

ERIN WOO

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📍 Burlingame, CA

EDUCATION

University of California, Santa Barbara – *Exp. grad: June 2021*

- **Computing B.S., College of Creative Studies**
 - Coursework: Data Structures and Algorithms, Linear Algebra, Object-oriented Programming, Formal Languages and Automata, Computer Organization, Computer Architecture, Problem Solving with Computers, Probability and Statistics
 - Organizations: SB Hacks V Organizing Team (Sponsorship Coordinator), Alpha Sigma Kappa – Women in Technical Studies (Webmaster/Photographer), Theta Tau – Sigma Epsilon Chapter
 - Scholarships: Grace Hopper 2018 UCSB CS Departmental Scholarship
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PROJECTS

Bow & Arrow Haptic Simulation - ECE 194T: Haptics: Perception, Engineering & Interaction – Winter 2019

C++/CHAI3D/Novint Falcon/Blender/OpenGL

- Constructed 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.

Tactile Echoes (Simon VR) - RE-Touch Lab – UC Santa Barbara; May - September 2018

Unity3D/C#/Oculus Rift

- 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.

BlockbasedVR – Gevirtz Graduate School of Education – UC Santa Barbara; November 2017 – March 2018

Unity3D/C#/HTC Vive

- Reworked the architecture of Blockbased VR's code to fit a model-view-controller framework, which allowed the code to be more flexible and debuggable during the project's lifespan.

MentorMeet – Mulesoft Coding Cup Hackathon; September 2016; Overall Best Winner

HTML/CSS/Javascript/Bootstrap

- Designed and prototyped a website that connects professional mentors in STEM fields with minority high school mentees. Implemented web APIs such as Google Maps and Facebook.
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WORK AND EXPERIENCE

Software Engineering Intern - WeWork | San Francisco, CA | June 2019 - Present

- **Core Platform - DeviceKit Team** – Developed RESTful APIs using Golang, Gin, and Elasticsearch for accessing WeSecure data. Built middleware that allowed for MQTT messaging data from IoT devices to be read by front-end applications.
- Designed API for data visualization of access card usage and other security-related information across WeWork buildings.

End User Computing Student Tech - Life Sciences Computing Group - UC Santa Barbara | July 2018 - Present

- Managed network system administration, university-owned software distribution, hardware troubleshooting, and device networking protocols.

EUREKA! Scholars Research Intern - RE-Touch Lab - UC Santa Barbara | May - September 2018

- Designed, prototyped, and built applications for dynamic finger-worn haptics in virtual reality systems using Unity3D/C# in Oculus Rift using Leap Motion and MaxMSP (*Tactile Echoes*).
- Studied the effect on haptics in virtual reality on trial participants and co-authored research on haptic applications. Submitted findings to the ACM SIGCHI conference.

Undergraduate Research Assistant - Gevirtz School of Education – UC Santa Barbara | Nov. 2017 - March 2018

- Co-developed the back-end infrastructure of a Scratch-based virtual reality game in Unity3D/C# for HTC Vive that teaches young children how to code (*Blockbased VR*).

Instructional Tutor - Bay Area Learning Academy | Millbrae, CA | Aug 2016 - July 2017

- Developed/led weekly Scratch/Python-based coding curriculum for students aged 5-13.

Creative Code Youth Apprentice - Dolby Labs | San Francisco, CA | Oct. 2016 - Feb. 2017

- Designed, programmed, and implemented a 60 ft. long visual and audio art installment ("The Organic Mecanique") using Processing in Java and Ableton. Featured at the Dolby Labs Digital Ribbon Screen.

Girls Who Code Summer Immersion Program - Twitter SF | June-Aug. '16

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

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

Tools/Skills: Emacs, UNIX shell, Linux, GDB, Valgrind, CHAI3D, Visual Studio Code, IoT, MQTT protocols, Elasticsearch, QtSpim, RESTful APIs, Postman, Xcode, LaTeX, Unity3D, Git/Github, test driven development (TDD)/unit testing