

Kevin Song

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Education:

Carnegie Mellon University (Pittsburgh, PA)

- B.S in Electrical/Computer Engineering, Minor in Sonic Arts
- **Expected Graduation:** May 2024 (**GPA:** 3.89/4.00, S22 Dean's List)

Years

Aug 2020 -
Present

Work Experience

CMU Biorobotics Lab: Undergraduate Research Assistant

- Designed an LED-driver PCB, a GNSS/IMU PCB, a USB Hub PCB (WIP), and a USB-to-RS485 communication PCB in Altium. Learned PCB-layout guidelines, circuit-protection measures, and noise-reduction techniques.
- Created gcode test scripts and Python parser scripts for a five-axis 3D printing arm.
- Configured Marlin firmware for a MKS Gen L V1.0 3D printer control board.
- Created CAD models for filament holder and part cooling fan in Solidworks.

Date

Dec 2021 -
Present

Radiance Technologies: Reverse Engineering Intern

- Improved efficiency of Intel PT-based tool by automating portions of intermediate file/output generation and removing unused QEMU features.
- Created and modified tests for tracing tools using C and Python.
- Added Java-based features to DragonDance (a reverse engineering software plugin).

May 2021 -
Aug 2021

Projects & Activities:

Build18 Project: Pancake Printer

- Used Arduino Uno + CNC electronics to create a pancake-printing rig.
- Wrote Python script to format gcode and send it line-by-line to the Arduino board.

Jan 2022 -
Feb 2022

CMU Robotics Club: Club Architect (Mar '21 - Apr '22), Gen. Officer (Apr '22 - Present)

- Organized physical club space and assembled/set up Prusa MK3S+ 3D printers.
- Helped plan and run the annual Red Robot Hackathon. Fixed 3D printers, printed game pieces, supervised/assisted ~50 participants.

Sep 2020 -
Present

RISC240 Lab (18-240 Project):

- Coded implementation of a multiplication coprocessor for RISC240, an example microarchitecture. Demonstrated knowledge of FSM + datapath design. Design was simulated using VCS and synthesized to an DE2-115 FPGA board.

Apr 2022

Malloc-Lab (18-213 Project):

- Coded implementation of the malloc, dealloc, and realloc commands in C. Demonstrated techniques such as seglists, footer removal, and mini-blocks.

Nov 2021

Relevant Coursework:

- Intro to Computer Systems (18-213)
- Struc. & Design of Digital Systems (18-240)
- Introduction to Machine Learning (10-301)
- *Embedded Systems (18-349)
- *Logic Design and Verification (18-341)
- *Devices & Analog Circuits (18-220)

Relevant Skills:

- Coding: C, Python, Java, SystemVerilog
- Experienced with Altium Designer
- Familiar Tools and Skills: Solidworks, Linux cmd line usage, Git, VCS, Quartus, soldering.
- Proficient with Microsoft Office Tools

*: Current Coursework