Richard Hu

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EDUCATION

UC BERKELEY

B.S. in Electrical Engineering and Computer Science
May 2022
College of Engineering
GPA: 3.93 / 4.0

COURSEWORK

BERKELEY

Probability and Random Processes
Introduction to Artificial Intelligence
Efficient Algorithms and Intractable Problems
Introduction to Articial Intelligence
Computational Learning Theory (IP)
Optimization Models in Engineering (IP)

OTHER

Linear Algebra
Machine Learning (Stanford CS 229)
Convolutional Neural Networks for Visual Recognition (Stanford CS 231n)

SKILLS

LANGUAGES

Advanced:

- Java
- Python

Familiar:

- C
- C++
- SQL

SOFTWARE

- Git
- Unix-like operating systems

OTHER

- Tensorflow
- NumPy
- Machine learning
- Statistics and probability

EXPERIENCE

BERKELEY EECS DEPARTMENT
Undergraduate Student Instructor (uGSI)
Head uGSI January 2020 - Present, June 2020 – Present | Berkeley, CA

- Teaching discussion sections of 40 students twice a week and holding weekly office hours for Discrete Mathematics and Probability Theory
- Received 4.53/5 average rating from students, over 1 standard deviation above department average, and 5/5 median rating

PROJECTS

RIZNETS | December 2020 - Present

- Developing neural network architectures (feedforward, CNN, RNN) **from scratch using NumPy** along with basic CLI to manage and train
- Simple feedforward neural network achieves **92% test accuracy** when **trained on subset** of MNIST dataset
- Currently working on manually implementing CNN architecture and backpropagation

LINES OF ACTION | March 2020 - April 2020

- Implemented Lines of Action board game in Java playable via command line or GUI using AWT and Swing
- Optimized an alpha–beta pruning game tree search heuristic that **won 2nd place** in 500-entrant tournament

SILAS | October 2019 - December 2019

- Created linear algebra command line utility using Python and NumPy to help students visualize computations in EECS 16A
- **Substantially improved** many users' understanding of elementary matrix operations

HEX ROCKETS | September 2018 - January 2019

- **Collaborated with a friend** to develop and maintain a Java cross-platform mobile game teaching hexadecimal arithmetic
- **Won the Congressional App Challenge** and received over **100 installs** across iOS and Android with **primarily 5-star reviews**