

Erin Woo

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📍 Burlingame, CA

Projects

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

Unity3D/C#/Oculus Rift

- Designed and 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.

Foodar - Front-end Developer - Summer 2017

Swift/Cocoa

- Developed feed functionality and layout for an iOS application that allows users to discover new restaurants based on photos in a social media platform.

BoxOfficeBot - Superposition Hackathon - June 2017

Python

- Twitter bot using the Tweepy API that tweets whenever a new movie in the U.S. is released. Can be repurposed for other applications that fetch data in JSON format in real-time.

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

HTML/CSS/Javascript/Bootstrap

- Developed a web service 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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Technical Tools

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

Tools/Skills: Emacs, UNIX shell, Linux, GDB, Valgrind, Node/Vue.js, Visual Studio Code, QtSpim, Xcode, LaTeX, Unity3D, Git/Github, MaxMSP, test driven development (TDD)/unit testing

Work and Experience

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

- Managed network system administration, university-owned software distribution, and device IP addressing.

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*).

Research Intern - UCSB Summer Institute in Mathematics and Science | Aug. 2017

- Analyzed the mathematical propagation of epidemic graph networks in Matlab in a 2-week research intensive for freshmen.
- Hosted a final research talk to present findings to UCSB faculty and academics.

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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Education

University of California, Santa Barbara - 2017-2021

- 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)
 - Scholarships: Grace Hopper 2018 UCSB CS Departmental Scholarship