

Jennessa Ma

Aspiring software engineer passionate about technology and eager to take on opportunities that will enable me to create, grow, and innovate.

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Education

University of California, Berkeley 2019 - 2023

College of Letters & Science

Computer Science

Relevant coursework: Data Structures, Structure and Interpretation of Computer Programs, Machine Structures

Skills

Java

Python

Swift

Javascript

HTML

SQL

CSS

RISC-V

C

Adobe XD

Arduino

Scheme

Projects

MDB Training Program (Swift)

- Participated in an intensive 6-week iOS training program which includes developing 5 different predetermined apps and attending weekly ideation meetings to gain insight on the app development process

GroTech Pest Control Web App (Python)

- Started a Pest Control App that scans an image for over 8 different types of insects aimed to assist the workers at Oxford Greenhouse who previously had to manually count the number of insects on numerous sticky traps
- Program aims to classify insects as small as 2mm with very similar characteristics using OpenCV and inexpensive scanning tools to increase ease of use

NUMC (C/Python)

- Created a C version of the NumPy framework capable of performing matrix operations with optimized performance using strategies of OpenMP, SIMD, unrolling, cache manipulations, and transpositions
- Achieved a 120x speedup for matrix multiplication, 1700x speedup for matrix powers, and 5x speedup for simple matrix operations compared to naively implemented solutions

Gitlet (Java)

- Implemented a version-control system that mimics some of the basic features of the popular system Git such as committing, merging, branching, and status
- Utilized concepts of serialization, functional programming, and efficient runtime with specifically chosen data structures

Experience

Juni Learning Instructor, San Francisco

10/2020 - Present

- Teach students at the ages of 8-15 varying levels of Scratch, Python, and Java that range from the basics of variables, conditionals, and loops to functions, search algorithms, and integrated projects following the Juni Learning curriculum
- Guide students through difficult debugging situations and inspire them to adapt their programming skills to create their own creative projects

ServiceNow Quality Engineering Intern, San Francisco

5/2021 - 8/2021

- Automated several ServiceNow form fields test cases through the use of web drivers and Selenium while adapting to its large codebase
- Developed a Capacity Planning App using the ServiceNow platform and tools that aids QE managers in managing QE capacities across several teams and releases

CS61BL (Data Structures) Academic Intern, UC Berkeley

6/2020-8/2020

- Resolved CS61BL students' questions related to labs and projects about various data structures in the curriculum
- Guided students in debugging complex problems in their code in order to optimize the time needed for them to comprehend the material