

Aaron Broukhim

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Summary

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

Education

PhD in Computer Science @ <i>University of California, San Diego</i> Human Computer Interaction & Machine Learning	2022-Present
B.S. in Cognitive Science: Machine Learning & Neural Computation Minor in Computer Science & Engineering @ <i>University of California, San Diego</i> Supervised/Unsupervised/Reinforcement/Deep Learning, Genetic Algorithms, ML in Music, ML in Brain Computer Interfaces, Human-AI interaction	2019-2021 GPA: 3.6
Computer Science & Visual Communications @ <i>Santa Monica College</i> Engineering Physics, Data Structures, Assembly, Typography, Color Theory, 3D Animation, Photography, Art	2015-2019 GPA: 3.5

Experience

Research Assistant @ <i>UCSD: Computer Science & Engineering</i> -Web Scraped Facebook using Selenium to make inferences on a user's connections -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	June 2021-Present
Associate Audio Machine Learning Engineer @ <i>Virufy</i> -Peer review ML research involving cough audio classification in Tensorflow and SK-Learn -Utilize Sagemaker to explore new feature and architecture combinations with novel data	January 2022-August 2022
Graphic Design Internships @ <i>Hotpoint App/Samuels Advertising</i>	Summer of 2015, 2016 & 2017

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 -Scraped Spotify for emotion based playlists to create dataset labeled by emotion -Built SVM model to classify songs according to emotion -Retrained existing audio to emotion model on RAVDESS dataset	

Skills

Languages - Python, SQL, Java, CSS, HTML, C++, C, Javascript
Frameworks - Pandas, NumPy, SK-Learn, TensorFlow, Keras, PyTorch, Selenium, React, Node, Flask
Misc - Git, Sagemaker, MySQL, AWS, Illustrator, Lightroom, Photography