

Kevin Chen

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EDUCATION

Massachusetts Institute of Technology

2019-2023

B.S. IN ELECTRICAL ENGINEERING & COMPUTER SCIENCE (COURSE 6-2)

- Completed Coursework: 6.08 (Interconnected Embedded Systems), 6.004 (Computation Structures), 6.006 (Introduction to Algorithms), 8.022 (Electricity & Magnetism), 6.145 (Introduction to Python), 6.042 (Mathematics for Computer Science), 18.100A (Real Analysis), 18.02 (Multivariable Calculus)
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WORK EXPERIENCE

Cambridge Electronics, Inc.

Summer 2020

DEVICE MODELING & SOFTWARE DEVELOPMENT INTERN

- Created an intuitive and flexible application for semiconductor device design using Python, Tkinter, and GdsSpy, compatible with the industry-standard GDSII format for integrated circuit layouts

MIT Lincoln Laboratory, Advanced Lasercom Systems & Operations

January 2020

RESEARCH INTERN, UNDERGRADUATE TECHNICAL ASSISTANT

- Using Autodesk EAGLE, designed driver circuit for high-speed optical switches in multi-aperture free-space lasercom terminal that uses Helmholtz reciprocity to dynamically optimize signal
 - Prototyped driver circuit using dual-inline-package integrated circuits and tested in laboratory setting
 - Using MATLAB, ran circuit accuracy simulations and generated mock input waveforms for lab testing
 - Reworked C++/Python codebase to implement 4-channel analog output in driver circuit testing
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LEADERSHIP EXPERIENCE

MIT Fall Career Fair Committee

2020-2021

DIRECTOR OF DAY-OF LOGISTICS

- Transitioning MIT's largest recruiting event into a virtual fair series split by industry hiring interests
- Managing virtual recruiting platform and related logistics to optimize employer-student interaction

Coding the Future

2015-2019

FOUNDER, DIRECTOR

- Founded & managed student-run non-profit for accessible computer science education
 - Oversaw development/deployment of Java, Python, Scratch, & cybersecurity curricula that have been used with over 600 students in 50+ classes at schools and libraries
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PROJECTS

IoT-Enabled Music Kit: Metronome + Sampling Synth

Spring 2020

6.08 FINAL PROJECT (GROUP)

- Used Arduino on ESP32 microcontroller, HTML/Python on Flask, various hardware components to build "music kit" with metronome/keyboard synth modes and server-side data storage capabilities
- Metronome: set tempo on-device with button/claps or from webpage, realtime on-beat checking
- Synthesizer: record audio samples with device mic and save them to cloud, play/edit collection of saved samples from webpage, select/play pitch-modulated samples on device keyboard

Starch-stabilized silver nanoparticles as LSPR-based sensors

Summer 2018

UCSD, CALIFORNIA STATE SUMMER SCHOOL FOR MATHEMATICS & SCIENCE, PHOTONICS GROUP

- Tested various "green synthesis" procedures for silver nanoparticles and researched their optical properties for potential use in color-based sensing applications
 - Presented project "Starch-stabilized silver nanoparticles as localized surface plasmon resonance-based sensors" alongside groupmates to UCSD faculty and other research groups
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