Aaron Broukhim

broukhimaaron@gmail.com | (310) 867-3564 | github/linkedin: @aabroukh

Summary

Looking to apply machine learning and software engineering related skills from research, personal projects, and school to industry. I'm a fast learner, willing to take initiative, and am willing to work remotely or in person while contributing to a positive work environment.

Skills

Languages - C, C++, Java, Python, R, SQL
Frameworks - Pandas, Scikit-learn, Tensorflow, Keras, Selenium, Seaborn, Matplotlib, NumPy, React, Node
Misc - Illustrator, Lightroom, Maya, Photography, Git, AWS, Linux, MySQL

Education

B.S. in Cognitive Science: Machine Learning & Neural Computation — 2019-2021
Minor in Computer Science & Engineering — GPA: 3.6
@ University of California, San Diego

Supervised/Unsupervised/Reinforcement/Deep Learning, Genetic Algorithms, ML in Music, ML in Brain Computer Interfaces, Human-AI interaction

Computer Science/Visual Communications — 2015-2019
@ Santa Monica College — GPA: 3.5

Engineering Physics, Data Structures, Assembly, Typography, Color Theory, 3D Animation, Photography, Art

Experience

Research Assistant — June 2021-Present
@ UCSD: Computer Science & Engineering

-Investigated privacy in a group setting and contestability in machine learning
-Web Scraped Facebook using Selenium to make inferences on a user's friends
-Designed logistic regression models capable of detecting hate speech on twitter & used word embedding (Word2Vec) to bin dataset into different types of hate speech
-Designed and implemented a UI in React with a Node and Flask backend to help non-tech savvy users identify faulty ML systems
-Created SQL databases on an AWS server and conducted queries to support UI backend
-Built Balltree with various similarity metrics to show similar tweets that may be mislabeled

Graphic Design Internships — Summer of 2015, 2016 & 2017
@ Hotpoint App/Samuels Advertising

-Designed easy to understand one sheets for potential buyers of
-Designed geotags & for print typographical illustrations

Projects

Snake Reinforcement Learning

-Utilized N-Step Temporal Difference and SARSA methods to play snake and compared performance
-Designed a custom Open-AI gym environment and deep Q-Learning agent in keras that reached level 20 consistently (max 40) with a small state space of 10 and action space of 3

DJAI

-Developed models to classify spotify songs by emotion
-Developed another model to determine the mood of ambient noise in a room
-Utilized both models to play music that fit a rooms mood

Brain Wave Depression Classification

-Analyzed EEG data of open/closed eye state participants
-Classified participants as depressed or not by alpha wave power