Dominic K. Olson

linkedin.com/in/domkolson/ | domkolson.github.io/

EDUCATION

University of California, Los Angeles B. S. Electrical Engineering, GPA 4.0, *Oct 2020 - Jun 2024*
- Relevant Coursework: Intro to Electrical Engineering, Intro to Computer Science I and II, Intro to Engineering Design: Internet of Things

ENGINEERING PROJECTS/EXPERIENCE

IEEE at UCLA - Micromouse | *Oct 2020 - present*
Project: Remote collaboration with a partner to create a small autonomous maze-solving robot
- Programmed STM32 microcontroller in C using STM32CubeIDE
- Used Autodesk Eagle to design schematics and breakout PCBs for motor control and IR sensing
- Prototyped using a breadboard and soldered SMD and through hole components
- Used PID Control and IR Sensing to successfully navigate the "mouse" through a track
- Placed in the top 3 (out of 32 teams) for Fall Quarter Rat Competition

IDEAHacks 2021 | Hardware hackathon hosted by UCLA IEEE, *Jan 2021*
Project: WiFi connected checklist that reminds the user to take breaks, improving organization and focus
- Designed and prototyped project using ESP32 microcontroller and electronic circuit on breadboard with IR sensor, OLED and 7 segment display, piezo buzzer

Embedded DSP with Faust | Summer workshop at Stanford's CCRMA, *Jul 2019*
Project: Digital Effects Pedal
- Used a Teensy microcontroller to process an audio signal using the Faust language
- Wrote Arduino code to control digital effects with four knob potentiometers and a button

Designing Physical Interactions for Music | Summer workshop at Stanford's CCRMA, *Jun 2019*
Project: Trumpet MIDI Controller, an electronic musical instrument
- Used a Teensy microcontroller to send MIDI messages to my computer through USB based on input from a wind sensor, soft potentiometer, and a set of three buttons

UCLA 3D Printing Club | *October 2020 - present*
Project: Designed a 3D model for a recorder (instrument) in Autodesk Fusion 360

UCLA ACM TeachLA | **Instructor and Curriculum Developer**, *Oct 2020 - present*
- Created curriculum and taught Python at middle schools in Los Angeles

Sequoia HS Robotics Club | **Co-President**, *Aug 2019 - Jun 2020;* **Programmer**, *Sep 2016 - Jun 2020*
- Led the software development for my team's robot and worked on the overall design
- Guided the promotion of the club, welcomed new members, and mentored members in programming

WORK EXPERIENCE

Mathnasium of Redwood City | **Lead Instructor**, *Aug 2019 - present;* **Instructor**, *Jun 2018 - Aug 2019*
- Instructed students and designed customized learning plans tailored to each student's needs
- Led training on math concepts for our instructor team and planned social events
- Received the Instructor of the Month award for November 2019

SKILLS/INDEPENDENT PROJECTS

Woodworking | Completed 3 years of high school woodworking
- Used both traditional tools and the CNC router; learned Vectric Aspire CAD software
- Created projects including a tongue drum (percussion instrument), shelf, cutting boards, and bowls

Music Arranging | Created and sold arrangements on Sheet Music Plus under the name Brass Key Music