MELANIE WONG

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EDUCATION

University of California, Santa Cruz

- **B.S. in Computer Science**, June 2020. GPA: 3.8
- **M.S. in Computer Science and Engineering**, September 2020 – June 2021 (expected).
- **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

EXPERIENCE

Computation Intern – Lawrence Livermore National Laboratory June – September 2019

- Developed React application and supporting Java REST API for tracking laser facility maintenance
- Implemented client-side data sorting and filtering, and exporting data to Excel
- Utilized Jenkins CI/CD and Atlassian Bamboo for automated builds and deployments

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

- Applying cuckoo hashing techniques in C/C++ to track TLS certificate revocations
- Performing data analysis and visualization in Python for evaluating memory efficiency
- Investigating performance & security benefits of implementing revocation checks in browsers

Undergraduate Research Assistant – Tech4Good Lab, UC Santa Cruz March 2019 – Present

- Building platforms focused on team collaboration using Angular, RxJS, Travis CI and Firebase
- Developing responsive and user-friendly applications by working closely with design teams and conducting usability studies

PROJECTS

Distributed Key-Value Store

- Collaborating in a team of 4 to implement a fault-tolerant key-value store using Python, Flask, and Docker
- Enhancing capacity and throughout using replication and sharding techniques

Multi-threaded HTTP Server

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

Daily Messages

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

Production Network Simulation

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

LiveColor

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

TECHNICAL SKILLS

- ***Programming:*** Experience with Java, C/C++, Python, JavaScript, TypeScript, HTML/CSS, Sass; Familiar with Go, SQL
- ***Frameworks:*** React, Angular, Flask, Express, Vue
- ***Technologies:*** Git, NodeJS, Docker, Linux/Unix, Google Cloud Platform, Amazon Web Services (AWS)
- ***Security Tools:*** Wireshark, Kali Linux, Nmap, SQLmap, OWASP ZAP
- ***Languages:*** English, Cantonese, and Mandarin

ACTIVITIES

Building Belonging Fellowship Award May 2020

- Undergraduate 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 career coaching, industry exploration, and mentorship opportunities to college women in tech

NCAA Track & Field Athlete – Sprinter & Hurdler September 2017 – Jan 2020