

# Rory Hartong-Redden

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## Summary

data scientist, physicist, all-around nice guy

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## Skill Summary

**Languages:** Python, MATLAB

**Dev Tools:** Git, Heroku, PyCharm, AWS

**Data:** SQL, PostgreSQL, HDF5

**ML:** Neural Networks, Decision Trees

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

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## Work Experience

- **Startup.ML** San Francisco, CA  
*Machine Learning Fellow* Dec 2015–Present
    - Developed a FinTech data pipeline for applying machine learning to algorithmic trading
    - Wrote Python scripts to setup a PostgreSQL database on Heroku and ingest streaming data
  - **Harold Washington College** Chicago, IL  
*Adjunct Faculty* Feb 2015–May 2015
    - Gave 2 lectures a week for a descriptive astronomy course
  - **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  $225\text{ cm}^2$  [profilometry repository]
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## Projects

- **Personal** Chicago, IL  
*Home* May 2015–Present
    - Participating in the Yelp Kaggle competition [yelp\_kaggle repository]
    - Deployed a Twitter clone in Rails on Heroku by following the *Ruby on Rails Tutorial*
  - **Bachelor’s Thesis: Drop Splash Experiment** Santa Barbara, CA  
*Krechetnikov Fluid Physics Lab, Dept. of Mechanical Engineering* Jul 2009–Oct 2010
    - Performed stereo triangulation in MATLAB, reduced the 3D data, and searched for patterns using my theory of pattern identification [drop\_splash repository]
    - Published a peer-reviewed article<sup>1</sup> on the experimental and theoretical advances I developed that may have solved a 100-year puzzle in fluid dynamics
  - **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
  - **Northwestern University** Evanston, IL  
*Graduate study in Physics* 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, GPA: 3.7/4.0
    - Dean’s List 11/12 quarters
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<sup>1</sup>Hartong–Redden, R. & Krechetnikov, R. *Pattern identification in systems  $S(1)$  symmetry*. Phys. Rev. E. 2011.