KAI CHEUNG

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EDUCATION

University of California, Irvine | September 2023 - Present   **Current GPA: 3.9**

B.S. Electrical Engineering, specialization in Digital Signal Processing, Expected 2027

3nd Year with Junior Standing

Honors and Awards:

AICE Diploma, Received 2023

Cambridge Merit, Received 2021, 2022, 2023

RELEVANT PROJECT EXPERIENCE

Personal Music Production Project | DocKai   **2019 - Present**

Passion Project

- Striving to achieve a unique experimental sound rooted in electronic music genres.
- Fostered a passion for electrical engineering through musical applications, such as studying synthesizers, recording hardware, and others.
- Learned to synthesize experimental sounds such as dubstep growls, ambient soundscapes, e.t.c using fundamental synthesis techniques.

Robot Arm Project | Zotbotics@UCI FABWorks   **January 2025 - June 2025**

Club Project

- Currently synthesizing a robot arm from scratch utilizing 3D printing, basic electronics, and Arduino skills in groups of 6 members.

Personal iPod Refurbishment Project | IEEE@UCI Lab   **Completed January 2025**

Hobby Project

- Upgraded iPod Video (5.5th Gen) with 2000mAh battery solution and flash storage.
- Added Bluetooth Functionality using generic 3rd party Bluetooth module and cleverly rewired existing iPod buttons for a seamless listening experience.
- Demonstrated proficiency in soldering and system optimization.

Personal Guitar Pedal Project | IEEE@UCI Lab   **Completed June 2024**

Hobby Project

- Built a fuzz distortion pedal from scratch, researching parts, ordering specialized PCBs and assembling by hand.
- Demonstrated proficiency in soldering and electronics troubleshooting.
- Currently working on a reverb pedal.

RELEVANT COURSEWORK

- Math 2D - Multivariable Calculus I
- Math 2E - Multivariable Calculus II
- Math 3A - Linear Algebra
- Math 3D - Elementary Differential Equations
- Physics 7C/7D/7E - Classical Physics
- EECS 10 - Computational Methods in ECE
- EECS 31/31L - Intro to Digital Systems and Digital Logic Lab
- EECS 22 - Advanced C Programming
- EECS 70A/70LA - Network Analysis I
- EECS 70B/70LB - Network Analysis II
- EECS 55 - Engineering Probability
- EECS 50 - Discrete Time Signals and Systems

Currently Enrolled in (Fall 2025):

- EECS 112 - Organization of Digital Computers
- EECS 152A - Digital Signal Processing
- EECS 170A/LA - Electronics I

RESEARCH INTERESTS

Exploring advancements in audio signal processing and electronic circuit design to enhance sound synthesis technologies. Particularly interested in developing innovative hardware and software solutions for music synthesizers and audio effects.

LEADERSHIP EXPERIENCE

National Student Leadership Conference |Held at the University of California, Berkeley   2022

Student

- During the 9-day leadership development program, I participated in hands-on engineering labs, attended daily leadership workshops, and attended presentations from industry professionals.
- Began life-long friendships with engineers across the United States and beyond.

Cambridge Program Info Nights Speaker | Juanita High School, Kirkland, WA   2019 – 2021

Speaker

- Developed speeches annually to paint the honest experience of a student in the Cambridge Program.
- Presented personal experiences live and online to families interested in the Cambridge Program.

WSSDA Conference Speaker | Hyatt Regency Ballroom, Bellevue, WA   2021

Speaker

- Chosen by Cambridge Coordinator Meg Lewis to speak at the annual Washington State School Directors Association conference, influencing the future of education in Washington state.
- Wrote a speech and responded to live questions and criticism.

PROFESSIONAL AFFILIATIONS

Institute of Electrical and Electronics Engineers @UC Irvine (IEEE@UCI)	2023-Present
ZiMS @UC Irvine (Zotbotics member)	2024-Present

PROFESSIONAL EXPERIENCE

Cyan Swim| 6601 132nd Ave NE, Kirkland, WA

Swim Instructor   January 2023 – August 2023
- Worked with children aged three to fifteen individually, teaching foundational swimming skills up to competitive swim team strokes. Proudly taught several students from zero experience to swimming alone, without help.
- Led and planned swim team practices, fostering an environment for improvement of all swimming skills for the team.
- Worked with parents to determine the best course of action to teach their children.

Pedalheads | 6046 West Lake Sammamish Pkwy NE, Redmond, WA

Bike Instructor   June 2024 – August 2024
- Coached children through progressive riding lessons, focusing on their self-awareness, skill development, and safety abilities.
- Developed own leadership, collaboration, and problem-solving skills by managing a 2:10 instructor-to-student ratio.
- Prepared for and addressed various challenges under pressure, ensuring smooth lesson execution.

RELEVANT SKILLS

- Soldering & Desoldering
- Music Production   FL Studio & [Soundcloud Catalog](#)
- Hardware Description Language (HDL)   Verilog
- Microcontroller Programming   Arduino
- Reading Datasheets
- Synthesizing Circuits
- Linux and Common Text Editors
- SPICE Simulation   LTSpice
- PCB Design   KiCad
- CAD   Fusion