

Julius Hoang

Address: 1930 N Sprigg St. Cape Girardeau, MO 63701 **Tel:** (573)-838-7135

Email: juliush123@hotmail.com **Website:** juliushoang.com

WORK EXPERIENCE

Software Development Engineer in Test II @ Sonos — Remote.

12/2023 – 12/2025

Software Development Engineer in Test

01/2023 – 12/2023

Software Development Engineer in Test Intern

06/2020 – 08/2022

Developed end-to-end automation frameworks, CI/CD integrations, and full-stack solutions for remote embedded systems testing.

- Automated bug triage by developing a Python script that cross-referenced Jenkins failures with Jira tickets and auto-updated Confluence documentation, reducing manual triage time and accelerating the bug-fixing lifecycle.
- Refactored legacy automation infrastructure by migrating from Python 2 to Python 3 and porting legacy test framework to Pytest to maximize execution speed and maintainability.
- Automated remote infrastructure mapping by designing a tool in Python, Bash, and Expect to discover and catalog testbed configurations on remote Linux machines, eliminating documentation decay.
- Designed performance test automation for hardware-to-Tableau integration, triaged and debugged API failures across Jenkins and Docker CI/CD configurations to stabilize test execution and metrics collection.
- Automated infrared remote control testing by developing a Python wrapper for LIRC, ALSA, and PulseAudio; integrated Pytest with Jenkins and Docker to significantly expand test coverage and reduce manual testing for a core product initiative.
- Enabled remote hardware testing capabilities by developing a Python and Flask web infrastructure integrating VLC and LIRC to send IR commands and stream real-time soundbar responses and webcam video feeds over RTSP and HTTP.

Python Tutorial Curator @ Kite.com — Remote.

07/2019 – 01/2020

Authored developer-centric Python code examples and reviewed technical documentation for accuracy and clarity.

- Authored and peer-reviewed Python code examples and technical documentation for 50+ highly searched developer problems, while ensuring technical accuracy and consistent formatting.

Undergraduate Teaching Assistant @ MIT — Cambridge, MA.

09/2018 – 05/2020

Delivered academic instruction and hands-on technical lab support for embedded systems, circuits, and Python programming courses.

- Instructed and mentored students in foundational engineering and programming coursework, including Physics, Intro to Python, Circuits & Electronics, and Intro to EECS via Interconnected Embedded Systems.
- Guided students through laboratory exercises, troubleshooting embedded hardware circuit designs, debugging Python and Arduino scripts, and clarifying complex electrical engineering concepts alongside programming best practices.

Undergraduate Researcher @ MIT — Cambridge, MA.

01/2018 – 05/2018

Developed automated manufacturing workflows and standardized operational procedures for photonics semiconductor fabrication equipment.

- Accelerated academic research workflows by translating complex hardware specifications into accessible Standard Operating Procedure (SOP) manuals for 5 advanced IC manufacturing machines.
- Fabricated and characterized 100+ surface-mount laser diode samples, designing an optimized pick-and-place workflow to transition the assembly from manual to automated production.

EDUCATION

Massachusetts Institute of Technology (MIT) Cambridge, MA.

09/2017 – 01/2022

Bachelor of Science in Electrical Engineering and Computer Science, 2022. GPA: 4.9/5.0

TECHNICAL SKILLS

- **Languages:** Python, C, C++, C#, RISC-V Assembly, TypeScript, JavaScript, Lua, Bash
- **Testing & Automation:** PyTest, Playwright, PyAutoGUI, Expect Framework
- **Web & GUI Frameworks:** Flask, REST APIs, Node.js, React, Vite, HTML5, CSS3, MongoDB, Tkinter
- **CI/CD & DevOps:** Git, Docker, Jenkins, Jira, Agile, Poetry, Linux/Unix
- **Hardware Design:** Cypress PSoC, Arduino, ESP32, Raspberry Pi, PCB Design, Oscilloscopes, Multimeters
- **Technical Computing:** MATLAB, NumPy, SciPy, Matplotlib

CERTIFICATIONS

- OpenAI Applied AI Foundations (Pilot) Certification