

Richard Hu

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EDUCATION

UC BERKELEY

B.S. IN ELECTRICAL ENGINEERING
AND COMPUTER SCIENCE

May 2022

College of Engineering

GPA: 3.9 / 4.0

COURSEWORK

BERKELEY

CS 170: Efficient Algorithms and
Intractable Problems

CS 61B: Data Structures (A+)

EE 126: Probability and Random
Processes

CS 188: Introduction to Artificial
Intelligence

EECS 70: Discrete Mathematics and
Probability Theory

MATH 53: Multivariable Calculus

OTHER

MATH 265: Linear Algebra

Machine Learning ([certified by Coursera](#))

SKILLS

LANGUAGES

Advanced:

- Java
- Python
- \LaTeX

Familiar:

- C++
- SQL

SOFTWARE

- Git
- Unix-like operating systems

OTHER

- Unit and integration testing
- Statistics and probability
- Machine learning

EXPERIENCE

BERKELEY EECS DEPARTMENT

UNDERGRADUATE STUDENT INSTRUCTOR - EECS 70

June 2020 – Present | Berkeley, CA

- Teaching discussion sections of 25 students twice a week to reinforce concepts introduced in lecture
- Holding office hours and attending staff meetings with instructors and other TA's weekly
- Creating official \LaTeX documents for weekly homework assignments

PROJECTS

CHESS AI | JUNE 2020 - PRESENT

- Currently developing a Chess AI in Java that plays using a multi-threaded Monte Carlo tree search with a random rollout policy
- Implemented game logic and working on time and space optimizations to maximize the breadth and speed of Monte Carlo tree search
- Developed comprehensive unit tests to debug move legality criteria and board display

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 a class-wide tournament with over 450 entrants

SILAS | OCTOBER 2019 - DECEMBER 2019

- Created a linear algebra command line utility using `argparse` and NumPy
- Developed functionality for storing and retrieving matrices
- Wrote efficient algorithms that compute row reductions, inversions, and multiplication and display each step

HEX ROCKETS | SEPTEMBER 2018 - JANUARY 2019

- Collaborated with one friend to develop and maintain a cross-platform mobile game teaching hexadecimal arithmetic
- Self-taught basic graphic design and a low-level Java mobile game development package libGDX
- Received over 140 installs across iOS and Android with primarily 5-star reviews and won the Congressional App Challenge