

Andrew K. Heng

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EDUCATION

University of California, Santa Cruz

Santa Cruz, CA

B.S. Computer Engineering | Concentration: Digital Hardware | GPA: 3.2

June 2023

- Achievements: Undergraduate Dean's Scholarship; Dean's Honors: Spring 2019, Winter 2023
- Affiliations: Acquire A Cappella (President)

TECHNICAL SKILLS

Programming Languages: C, C++, Python, MATLAB, VHDL, Verilog, RISC-V, Javascript

Software & OS: Vivado, SOLIDWORKS, PSpice, KiCad, Linux, Git, Fusion 360, Photoshop, Premiere Pro

Additional: Soldering, Digital Circuit Design, Oscilloscope, Signal Generator, Product prototyping

Languages: English, Thai, Spanish (Elementary)

PROJECTS

Portable Climate Display | C++, KiCad, Cura, Fusion 360

Mar. 2023

- Prototyped a device that displays room temperature, humidity, and CO2 levels on an LED matrix display
- Fabricated prototype by writing C++ code on ESP32 microcontroller
- Used KiCad to create custom PCB, along with custom 3D printed enclosure

slugpoints.tech Website | Hackathon Winner, Javascript, CSS, HTML

Feb. 2023

- Developed dining hall swipe counting website for UCSC students
- Worked in a team of 4 to develop and deliver for CruzHacks 2023 Hackathon within 48 hours
- Won "Best Slug Hack" category award

FPGA Game "Frog Frenzy" | Verilog, Vivado

May 2022 – June 2022

- Developed and implemented a clone of video game Flappy Bird using Basys 3 Artix-7 FPGA
- Programmed a VGA display driver in Verilog through Vivado, interfaced with VGA, 7-segment display and LEDs
- Learned the importance of specializing individual component I/O by making modules and interconnecting with a top-level module

EXPERIENCE

Tech Camp Instructor

June 2023 – Aug. 2023

Integem Inc.

Cupertino, CA

- Guided young students in various disciplines, Computer Science and Coding, Robotics and Engineering, and Augmented Reality (AR) technology
- Facilitated a creative and interactive learning environment, focusing on coding AR technology
- Developed expertise in Holographic AR coding (2D and 3D), Python coding, and AI and Robotics Engineering through training process.

Student Life and University Guide

Dec. 2021 – June 2023

UC Santa Cruz Admissions

Santa Cruz, CA

- Provided walking tours of UCSC campus to prospective students, and assisted tour and event coordinators with international and administrative tasks
- Developed excellent communication and organizational skills, as well as finding new methods to understand the university's history, programs, and resources
- Proven ability to handle large groups and answer complex questions. Strong ability to work in a team and collaborate with other staff

Class Grader / Reader: CSE 80N Introduction to Networking

Mar. 2022 – June 2022

UCSC Baskin School of Engineering

Santa Cruz, CA

- Assistant to professor and graduate students as class grader for CSE 80N: Introduction to Networking
- Evaluated and provided detailed feedback on student assignments and assessments
- Worked both independently and under guidance of professor and graduate instructors