

# Aaron Broukhim

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## 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 an inclusive 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, Genetic Algorithms, Statistics, Discrete Math, ML in Music, ML in BCIs, Research Methods/Principles, Data Representation, Advanced Data Structures, Algorithms, Human-AI interactions  
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  
-Designed and implemented a UI in React with a Node backend  
-Created databases and conducted queries in MySQL on an AWS RDS instance  
  
Graphic Design Internships Summer 2015, 2016 & 2017  
@ *Hotpoint App/Samuels Advertising*  
-Designed easy to understand one sheets for potential 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  
-Designed a custom gym environment and deep Q-Learning agent  
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, React, Node  
Misc - Illustrator, Lightroom, Maya, Photography, Git, AWS, Linux, MySQL