ERIN WOO

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EDUCATION

University of California, Santa Barbara Santa Barbara, CA
Computing B.S., College of Creative Studies Exp. grad: **June 2021**

- Organizations: SB Hacks V Organizing Team (Sponsorship Coordinator), Alpha Sigma Kappa – Women in Technical Studies (Webmaster/Photographer), Theta Tau Professional Engineering Fraternity – Sigma Epsilon Chapter (Vice Regent)
- Scholarships/Fellowships: Grace Hopper 2018 UCSB CS Departmental Scholarship, Rewriting the Code Fellow

WORK AND EXPERIENCE

Software Engineer Intern *Microsoft – Redmond, WA* *June 2020 – September 2020*

- Primary feature owner for the real clear notifications project on the Teams Android app, which entails a revamp of the notification settings user experience that allows users to become more proficient in managing their notifications.

Software Engineer Intern *UCSB Enterprise Technology Services (Software Engineering Architecture & Lifecycle)* *August 2019 - Present*

- Developing and refining high-visibility UI features in Javascript & Aurelia for UCSB's Identity Access Management (IAM) platform.
- Implemented new pages for group and personal identity management, refactored server-side routing with Java SpringBoot.
- Optimized the people search feature by implementing debouncing and throttling to reduce latency between search result requests.

Software Engineer Intern *WeWork HQ – San Francisco, CA* *June - August 2019*

- Architected RESTful APIs and middleware with Golang, Gin, and Elasticsearch for data visualization of access card usage across WeWork buildings. Integrated WeWork's core platform infrastructure to transform real-time datasets into an interactive web application.
- Actualized a proof-of-concept device heatmapping tool in Mapbox JS that enables product managers to visualize the utilization and traffic of WeSecure devices across floors and areas within Salesforce Tower.

EUREKA! Scholars Research Intern *RE-Touch Lab – UCSB Media Arts & Technology* *May - September 2018*

- Researched and developed applications for dynamic finger-worn haptics in virtual reality systems using Unity3D/C# in Oculus Rift using Leap Motion and MaxMSP. Co-authored the paper *Tactile Echoes: Multisensory Augmented Reality for the Hand* (Kawazoe et. all) which was submitted for review under the IEEE Transaction for Haptics journal.
- Built the backend functionality of the VR engine that bridged the communication between hand tracking and the haptics engine in Unity3D (C#) for Oculus Rift. Implemented the handheld memory-based game, Simon, in virtual reality with haptic and auditory feedback.

Girls Who Code Summer Immersion Program *Twitter – San Francisco, CA* *June - August 2016*

- Introduction to programming fundamentals and data structures using Python, Javascript, and C++.
- Final project culminated in a web-based Javascript platform game ("The Human Race") that explored the effects of racial privilege in everyday life.

PROJECTS

P2P Money Exchange Application with Private Blockchain: *C/C++* *Spring 2020*

- Developed a peer-to-peer money exchange application on top of a private blockchain for fault-tolerant transactions within a decentralized system. Implemented Paxos, a consensus protocol, to ensure consistent replication across transactions and tolerance of crash failures.

Data Visualization of San Francisco Eviction Rates: *Java, Processing, MySQL, Python, Jupyter Notebook* *Fall 2019*

- Conceptualized and developed a 3D data visualization in Processing that displays the state of gentrification on neighborhoods in San Francisco over time. Queried datasets in MySQL and wrote Python scripts to automate dataset modification and organization.

KOS: *C, DEC MIPS R3000 Simulator* *Fall 2019*

- Built an operating system for MIPS-simulated hardware that implemented interrupt/error handling, fork/exec/wait system calls, and multi-process memory management.

Bow & Arrow Haptic Simulation: *C++/CHAI3D/Novint Falcon/Blender/OpenGL* *Winter 2019*

- Engineered a force-feedback simulation of a bow and arrow with haptic and visual stimuli on the Novint Falcon haptic system. Modeled the physics of the bow string tension force and the corresponding graphical display using the CHAI3D haptic library with OpenGL.

TECHNICAL TOOLS

Programming Languages (from most to least experienced): C++/C, Java, Javascript/Typescript, HTML/CSS, C#, Golang, Python, Assembly (MIPS)

Tools/Skills: Emacs, UNIX shell, GDB, Valgrind, IoT, Elasticsearch, Android Studio, Gradle, MVVM/MVC architecture, Mockito, RESTful API design, Postman, Xcode, Unity3D, Git/Github, test driven development (TDD)/unit testing, Node.js, socket programming, operating systems, distributed systems design, blockchain, Firebase