

# Richard Boeri Decal

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## Skills

+ denotes proficiency

**Algorithms** Supervised, unsupervised, and reinforcement learning · Cross-validation · PCA  
**Languages** Python<sup>+</sup> · R · SQL  
**Packages** Tensorflow · Pandas<sup>+</sup> · Numpy<sup>+</sup> · Scikit-learn · Matplotlib<sup>+</sup>  
**Misc.** Español<sup>+</sup> · English<sup>+</sup> · Italiano · UNIX systems<sup>+</sup>  
**Passions** Travel, teaching, learning, social justice, tiny living. Research interests: molecular biology, climate change, computational neuroscience, +++.

## Projects

**CartPole** I solved [CartPole](#) (a continuous classic control game) using policy gradients.  
**Income Prediction** Predicted incomes using [California census data](#) based on 14 characteristics using feature engineering, support vector machines, and cross-validation.  
**Roboskeeter** Created models of mosquito heat-tracking behavior during foraging from wind-tunnel experimental data.  
(ongoing)

## Experience

### Research Assistant

*Fairhall Lab, Dept. of Biophysics, Uni. of Washington*

Seattle, WA

2014 → 2016

- Responsible for simulating experiments (data munging, design, coding, visualization, analysis).
- Learned concepts in neuronal dynamics which are relevant to artificial deep neural networks.

## Publications

“[Analysis of neural subtypes reveals selective mitochondrial dysfunction in dopaminergic neurons from parkin mutants](#)”. *PNAS* 2012. 109(26):10438-43.

“[Destruction Complex Function in the Wnt Signaling Pathway of Drosophila Requires Multiple Interactions Between Adenomatous Polyposis Coli 2 and Armadillo](#)”. *Genetics* 2012. 190(3):1059-75.

“Quantifying Small RNA Concentrations in *C. elegans*”. Honors thesis. 2011.

## Education

**M.S. Data Science**, *New College of Florida*. Expected 2019.

**Artificial Intelligence Engineer Nanodegree**, *Udacity & Kaggle*

**B.A., Chemistry/Biology (Honors)**, *New College of Florida*

Sarasota, FL

[Udacity.com](#)

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