

Thomas Kim

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EDUCATION

University of California, Berkeley | Berkeley, CA

August 2019 - May 2023

- B.S. in **Electrical Engineering and Computer Sciences**
- Relevant Coursework: Data Structures, Efficient Algorithms and Intractable Problems, Foundations of Data Science, Designing Information Devices and Systems, Multivariable Calculus, Discrete Mathematics and Probability Theory

Fullerton Union High School

August 2015 - May 2019

- **Honors:** Valedictorian

PROJECTS

The Enigma Machine | *Java*

March 2020

- Created a simulator for a generalized version of the Enigma Machine used in World War II
- Replicated physical components of the machine through an object-based view of programming
- Utilized cyclic permutations, Scanners, and HashMaps to encrypt and decrypt machine input

Gitlet | *Java*

May 2020

- Implemented a version-control system that supports saving and restoring versions of files, tracking history, and merging related file versions
- Required a strong understanding of trees, object-oriented programming, and serialization
- Used Linked Lists, HashSet, HashMap, Files, and Tree manipulation

Lines of Action | *Java*

April 2020

- Completed a program to play Lines of Action between two players
- Implemented game trees and heuristics to create an AI capable of forcing wins within a small number of moves
- Applied Lists, Arrays, Formatters, Collections, and Patterns to create a valid game board and move set

Scheme Interpreter | *Python*

November 2019

- Created an interpreter to read, evaluate, and display results of Scheme expressions
- Demonstrated an understanding of tree-recursion and recursive programs

SKILLS

Data Structures and Algorithms

- Object-oriented programming and functional programming
- Advanced data structures, search algorithms, asymptotic analysis and time/space complexity analysis

Languages: Java, Python, SQL, Scheme, C++

Git Version Control, Math and Physics Tutoring

LEADERSHIP AND EXTRACURRICULARS

Data Science Society | Berkeley, CA

August 2020 - December 2020

- Dedicated 10hrs/week to explore and process financial market datasets to generate a semester-long research project
- Applied technical analysis with data science methods to evaluate the performance of 10 mega-cap NASDAQ stocks
- Collaborated with a diverse team of 6 to create a 25-slide final presentation deliverable for a bi-annual Symposium

PROFESSIONAL EXPERIENCE

Volunteer Peer Tutor | Fullerton, CA

August 2018 - May 2019

- Led biweekly tutoring sessions open for students struggling in AP Physics 1 and 2, AP Calculus, and IB Mathematics SL/HL
- Explained necessary course material and reviewed key concepts from lectures and homework assignments
- Provided efficient work environments for students involved in extracurricular activities

Forensics Mentor | Fullerton, CA

July 2017 - May 2019

- Organized and attended weekly meetings to provide time for practice and coaching sessions
- Provided feedback, motivation, and support for students struggling to achieve competitive success
- Created a new system of managing stored files including news articles and statistics.