

# Richard Boeri Decal

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## Skills

+ denotes proficiency

**Languages** Python<sup>+</sup> · R · SQL · BASH · Español<sup>+</sup> · English<sup>+</sup> · Italiano  
**Packages** Tensorflow · Pandas<sup>+</sup> · Numpy<sup>+</sup> · Scikit-learn · Matplotlib<sup>+</sup> · Tidyverse  
**Passions** Travel, teaching, learning, social justice, my tiny home. Research interests: molecular biology, climate science, computational neuroscience.

## Experience

### Classroom Mentor

Udacity.com, Intro to Programming Nanodegree

Remote  
2017 — Now

- Teaching Python, increasing student engagement, and goal planning.

### Research Assistant

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

Seattle, WA  
2014 — 2016

- Iteratively developed dynamical agent-based models of mosquito thermonavigation and benchmarked them against experimental data.
- My models will be further validated using electrophysiological & tethered flight experiments to test theories about multi-modal sensation and decision-making.

## Publications

Burman, Yu, Poole, **Decal**, Pallanck. "[Analysis of neural subtypes reveals selective mitochondrial dysfunction in dopaminergic neurons from parkin mutants](#)". *PNAS* 2012. 109(26):10438-43.  
Kunttas-Tatli, Zhou, Zimmerman, Molinar, Zhouzheng, Carter, Kapur, Cheatile, **Decal**, McCartney. "[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.  
**Decal**. "Quantifying Small RNA Concentrations in *C. elegans*". Honors thesis. 2011.

## Projects

**PolceStops** Created a webapp to query and visualize the [Stanford Open Policing dataset](#).  
**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** Modelling mosquito heat-tracking behavior from windtunnel experiments.  
(ongoing)

## Education

**M.S. Data Science**, New College of Florida. Full tuition scholarship. Expected 2019  
**Artificial Intelligence Engineer Nanodegree**, Udacity 2017  
**B.A., Chemistry/Biology (Honors)**, New College of Florida 2011