

# Aaron Broukhim

broukhimaaron@gmail.com | github/linkedin: @aabroukh

## Summary

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Looking to apply machine learning 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.

## Education

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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, GAN, CNN, RNN  
Genetic Algorithms, KNN, K-means, EM Maximization, Bellmans Equation,  
Monte Carlo, Q-Learning, SARSA, N-step TD, Linear/Logistic Regression

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

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Research Assistant Summer 2021

@ UCSD: Computer Science & Engineering

- Web Scraped social media using Selenium and then made inferences on users that were missing data based on mutual friend information
- Designed logistic regression models capable of detecting hate speech on social media & used word embedding (Word2Vec) to bin dataset
- Stored data and conducted queries in MySQL and MongoDB

Graphic Design Internships

Summer 2015, 2016 & 2017

@ Hotpoint App/Samuels Advertising

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

## Projects

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Snake Reinforcement Learning

- Utilized N-Step TD and SARSA methods to play snake
- Compared the two methods performance within small feature spaces
- Made a custom gym environment and deep Q-Learning agent as well

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

cycleGAN

- Modified a GAN in Keras to transform Classical music to Blues and vice versa

Brain Wave Depression Classification

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

## Skills

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Languages - C, C++, Java, Python, R, SQL

Frameworks - Pandas, Scikit-learn, Tensorflow, Keras, Selenium, Seaborn, Matplotlib, NumPy

Misc - Illustrator, Lightroom, Maya, Photography, Git, mongoDB