

Edward Chau

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EDUCATION

University of California, Berkeley

Fall 2021

B.S. Electrical Engineering and Computer Science

Coursework: Data Science, Data Structures, Discrete Math & Probability, Logic Design, Multivariable Calculus, Linear Algebra, Differential Equations

EXPERIENCE

Lockheed Martin

June 2020 – Aug 2020

Artificial Intelligence Research Intern

- Researched Multi-Agent Deep Deterministic Policy Gradient/Q-Learning to train agents in predator-prey simulations
- Developed data recording/analysis tools of agent observations at each game state for higher order feature extraction

UC Berkeley CS61A (Structure & Interpretation of Programs)

Feb 2020 – May 2020

Academic Intern

- Supported and taught computer science fundamentals in Python, SQL, Scheme to labs of 30 students

NASA Marshall Space Flight Center

June 2019 – Aug 2019

Software Development Intern

- Researched several deep learning models (LSTMs, Autoencoders, LSTM-Autoencoders) in Tensorflow for fault detection in rate gyroscopic sensors on the Space Launch System
- Helped develop pipeline to train unsupervised models and sort/analyze results given any type of sensor data

Huntington Medical Research Institutes Neuroimaging Lab

Dec 2018 – June 2019

Data Science Research Intern

- Led research of deep learning models (U-Net) in Tensorflow to segment white matter lesions in T2 FLAIR Brain Magnetic Resonance Images (MRI) for Leukoaraiosis severity analysis to predict Alzheimer's Disease
- Developed pipeline to automate processing of finding cerebrovascular reactivity and cerebral blood volume mappings of CO2 and O2 respiratory data taken from patients

PROJECTS

Treasure Hunter

June 2020

- Developed turn-based rpg based on Pokemon using React and Redux

Douglas Nguyen, DDS Check-in Form

May 2020

- Developed web application using React and Express with MongoDB for Douglas Nguyen, DDS's 1500 monthly patients to check in during COVID19 times and allows staff to manage list of checked in patients

Deep Learning for Diagnosis of Tuberculosis in Chest X-Rays

Oct 2018 – Jan 2019

- Developed deep learning model (CNN) in Tensorflow to diagnose Tuberculosis in Chest X-Rays (Research Mentorship under Dr. Paul J. Wilkinson, U.S. Airforce Academy)
- Presented at SCCUR 2018/HTCC 2019 and received a \$1000 Research Scholar Award

Mood Up! (CalHacks 5.0)

Nov 2018

- Built sentiment analysis Discord chat bot in Python with Clarafai API and IBM Watson that analyzes emotions in messages to create appropriate response

Notable Class Projects:

Gitlet: Version Control System (Java), *Lines of Action* Game using Minimax (Java), *Enigma Machine* Encryption (Java), *Signpost Puzzle* (Java), *Chess* (Java, Swing), *Language Processor to Analyze Books* (C++, QtWidget), *Shortest Path to Fire Stations in LA* (C++, QtWidget), *Reverse Polish Notation Calculator* (C++, QtWidget), *Scheme Interpreter* (Python)

PROFESSIONAL DEVELOPMENT

edX (Massive Open Online Course Platform)

Microsoft: NodeJS, Functional Prototypes w/ Node.js, ReactJS, React Router/Redux, Asynchronous Programming

IBM: AI Capstone Project, Using GPUs for Deep Learning, Deep Learning in Tensorflow/Pytorch/Keras

Harvard: Using Python for Research

TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript (ES6), SQL

Frameworks: Node.js, Express, React, Redux, Pandas, NumPy, PyTorch, Tensorflow, SKLearn

Technologies: HTML5, CSS3, Docker, Domino, Git, MongoDB, Arduino