

# Richard Boeri Decal

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## Skills

+ denotes proficiency

**Languages** Python<sup>+</sup> · R Tidyverse · BASH · RegExp · ECL · Español<sup>+</sup> · English<sup>+</sup> · Italiano  
**Tools** PyTorch, Keras, Tensorflow · Pandas<sup>+</sup>, MongoDB, PostgreSQL · SciPy<sup>+</sup> · PySpark, Hadoop · Plotly Dash, Flask · BeautifulSoup, Scrapy · SSH · Docker · GraphViz · vim  
**Passions** AI for good: carbon sequestration, existential risk, healthcare, anti-propaganda, anti-censorship, education, molecular bio. Travel, [photos](#), my tiny home, [Couchsurfing](#).

## Experience

**Lead Data Scientist**, *Pacemate* 2019  
Improving cardiac patient care with automated time-series analysis of ECG data.

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

**Research Intern**, *Neuron Morphology Team, 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, 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.

## Selected Projects

**Author ID** NLP analysis to deanonymize the *New York Times* "[Resistance Op-Ed](#)" author.  
**Tensorpack** Contributed to deep RL framework for automating medical imaging tasks.  
**Capsule Net** Trained [CapsNet](#) for [manifold learning](#) of notMNIST; synthesizing data.  
**CartPole** Solved a physics game using a deep policy gradient neural network.

## Education

**M.S. Data Science**, *New College of Florida*. Full tuition scholarship. 2017 — 2018  
**B.A., Chemistry/Biology (Honors)**, *New College of Florida* 2007 — 2011