Michael Chau

Education

University of California, Berkeley
Expected: May 2022
Major: Computer Science and Statistics
GPA: 3.754

Relevant Courses
CS231n: CNNs for Visual Recognition
CS61a: Structure and Interpretation of Programs
CS61b: Data Structures
CS61c: Machine Structures
CS70: Discrete Math and Probability Theory
Data 8: The Foundations of Data Science
CS186: Introduction to Database Systems
CS170: Efficient Algorithms and Intractable Problems

Palo Alto High School
August 2014 – May 2018
Cum. Unweighted GPA: 3.9836
Cum. Weighted GPA: 4.4754

Work Experience

Research Intern, RISE Lab, UC Berkeley **August 2019 – Present**
- Working on Ray Tune (Machine learning hyperparameter tuning framework)
- Wrote package to interface Tune hyperparameter schedulers with sklearn models

Data Science Intern, RhoAI **June 2018 – August 2018, June 2019 – Present**
- Consult with companies to suggest promising lithium-ion battery materials to synthesize using predictive models
- Designed and implemented machine learning model to predict melting point of electrolytes with 2x the predictive accuracy of previous model
- Designed and implemented model to identify reagents for electrolytes of interest and predict energy needed to synthesize electrolytes of interest
- Built ML app in Flask to centralize all predictive tools in one place for all clients

Research Intern, Persson Group, Lawrence Berkeley National Lab **October 2018 – June 2019**
- Build online tool to allow scientists to graphically query Materials Project's 58k+ material band structures

Research Intern, Reed Group, Stanford University MSE **June 2017 – August 2018**
- Used machine learning models to find promising lithium ion battery solid electrolytes and identify new training points to improve model accuracy; implemented Gaussian process to predict material's likelihood of being effective electrolyte
- Built ElectrolyteAI with Django and Bootstrap, a website releasing our lab's predictive model for use by researchers looking for promising solid electrolytes. 5-6 orders faster than conventional DFT calculations. Drafted publication.

Student Researcher, Advanced Authentic Research, Palo Alto High School **August 2016 – May 2018**
- Conduct research on spintronic applications of graphene in cohort with Dr.McGee, superintendent of Palo Alto Unified School District, and National Junior College of Singapore
- Run computations on graphene system using Quantum Espresso, wrote research poster and paper on results
- Participated in exchange program in Singapore to be mentored by head researcher of NJC Singapore.

Extracurricular Experience

Intern, Uizard, Student Association for Applied Statistics **August 2020 – Present**
- Working on image to image search engine using CNNs and VAEs

Intern, Trace Data, Student Association for Applied Statistics **August 2019 – December 2019**
- Used Word2Vec and clustering to classify JSON files to help build search engine on JSON data

Intern, Minted, Student Association for Applied Statistics **January 2019 – May 2019**
- Generated augmented dataset to train CNN to count number of photos in Minted's postcard templates in order to make postcard templates more searchable for customers
- Built autoencoder in Tensorflow to generate image segmentation maps of postcard templates

Intern, Taco Bell, Student Association for Applied Statistics **August 2018 – December 2018**
- Built statistical model to predict demand for Taco Bell products at 15 min. increments to adjust staffing accordingly
- Used pandas to identify trends and variables affecting demand

Skills/Languages

Java, Python, C, Django, Flask, HTML, CSS, Bootstrap, SQL, Unix, Git