OLIVER CABRAL

oliver@kym-kim.com
https://www.kym-kim.com
Bellflower, CA 90706

SUMMARY:

Driven Computer Engineering student with 5+ years of experience in programming embedded systems through academic courses and personal projects. Adept in C-like languages, Python, Linux, and development tools such as Docker, Git, and Nix. A car enthusiast with a passion for turning wrenches.

Education:

2020-Present California State University, Long Beach (CSULB)

Bachelor of Science, Computer Engineering. Minor in Computer Science

Completed coursework in Embedded Systems Programming, Algorithms, Data Structures, Operating Systems, and Software Engineering. Worked on high-level projects developing hardware systems with TM4C and STM32. Gained experience with common computer communication protocols, including I2C, UART, SPI, and CAN Bus.

GPA: 3.2

2016-2020 Mayfair High School

Started learning computer programming at an early age and studied Advanced Placement courses such as Computer Science Principles and Computer Science A.

Skills:

Languages and Architectures: C/C++/C#, Python, Nix, HTML/CSS, MIPS
Development Tools and Project Tools: Keil, Vivado. LTSpice, KiCAD, VSCode, MATLAB
Lab and Test Equipments: Oscilloscope, Voltage Generator, 3D Printer, High-Spec Computer
Other Skills and Emphasis: Embedded Systems, Microcontrollers, PCB fabrication, GNU/Linux, Git, Game Design, Networking, Docker

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Projects:

SKBD: A custom small-form-factor keyboard with multiple encoder knobs. Designed with KiCAD and programmed using QMK.

Homelab Cluster: A personal self-hosted server that can be accessed with an internet connection. The server hosts multiple services such as music streaming, game servers, and file-sharing.

UKIMNIX: A custom Linux OS configuration on Nix, optimizing desktop performance with a custom Hyprland environment, emphasizing reproducibility and user customization.

Work Experience:

2021–Current theCoderSchool – La Palma, CA

Part-Time Instructor

Taught Computer Science to young and aspiring programmers using various styles and languages. Created custom curricula that emphasized learning while having fun. Mentored over 50 one-on-one sessions with students and led video game and hardware design projects.

2021 California State University, Long Beach – Long Beach, CA

Part-Time Assistant Researcher

Worked as a research assistant exploring ways artificial intelligence can be utilized to improve traffic flow at intersections. Collected and pre-processed data for a neural network model for traffic flow predictions.