EMILY **O'NEAL**

eaoneal@calpoly.edu · 1(831) 359-7241 · linkedin.com/in/emily-o-045491123 · emsoneal.github.io

EDUCATION

BS IN COMPUTER SCIENCE - CAL POLY STATE UNIVERSITY, SAN LUIS OBISPO **JUNE 2021 (EXPECTED)**
Concentration in Interactive Entertainment, Minor in Dance, GPA: 3.3
Courses: Algorithms, Data Structures, Systems Programming, Computer Graphics, Discrete Structures, Software Engineering, Architecture, Object-Oriented Programming, Computer Security, Stats, Calculus 3, Linear Algebra, Public Speaking

EXPERIENCE

UNDERGRADUATE RESEARCHER, MIXED REALITY LAB [SAN LUIS OBISPO] **2020 - PRESENT**
Developing real-time mapping software that allows the human body to be a physical canvas for projected images.
Directing a live performance with Kinect and projectors so that the dancers are able to interact with visual effects.

EMBEDDED SOFTWARE ENGINEERING INTERN, CISCO [SAN JOSE] **SUMMER 2019**
Developed test automation and execution of next-generation routing products for the Service Provider Network System segment.
Implemented an internal testing framework to increase code coverage in the networking layer, specifically the ACL and QoS.
Gained experience with large shared code bases and specific frameworks for scaling.

TECHNICAL ASSISTANT , BLACK GIRLS CODE [OAKLAND] **SUMMER 2018**
Lead the implementation of Summer Camp curriculum to 25-30 underrepresented young women.
Taught basic programming concepts with Python by using Raspberry Pis to control cameras, LEDs, buttons, and Sense Hats.
Expanded the curriculum by building a template motion responsive maze game with a Raspberry Pi to teach conditionals.

CURRICULUM DEVELOPER & EDUCATOR, CODE NATURALLY [SANTA CRUZ] **2016 – 2018**
Developed curriculum, designed educational presentations, and taught JS Processing to hundreds of students.
Shaped the company's commitment to providing students of all backgrounds and interests with relevant and engaging material as one of the first three employees by emphasizing project-driven learning.

PROJECTS

HUMAN MOTION CAPTURE, CAL POLY [SAN LUIS OBISPO] **FALL 2019**
Created an animated dance where different parts of the body left trails, creating a paint brush effect.
Worked with the Axis Neuron Motion Capture suit to collect data and OpenGl to convert the data into an animation.

UNIX SHELL, CAL POLY [SAN LUIS OBISPO] **SPRING 2019**
Created a shell using C system calls to support core bash features including redirection, signals, file system navigation, pipes.
Wrote a parser to dynamically read, decipher, and error handle user input from the command line.

HACKATHONS, JUNCTION [ESPOO, FINLAND] AND CAL HACKS [BERKELEY]. **WINTER 2018**
Integrated the Google Maps API to create automatically generated routes based on certain, user criteria.
Developed algorithms to translate the data given by Google Cloud's natural language processing API into searchable phrases.

LANGUAGES / SKILLS / INTERESTS

- Python, Java, C, C++, Assembly, JavaScript, CSS, HTML, R, BASH, LINUX/UNIX
- Collaboration with GitHub & Slack, Graphics with OpenGl, NLP with Google Cloud, Data Analysis with Pandas & Ggplot
- Mixed Reality, IoT, Computer Science Diversity Outreach, Event Coordination, Dance

LEADERSHIP

OFFICER, WISH (WOMEN INVOLVED WITH SOFTWARE AND HARDWARE) **2018 - PRESENT**
TECH OFFICER - Creating more accessible spaces for underrepresented students to expand their technical skills.
Building a Bluetooth controlled skateboard utilizing microcontrollers and a 3D printer.
FOUNDER OF ENVISION - Spearheaded Cal Poly's first high school hackathon for students along the central coast.

ORGANIZER, SLO HACKS [SAN LUIS OBISPO] **2017– 2019**
Coordinated 6 hackathons over the course of two years - raising 70k+ and serving over 400 university students.
Designed hacker experience, scheduled mentors, organized workshops, managed social media, and contacted companies.

FOUNDER, SANTA CRUZ TEEN ENTREPRENEUR CHALLENGE **2016 - 2018**
Conceived, organized, and lead this highly successful hackathon for two consecutive years.
Raised a total of $12,000, benefiting over 200 7th-12th graders in the Santa Cruz Area.
Connected innovative companies with teens, inspiring them to use technology to be the leaders and innovators of the future