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: Interconnected Embedded Systems, Computation Structures, Introduction to Algorithms, Mathematics for Computer Science, Electricity & Magnetism, Real Analysis
- Current Coursework (Fall 2020): Design & Analysis of Algorithms, Introduction to Machine Learning, Fundamentals of Programming, Japanese I

WORK EXPERIENCE

Cambridge Electronics, Inc. — Summer 2020

SOFTWARE DEVELOPMENT & DEVICE MODELINGINTERN

- Created a flexible application/library for semiconductor device design using **Python**, **Tkinter**, and **Gdspy**, compatible with the industry-standard **GDSII** format for integrated circuit layouts
- Senior Engineering team reported GUI was intuitive, easy-to-use, and significantly sped up layout design and modification process; has been adopted into company's long-term workflow
- Application's Python API allowed automation/more precise control over process of generating large multi-layout GDSII files to be sent to foundries — normally a laborious, error-prone manual task

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

LEADERSHIP EXPERIENCE

MIT Battlecode Competition Developer Team — Oct 2020 - Present

GAME ENGINE DEVELOPER

- Developing the **Java** engine for the 2021 Battlecode competition, collaborating with teammates using **Git** and code reviews to create a consistent, reliable implementation of game specs that will underpin 20k+ daily matches, and is also integrated with a code interface for competitors to develop their bots

MIT Fall Career Fair Committee — Feb 2020 - Oct 2020

DIRECTOR OF DAY-OF LOGISTICS

- Organized the physical-to-virtual transition of MIT's largest recruiting event by converting into a series of virtual fairs split by employer industry
- Managed virtual fair platform and related logistics to optimize employer-student interaction

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 microphone and save them to cloud, play/edit collection of saved samples from webpage, select/play pitch-modulated samples on device keyboard