Margo Oka

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Education

BA Mathematics & Minor in Computer Science
UC Berkeley 2019 // *Berkeley, CA*

Work Experience

Envision Experience - NYLF Engineering
Program Support // Jun 2019 - Jul 2019

- Assisted with the logistics of an engineering summer camp for high school students
- Facilitated Arduino workshops for groups of 40+ students with varying backgrounds with Arduino and circuit design
- Facilitated 3D CAD design workshops
- Demonstrated flexibility in a high-stress unpredictable environment with 12+ hour work days

Raices Recruitment and Retention Center - UCB
Tutor // Aug 2017 - Dec 2017

- Ran drop-in office hours for the introductory computer science course at UC Berkeley (CS61A)
- Supported Latinx students in STEM

Volunteer Experience

UC Berkeley Food Pantry
Volunteer // Jan 2019 - Jun 2019

t food shevles clean and organized. Maintained an excel spreadsheet with information on how much food the pantry gaives out.

Extra Curricular Activities

Pioneers in Engineering (PiE)
Electrical Team // Jun 2017 - May 2019

Learned to use Eagle CAD software to design PCBs. Developed strong teamwork skills. Taught people of varying levels of experience how to solder surface mounts onto PCBs. PiE is a nonprofit organization that puts on yearly robotics competitions for underserved high school students in the local area.

FEMTech Launch
Tutor // Jan 2017 - May 2019

Ran small group (2-8 students) weekly 2-hour tutoring sections for compsci students. Developed curiculum. Encouraged teamwork. Worked with a diverse group of women to create an inclusive environment for women in computer science.

Mathematics Undergraduate Student Association
Officer // Aug 2017 - May 2019

Organized weekly social and professional events for math undergraduates. Worked with alumni. Assisted in garnering funding from companies such as Jane Street. Encouraged networking among undergraduates.

Computer Science Mentors (CSM)
Associate Mentor // Aug 2017 - Dec 2018

Ran 3-5 person weekly tutoring sections for students in intro to cs and datastructures courses. Attended weekly meetings on teaching strategies.

Languages & Tools

Python, Java, C/C++, HTML, CSS, MATLab, Python Jupyter Notebook, SQL, LaTex, Excel

Projects

Rudimentary SQL Database 2017
Implemented support for: Create Table, Load, Drop, Store, Insert into, Print, Select, arithmetic operators, and joins. (Java)

Basic Shell/Terminal 2018
Support for cd and pwd, implementation of program execution, path resolution, input/output redirection (> and <) and signal handling. (C++)

Process Scheduler 2018
Implemented multithreaded process scheduler with priority and priority donation for Pintos. Also supports round-robin process execution. Synchronization via locks, semaphores, and conditionvariables. (C++)

Pac-Man 2018
Implementation of AI for multiple agents, alphabeta pruning, expectimax, minimax, identifying useful evaluation functions to evaluate gamestates, reinforcement learning, value iteration, asynchronous value iteration, q-learning. Basic intro to Machine Learning and back propagation. (Python)

Handwriting Extrapolation 2017
Given sample handwriting program can extrapolate handwriting and produce images of any text in that handwriting. (MatLab)

Secure File Sharing Client 2018
Implement cryptographically secure file uploading, downloading, sharing scheme; similar to Dropbox. Used signatures, MACs, Diffie-Hellman, cryptographically secure hash functions etc. (C++)

Voice Controlled Car 2018
Built voice control car on breadboard. Designed and wired circuits, soldered. Used closed-loop design to ensure car drove straight. Used PCA and SVD to reduce noise of audio input. Coded on Arduino Launchpad. (C++, Python Jupyter Notebook)