Abbie M. Popa, Ph.D.

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EDUCATION

Ph.D., University of California at Davis, Neuroscience	June 2018
Honors Sc.B., Brown University, Cognitive Neuroscience	May 2011

TECHNICAL SKILLS

Software including: Python, R, Jupyter, git

Packages including: sklearn, pandas, numpy, scipy, matplotlib, ggplot, fastai, lm, lme, dplyr

TECHNICAL EXPERIENCE

The Data Institute at the University of San Francisco — San Francisco, CA

Data Science Postdoctoral Fellow — August 2018 - present

- Using self-supervised learning techniques including feature embeddings to better describe nodes in brain networks from patients with schizophrenia and healthy controls
- Contributing to a web-based app for mass processing of EEG files in the cloud
- Classifying nonlinear features in EEG from infants who were born preterm using machine learning techniques including random forests and support vector machines
- Contributing to a collaborative reading and practice group on Reinforcement Learning
- Consulting on collaborations with 4 private sector companies
- Contributed to a collaborative reading and practice group on Reinforcement Learning
- Instructed and developed an Introduction to Data Science class for 36 undergraduates

UC Davis MIND Institute — Sacramento, CA

Ph.D. Researcher — September 2012 - June 2018

- Used k-means clustering to organize behavioral, eye-tracking, and self-report measures
- Used mixed effects linear modeling to identify patterns in participants' behavior over time
- Developed 6 child-friendly computerized behavior tests (disguised as games)
- Trained and mentored 6 junior research assistants and 7 volunteer interns
- Resulted in 4 manuscripts (in progress) and 18 conference presentations (completed)

Davis Incubator Group — Student organized group at UC Davis

President — September 2016 - June 2018

Member — January - August 2016

- Completed 2 collaborative Kaggle image classification challenges using skimage, TensorFlow, tflearn, keras, OpenCV and PIL on an AWS machine to efficiently localize and classify images through convolutional neural networks for datasets up to 100 GB.
- Completed a collaborative Driven Data competition using pandas and sklearn to finish in the top 10% of competitors

UC Davis Data Science Initiative — Davis, CA

Affiliate — April 2016 - June 2018

- Consulted with members of the UC Davis community on data science problems from twitter scraping to genomics as part of team seminars

LEADERSHIP AND COMMUNITY EXPERIENCE

Software Carpentry

Certified Instructor for bash, git, R, and Python — May 2018 - Present

International Rescue Committee

Refugee Empowerment Volunteer — January 2017 - October 2017

Explorations, UC Davis Undergraduate Research Journal

Editor — February 2015 - August 2015

Managing Editor, Physical and Life Sciences — September 2015 - June 2017