Edward Chau

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EDUCATION

University of California, Berkeley **Fall 2021**
B.S. Electrical Engineering and Computer Science
Coursework: Algorithms, Data Science, Machine Structures, 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
- Designed tool to record observations from Multi Particle Environments and perform higher order feature analysis
- Developed program to convert Video Game Description Language to Multi Particle Environments

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
- Developed command line interface to train unsupervised models and sort/analyze results given any type of sensor data
- Designed/Optimized LSTMs, Autoencoders, LSTM-Autoencoders in Tensorflow for fault detection in rate gyroscopic sensors on the Space Launch System

Huntington Medical Research Institutes Neuroimaging Lab **Dec 2018 – June 2019**
Data Science Research Intern
- Led research of U-Net in Tensorflow to segment white matter lesions in T2 FLAIR Brain MRI's for Leukoaraiosis severity analysis to predict Alzheimer's Disease
- Developed program to automate processing of cerebrovascular reactivity and cerebral blood volume mappings of CO2 and O2 rates

PROJECTS

Treasure Hunter **June 2020**
- Developed 2D turn-based dungeon crawler game based on Pokémon using React and Redux https://treasure-rpg.herokuapp.com/

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 with interface for staff to manage patient list

Deep Learning for Diagnosis of Tuberculosis in Chest X-Rays **Oct 2018 – Jan 2019**
- Designed/Optimized CNN in Tensorflow to diagnose Tuberculosis in Chest X-Rays (Research under Dr. Wilkinson, U.S. Airforce Academy)
- Presented at SCCUR 2018, HTCC 2019 (UC Irvine) and received a $1000 Research Scholar Award

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

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, C++, JavaScript (ES6), SQL
Frameworks: Node.js, React, Express, Redux, Pandas, NumPy, PyTorch, Tensorflow, SKLearn
Technologies: HTML5, CSS3, Docker, Domino, Git, MongoDB, Arduino