Tane Koh

mkoh@olin.edu https://www.linkedin.com/in/tane-koh/ 425-780-0416

Education

Olin College of Engineering May 2027
B.S. in Electrical and Computing Engineering

Relevant Coursework: Microelectronic Circuits, Principles of Integrated Engineering, Sensors/Instrumentation, Software Design, Engineering Systems Analysis: Signals

Skills

Programming: Python, JavaScript, MySQL, MATLAB, HTML, R, C++, Arduino, RasPi
Design: SolidWorks, KiCad, Adobe Creative Cloud, Microsoft Suite, LaTeX, LTSpice
Fabrication: Bandsaw, Drill press, Miter Saw, 3D Printer, Jig Saw, Table Saw, Laser Cutter/Printer, Screen Printer, Sublimation Printer, Knitting

Experience

Bluetooth Speaker Design and Construction Jan 2025 - May 2025
Engineer
- Constructed 3D design for exterior casing of speaker in SolidWorks, then fabricated it in the Wood Shop
- Drafted circuit diagram to integrate and power components of the speaker, then wired and soldered parts
- Updated circuitry to more efficiently power audio drivers, and implemented updated audio filters

Principles of Integrated Engineering: Vending Machine Sep 2024 - Dec 2024
Electrical Engineer
- Prototyped and drafted a circuit to power stepper motors with motor drivers and a current-mode converter
- Implemented circuitry to control and power a lighting system, stepper motors, and proximity sensors
- Integrated and programmed a microcontroller and microprocessor to control touchscreens and process signal input

Differential Amplifier Simulation and Measurement Jan 2025 - May 2025
Electrical Engineer
- Designed and analyzed a Class-AB transconductor-based differential amplifier to improve slew rate performance
- Simulated and validated circuit behavior and characteristics in LTspice, including Delbruck's bump/anti-bump circuit
- Implemented a folded-cascode/flipped-follower configuration to maintain constant bump current

Introduction to Sensors, Instrumentation, and Measurement Jan 2025 - May 2025
Teaching Assistant
- Codesigned problem sets and labs on electrical measurements, RC filters, op-amp circuits, and measurement systems
- Led lectures and labs, guiding students through sensor interfacing, circuit troubleshooting, and data collection
- Aided student teams in designing capstone experiments integrating sensors, signal conditioning, and data analysis

Acoustic Modem Signal Transmission and Decoding Jan 2025 - May 2025
Electrical Engineer
- Designed and implemented an acoustic modem receiver to demodulate and decode transmitted messages
- Reconstructed the original bitstring using time-domain convolution and sampling algorithms in MATLAB
- Applied Nyquist frequency and filter design principles to optimize cutoff frequencies

Balancing an Inverted Pendulum on a Moving Cart Jan 2025 - May 2025
Electrical Engineer
- Developed a control system to balance an inverted pendulum on a cart using PI controllers and feedback loops
- Designed and simulated the system in MATLAB Simulink, analyzing impulse responses to reach equilibrium
- Validated results through practical testing, ensuring system still performed under disturbances

Olin College As a Living Lab: Sustainability Committee Jan 2024 - Present
Student Committee Member

- Conducted research evaluating opportunities for upgrading operations with sustainable infrastructure at Olin
- Contacted partnered companies to implement upgrades alongside students as curricular projects
- Collaborated with staff in developing Olin's strategic plan to enact sustainability initiatives across campus