KATHERINE B. SHAKMAN, PhD
773 882 8262 | San Francisco, CA | katieshak@gmail.com
github.com/katieshakman | linkedin.com/in/katherine-shakman | katieshakman.github.io

SKILLS

Programming Languages and Tools: Python*, R, MATLAB*, MongoDB*, SQL, PyMongo, Bash, Pandas*, Numpy, Ray, Spark, Seaborn, Scikit-learn*, Torch, Tensorflow/Keras, AWS*, Unix*, Docker, Kubernetes, Git
Scientific: Experimental design*, statistical analysis*, data visualization*, technical communication*
Machine Learning and Algorithms: Linear and logistic regression*, decision trees and random forest*, k-nearest neighbors, support vector machines, k-means clustering, principal components analysis and dimensionality reduction, neural networks, natural language processing, collaborative filtering

* = most experience

EXPERIENCE

Domino Data Lab San Francisco, CA
Field Data Scientist May 2020-Present
- Co-conceived, piloted, and built out the data science advisory team within professional services
- Collaborated on implementation and optimization of a distributed deep learning model for tumor detection in whole slide images, resulting in a conference talk at Nvidia GTC 2020
- Contributed design and implementation of a solution for online ML from streams

Field Engineer/Customer Success Engineer October 2018-May 2020
- Educate data science leaders and teams in data science best practices on Domino data science platform
- Engineer solutions to customers' technical issues, from environment design to model deployment
- Produce tools to enhance the efficiency of the customer success team

Insight Data Science San Francisco, CA
Health Data Science Fellow June 2018 - September 2018
- Consulted for Therachat to build TheraPulse, a tool for predicting patients' symptom severity
- Produced an end-to-end solution from querying a MySQL database to modeling to webapp
- Engineered 8 text-derived features using NLP tools in Python
- Predicted patient distress ratings via SVM and random forest models with grid search HPO in sklearn

Columbia University New York, NY
Graduate Research Fellow in Neuroscience August 2011 - May 2018
- Led a team that assessed olfactory behavior and neural responses to olfactory stimuli to uncover new roles for dopaminergic neurons in modulating innate and learned responses to odors
- Wrote MATLAB programs for analysis of neural data to understand neural activity in memory circuits
- Imaged and analyzed neural activity in insect dopamine neurons in response to chemosensory stimuli
- Generated automated MATLAB tools and pipeline to recognize and analyze insect behavior

Columbia University Neuroscience Outreach New York, NY
Executive Board Member November 2012 – January 2018
- Designed neuroscience outreach programming for middle and high school students and families
- Prepared budgets and grants to fund outreach activities
- Coordinated events with the American Museum of Natural History and the Dana Foundation

EDUCATION

Columbia University New York, NY
PhD in Neurobiology and Behavior May 2018

California Institute of Technology (Caltech) Pasadena, CA
BS in Biology May 2011