

# 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

Data Structures

Efficient Algorithms and Intractable  
Problems

Probability and Random Processes

Introduction to Artificial Intelligence

Discrete Mathematics and Probability  
Theory

Machine Structures

### OTHER

Linear Algebra

Machine Learning ([Coursera certified](#))

## SKILLS

### LANGUAGES

Advanced:

- Java
- Python

Familiar:

- C++
- SQL

### SOFTWARE

- Git
- PyTorch
- Unix-like operating systems

### OTHER

- Unit and integration testing
- $\text{\LaTeX}$
- Statistics and probability
- Machine learning

## EXPERIENCE

### BERKELEY EECS DEPARTMENT

UNDERGRADUATE STUDENT INSTRUCTOR (UGSI)

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
- Contributing to weekly staff meetings with professors and other uGSI's to create plans for incoming weeks

## PROJECTS

### CHES 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
- 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 linear algebra command line utility using Python, `argparse`, and NumPy to help students understand matrix operations in EECS 16A
- Developed functionality for saving and retrieving matrices and displaying steps for matrix operations

### HEX ROCKETS | SEPTEMBER 2018 - JANUARY 2019

- Collaborated with one friend to develop and maintain a Java cross-platform mobile game teaching hexadecimal arithmetic
- Won the Congressional App Challenge and received over 500 installs across iOS and Android with primarily 5-star reviews