

SYDNEY BIRBROWER

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EDUCATION

University of California, Los Angeles

B.S. in Computational and Systems Biology with a concentration in Data Science

June 2020

Completed Courses: Machine Learning, Algorithms, Operating Systems, Data Mining, Mathematical Statistics, Computer Networking, Database Systems, Software Construction Laboratory, Computer Organization, Modeling and Simulation of Biological Systems, Bioinformatics

Audited Courses: Programming Languages, Artificial Intelligence, Graph Theory, Theoretical Computer Science¹

SKILLS

Technical Skills:

Python, Numpy, Pandas, Pytorch, scikit-learn, Django, C, Linux/UNIX, Shell scripting, Git, PostgreSQL
C++, R, Shiny, HTML/CSS, ggplot2, Matlab, Firebase, Adobe Premiere Pro, Adobe Photoshop

PROJECTS

Coronavirus X-ray Detection Trained a Pytorch convolutional neural network using transfer learning that differentiated between covid-19 induced pneumonia and other pneumonia. Lung boundaries were detected using a custom heuristic created from functions in Python's OpenCV library and Matlab

iOS Clothing Swap App Created an clothing swap marketplace app using Swift 5.1 and Google Firebase. It won the sustainability award at UCLA's QwerHacks hackathon

Psychedelic Image Generator Built a web app using flask which transformed images to look psychedelic using a custom entropy filter

EXPERIENCE

Data Science Intern

July 2020 - Sept 2020

Astrolabe Diagnostics, Inc.

Fort Lee, NJ

- Full-stack development of an interactive web app using R's event-based Shiny library, Javascript, and HTML/CSS. Visualized various ML methods such as the Louvain method, Kohonen self-organizing maps, and t-sne
- Conducted original research using a mouse lung data set and characterized the expression of various markers across the murine immune system

Tour Guide

March 2019 - July 2019

UCLA Housing

Los Angeles, CA

- Conducted hour long walking tours of the UCLA dorms and hill, leading groups of 20-80 people
- Wrote and developed tour script and provided clerical assistance in housing office

Barista

May 2018 - Sept 2018

Sip Matcha

Los Angeles, CA

- Food and drink preparation, customer server

EXTRA-CIRRICULAR ACTIVITIES

- Society of Women Engineers
- Botanical Garden Docent
- Jazz Reggae Festival Sustainability Coordinator

¹currently taking