MELANIE WONG

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EDUCATION

University of California, Santa Cruz

- **M.S. Computer Science and Engineering**, Expected graduation: June 2021
- **B.S. Computer Science** with Highest Honors, Cum Laude, June 2020. GPA: 3.83/4.00
- **Coursework**: Algorithms & Data Structures, Software Engineering, Computer Security, Distributed Systems, Web Applications, Machine Learning, Coding for Social Good
- **Graduate Coursework**: Network Security, Seminar on Networks

WORK EXPERIENCE

Global Technology Summer Analyst – Bank of America June 2020 – Present

- Software Engineer Intern for the Global Banking and Markets Technology Team

Undergraduate Researcher – Baskin School of Engineering, UC Santa Cruz Sep 2019 – Present

- Proposed, designed, and developing web security service using compact data structures in C++
- Analyzing data using various Python libraries to evaluate performance and memory efficiency

Undergraduate Research Lead – Tech4Good Lab, UC Santa Cruz Mar 2019 – Present

- Leading web development team to build web platforms for supporting community engagement
- Developing applications using Angular and Firebase from Figma high-fidelity prototypes

Economics Lab Lead Programmer – LEEPS Lab, UC Santa Cruz May 2020 –Present

- Designing and developing software to support research in an experimental economics lab
- Implementing web platforms for conducting experiments using oTree, Python and Javascript

Computation Intern – Lawrence Livermore National Laboratory June – Sep 2019

- Designed and developed a web application using React for tracking laser facility maintenance
- Implemented REST API in Java, API calls using Axios, and redesigned UI for improved usability
- Utilized Jenkins and Atlassian Bamboo for automated builds and deployments

PROJECTS

Distributed Key-Value Store

- Collaborated in a team of 4 to implement a fault-tolerant key-value store using Python, Flask, and Docker
- Applied replication and sharding techniques to enhance overall capacity and throughput

LiveColor (Mobile App)

- Built an Android application that allows picking, editing, and saving colors from the camera or uploaded image
- Implemented feature of displaying HEX values and color names using an API

Daily Messages

- Automated daily SMS with Twilio's API to receive customized weather reports
- Utilizing time-triggered Microsoft Azure Functions for scheduled executions

Multi-threaded HTTP Server

- Developed a REST server in C++ to handle simultaneous HTTP requests, with request logging and FIFO caching

Production Network Simulation

- Developed a multi-level production network using Mininet topology and Python
- Implemented firewalls and routing between subnets using switches and a POX controller

TECHNICAL SKILLS

- ***Programming:*** Experience with Java, C++, Python, JavaScript, TypeScript, HTML/CSS; Familiar with Go, SQL
- ***Frameworks:*** React, Angular, Vue, Polymer, Express, Flask
- ***Technologies:*** Linux/Unix, Git, Node.js, Docker, Kubernetes, Google Cloud Platform, AWS

ACTIVITIES

Building Belonging Fellowship Award May 2020 – Present

- Selected as lead programmer to develop software for a research project in experimental economics

Goldman Sachs Engineering Essentials Fellow May 2019

- Selective program involving industry insights and full-stack development training
- Created a stock visualization application using React, Jersey RESTful web services, JSON, and Maven

Rewriting the Code Fellow June 2019 – Present

- Selected for an annual program that offers professional development opportunities to college women in tech