Abbie M. Popa, ScB **UC Davis Neuroscience Graduate Group**
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EDUCATION

PhD University of California at Davis (September 2012 - December 2017)
Major: Cognitive Neuroscience with a Data Science Initiative Affiliation
Honors ScB., Brown University (September 2006-December 2010)
Major: Cognitive Neuroscience

TECHNICAL SKILLS

Python, R, Matlab, Jupyter, git, SQL, SPSS, DataGraph, LaTeX , HTML, CSS
Packages including TensorFlow, sklearn, ggplot, nlme, pandas, tflearn

PROJECTS

Kaggle: Fish Identification

- Used skimage, TensorFlow, and tflearn to classify fish images from a kaggle data set
- Preprocessed images using PIL and skimage and stored data in HDF5 for efficiency
- Collaborated with three other data scientists to apply convolutional neural networks

FastText Horror Author Classification

- Used Facebook's publically available package FastText to classify text
- Pre-processed text populated from Project Gutenburg public domain database using bash
- Achieved 80% accuracy for single sentences between two horror authors

Kaggle Done Quick: Animal Shelter Predictions

- Cleaned and re-binned data for feature dimensionality reduction
- Performed multinomial logistic regression using the nnet package of R to predict five possible outcomes for shelter animal and generated confusion matrices to visualize data
- Completed project in under 4 hours

Driven Data: Blood Drive Donations

- Cleaned data in pandas to account for outliers and unusual distributions
- Used sklearn to cross-validate multiple models, selecting random forest classification
- Collaborated with three other data scientists to finish in the top 10% of competitors

TECHNICAL EXPERIENCE

PhD Researcher UC Davis MIND Institute and Neuroscience Graduate Group
Davis, CA September 2012 - present

- Developed 6 child-friendly computerized behavior tests (disguised as games)
- Used k-means clustering to classify children as "copers" or "strugglers" based on behavioral, eye-tracking, and self-report measures
- Used ICA to isolate brain activity from noise in EEG data
- Used non-linear modeling to classify participants behavior over time
- Used linear regression to correlate trajectories of brain development and children's outcomes in a large (approximately 500 GB) dataset
- Programmed data analyses and visual stimuli using R, Python, and Matlab
- Trained and mentored four junior research assistants and seven volunteer interns

Davis Incubator Group Student organized group at UC Davis
President (September 2016 - present)
Member (January - August 2016)

- Completed online coursework in python, SQL, and machine learning
- Participated collaboratively in online machine learning competitions
- Organized and scheduled meetings for a group of 6-8 data scientists to practiced coding, machine learning, and share data science skills

LEADERSHIP AND COMMUNITY EXPERIENCE

International Rescue Committee
Refugee Empowerment Volunteer (Focus on Computer Support/Literacy) (Jan 2017 - Present)

Explorations, UC Davis Undergraduate Research Journal
Managing Editor (Sept 2015 - Present)
Editor (Feb - June 2015)

Neuroscience Initiative to Enhance Diversity
Student Organizer (Event held April 2016)

Neurobiology (class of 200 undergraduates)
Teaching Assistant (April - June 2015)