# Richard Boeri Decal

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Skills + denotes proficiency

Languages Python+ · R · BASH · RegExp · ECL · Español+ · English+ · 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 Al 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, Cheatle, **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 "Resistance Op-Ed" author.
Tensorpack	Contributed to deep learning framework for automating medical imaging tasks.
visit2vec	Created a word2vec variant for embedding patient visits & clustering.
Etsy Trends	Stealth start-up: scraping Etsy & programatically generating product ideas.

# Capsule Net Using CapsNet for manifold learning of notMNIST; synthesizing new digits.

#### **Education**

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