

Richard Boeri Decal

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Skills

+ denotes proficiency

Languages Python⁺ · R · BASH · ECL · Español⁺ · English⁺ · Italiano
Tools Tensorflow · Pandas⁺ · Numpy⁺ · Scikit-learn · Matplotlib⁺ · Tidyverse · SQL · MongoDB · HBase · HPCC
Passions Travel, teaching, learning, social justice, my tiny home. Research interests: pedagogical chatbots, large-scale carbon sequestration, computational neuroscience.

Experience

Intern

Allen Institute for Brain Science

Seattle, WA

Summer 2018

- Proposed & designed a method for predicting neuron morphologies from microscopy data. Implemented a proof of concept. Working towards a full implementation and publication.

Research Assistant

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

Seattle, WA

2014 — 2016

- Developed dynamical agent-based models of mosquito thermonavigation. Optimized simulations using flight data from 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

Profundo Using deep reinforcement learning to automatically trace neuron morphologies.
PolceStops Created a webapp to query and visualize the [Stanford Open Policing dataset](#).
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.

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