

Hannah S. Oh

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Education

University of California, Berkeley Electrical Engineering and Computer Science, BS

Aug 2020 – May 2023

Coursework: Algorithms, Data Structures, Machine Structures, Database Systems, AI, Linux SysAdmin DeCal, Discrete Mathematics, Designing Information Devices and Systems

Experience

Production Engineer Intern Facebook

Jun 2021 – Aug 2021 Menlo Park, CA (Remote)

- Implemented relative computing resource units for future use in server inventory management systems
- Refactored scheduler to be cross-compatible with capacity requests of different resource types
- Created alerts and detectors to monitor invalid resource configurations

Academic Course Staff UC Berkeley EECS Department

Jan 2021 – Current Berkeley, CA

- Reinforce student knowledge of circuit analysis, signals, and controls as a member of course staff
- Staff weekly reviews for students; focus on conceptual application through projects, homework, and labs

Projects

NumC April 2021

- Developed a Python array-processing API written in C mimicking NumPy functionalities
- Implemented multi-threading, SIMD, loop unrolling, and blocking to optimize matrix arithmetic
- Achieved 90x speedup for matrix multiplication and 1000x speedup for matrix powering

Gitlet March 2021

- Built a custom version control system in Java from scratch, mimicking git
- Wrote a breadth-first search algorithm to detect split points in commit history for correct branch merging
- Functionality includes init, add, commit, rm, log, global-log, find, status, checkout, branch, merge, reset, etc.

Classify Feb 2021

- Wrote RISC-V assembly code to run a simple Artificial Neural Network (ANN) on a RISC-V simulator
- Implemented basic operations including vector dot product and matrix multiplication using assembly code
- Loaded a pretrained ANN and executed it to classify handwritten digits from the MNIST benchmark set

Lisp Dialect Interpreter Nov 2020

- Wrote a recursive interpreter and tokenizer for a List dialect using Python
- Created the REPL to evaluate expressions and implemented tail recursion to optimize recursion

Autocorrected Typing Software Sept 2020

- Measures typing speed and accuracy and has autocorrect feature to correct user spelling mistakes
- Added multiplayer compatibilities to race friends and professors

Awards

Presidential Scholars Program Nominee, Jan 2020

National Merit Scholarship, Feb 2020

The President's Volunteer Service Award, Nov 2019

FUHSD Community Service Award, May 2020

Skills

Technical: Rust, Java, C, Python, SQL, LaTeX, Lisp

Tools: Vim, Git, Mercurial, Bash, Eclipse, IntelliJ

Languages: English (native), Korean (native), Spanish (elementary)