

CIANAN MURPHY

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EDUCATION

UCLA

Bachelors Biophysics 2020

Relevant Coursework: Neurophysics, Statistical Mechanics, Linear Algebra, Multivariable Calculus, Quantum Mechanics, E&M, Biophysics

SKILLS

MACHINE LEARNING: Linear/Logistic Regression, Random Forest, XGBoost, Naive Bayes, KMeans

NATURAL LANGUAGE PROCESSING: Topic Modeling: NMF/LSA/LDA, Stemming and Lemmatization, TF-IDF

LANGUAGES + TOOLS: Python, SQL, Git, Matlab

EXPERIENCE

Metis, *Data Scientist*, San Francisco, CA

June 2020 - Sept. 2020

Completed an intensive 12 week accredited data science bootcamp. Built five end-to-end projects using python and incorporated data acquisition, data management, data cleaning, machine learning, data visualization, and presentation.

Selected work includes:

California Wildfire Size Prediction

- The project's goal was to predict potential wildfire sizes within California, using California wildfire perimeter data from 1980 to 2019. California ecoregion and weather data were then used as descriptors for each fire.
- Used ecoregion, temperature, soil temperature, wind speed, and other variables to help predict potential wildfire size using XGBoost algorithm.

Specific Stock Prediction based on Subreddit

- With the aim to predict stock performance, looked at individual stocks and their corresponding subreddits. Found common recurring topics and the changing public sentiment of those topics over time
- Used clustering to separate post titles into groups, looked at sentiment towards a post by looking at upvote to downvote ratio and used XGBoost and Logistic Regression as a model to predict stock market

Facial Expression Classification

- Classified between different facial expressions that represent seven different human emotions
- Utilized data augmentation in tandem with classification techniques such as XGBoost and Random Forest as well as a convolutional neural network to classify images

NBA Career Longevity Prediction

- Looked at NBA players performance in their first two years in the NBA to predict how long they will remain in the league

Elegant Mind Club, *Undergraduate Research Team Member*, Los Angeles Jan. 2019 - Sept. 2019

As part of an undergraduate-based research team, explored the origin of human consciousness. In charge of an eye tracking project, focused on development of a cost-effective eye tracking alternative.

- Utilized proficiencies in MATLAB, Arduino, Fiji, and AutoCAD in a team effort to successfully create a setup that detected eye motion and micro saccades utilizing a cost-effective solution
- Created program to help distinguish micro saccades within eye-movement data

Molecular Matrix Inc., *Intern*, Sacramento

June 2018 - Sept. 2018

Researched companies biological scaffolding, maintained vivarium, assisted in surgeries and helped with business planning.

☐ Showcased that the scaffolding, when saturated with certain biologics, could produce similar results to current competitive commercialized products with less biologics, demonstrating a safer alternative in vivo.