA
Lubin Lab, Dept. of Physics Sep 2008–Jun 2009
 - Collaborated on the MATLAB/C data pipeline that processed 1GB of images per night
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Education

- **University of California, Santa Barbara** Santa Barbara, CA
MS Mechanical Engineering Dec 2014
 - Thesis: *Experimental apparatus for the study of Faraday waves on time-varying domains*
- **Northwestern University** Evanston, IL
Graduate study: PhD Physics Sept 2010–Mar 2012
- **University of California, Santa Barbara** Santa Barbara, CA
BS Physics & BS Mechanical Engineering June 2010
 - Thesis: *Experimental and theoretical study of pattern identification in physical systems with circular symmetry*
 - Graduated with honor in both degrees, GPA: 3.7/4.0
 - Dean's List 11/12 quarters