

Rory Hartong-Redden

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Summary

machine learning scientist, python developer, data scientist, physicist

Skills Summary

Languages: Python, Matlab, R

ML: Neural Networks, Gradient Boosted Machines

Data: SQL, Postgres, HDF5

Dev: Git, Heroku, PyCharm, AWS

Python Tools: Conda, Keras, matplotlib, NumPy, OpenCV, Pandas, scikit-learn, SQLAlchemy

Work Experience

- **Startup.ML**

San Francisco, CA

Machine Learning Fellow

Dec 2015–Apr 2016

- Developed a FinTech data pipeline for algorithmic currency trading using machine learning
- Lead the integration of an open-source Python backtesting and trading platform
- Research in Reinforcement Learning for autonomous trading

- **Harold Washington College**

Chicago, IL

Adjunct Faculty

Feb 2015–May 2015

- Presented complex concepts in Astronomy at the level of the general public
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Projects

- **Kaggle**

May 2015–Present

- Competing in the “Distracted Driver” Kaggle competition with a deep convolutional neural network written in Keras/TensorFlow

- **Master’s Thesis**

UC Santa Barbara

Krechetnikov Fluid Physics Lab

Dec 2013–Jun 2014

- Incorporated a recent image processing technique for cheap 3D high speed mm-resolution measurement over a surface area of 225 cm^2 [profilometry repository]

- **Bachelor’s Thesis: Drop Splash Experiment**

Santa Barbara, CA

Krechetnikov Fluid Physics Lab, Dept. of Mechanical Engineering

Jul 2009–Oct 2010

- Published a peer-reviewed article¹ on the experimental and theoretical advances I developed that may have solved a 100-year puzzle in fluid dynamics

- **Transient Optical Sky Survey**

UC Santa Barbara

Lubin Lab, Dept. of Physics

Sep 2008–Jun 2009

- Anomaly detection in astronomy using a Matlab/C data pipeline that analyzed 1GB of images taken each night
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Education

- **University of California, Santa Barbara**

Santa Barbara, CA

MS Mechanical Engineering

Dec 2014

- **Northwestern University**

Evanston, IL

PhD Physics Candidate

Sept 2010–Mar 2012

- **University of California, Santa Barbara**

Santa Barbara, CA

BS Physics & BS Mechanical Engineering

June 2010

- Graduated with honor in both degrees, Dean’s list 11/12 quarters, GPA: 3.7/4.0
 - Member: Tau Beta Pi engineering honor society
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¹Hartong-Redden, R. & Krechetnikov, R. *Pattern identification in systems $S(1)$ symmetry*. Phys. Rev. E. 2011.