Rory Hartong-Redden

San Franicisco, CA | roryhr@gmail.com | Cell: 925.297.9484 | roryhr.github.io | github.com/roryhr

Summary

machine learning scientist, python developer, data scientist, physicist

Skills Summary

Languages: Python, Matlab, R   **ML:** Neural Networks, Gradient Boosted Machines
Data: SQL, Postgres   **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 production FinTech data pipeline for algorithmic currency trading using XGBoost
  - 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

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 $225\,\mathrm{cm}^2$ [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 article[1] 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*
  - Collaborated on the Matlab/C data pipeline that processed 1GB of images per night

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, GPA: 3.7/4.0
  - Dean's List 11/12 quarters
  - Member: Tau Beta Pi engineering honor society

---

[1] Hartong–Redden, R. & Krechetnikov, R. *Pattern identification in systems S(1) symmetry.* Phys. Rev. E. 2011.