

# Richard Boeri Decal

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## Skills

+ denotes proficiency

**Languages** Python<sup>+</sup> · R · BASH · RegExp · ECL · Español<sup>+</sup> · English<sup>+</sup> · Italiano · 官话  
**Tools** Tensorflow · Pandas<sup>+</sup>, SciPy<sup>+</sup> · Spark, Hadoop, HPCC · Flask, Plotly<sup>+</sup> · Tidyverse · MongoDB, PostgreSQL, HBase · BeautifulSoup, Scrapy · GraphViz · AWS · SAS  
**Passions** AI for social good, educational chatbots, carbon sequestration, blockchain, anti-censorship, molecular bio, computational neuroscience, travel, [photos](#), my tiny home.

## Experience

**Data Scientist**, *Master's capstone project* 2018  
Studying effect of chronic conditions on heart failure using embeddings, clustering, & Markov models.

**Research Intern**, *Allen Institute for Brain Science* Summer 2018  
Enabling neuron tracing of petabyte-scale brain microscope data using deep reinforcement learning.

**Classroom Mentor**, *Intro to Programming Nanodegree, Udacity* 2017 — 2018  
Guided students 1-on-1 in the *Python for Data Analysis* Track.

**Research Assistant**, *Fairhall Lab, Dept. of Biophysics, Uni. of Washington* 2014 — 2016  
Simulating mosquito thermal plume navigation using agent-based models of windtunnel experiments.

## 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, Cheattle, **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.

## Other Projects

**Author ID** NLP analysis to deanonymize the *New York Times* Op-Ed Resistance author.

**Tensorpack** Contributed to deep reinforcement learning framework for medical image data.

**visit2vec** Created a word2vec variant which embeds patient visits for clustering.

**Etsy Trends** Continuously scraping & programatically generating product ideas.

**Capsule Net** Using CapsNet to for manifold learning of notMNIST; synthesizing data.

## Education

**M.S. Data Science**, *New College of Florida*. Full tuition scholarship. Expected Dec. 2018

**Artificial Intelligence Engineer Nanodegree**, *Udacity* 2017

**B.A., Chemistry/Biology (Honors)**, *New College of Florida* 2011