



CONNOR NISHIJIMA

embedded C/C++ engineer // hardware designer

salt lake city, utah

linkedin.com/in/connornishijima

connornishijima@gmail.com

[https:// connor.nishiji.ma](https://connor.nishiji.ma)

SUMMARY

I get quite sad whenever I run out of ways to optimize software.

Luckily, I never do. Often doing work under the name "Lixie Labs", I have 12 years of experience close to the metal in microcontroller firmware development, with a knack for memory footprint/access optimization, LED displays, DSP, and more. I'm seeking work where I can push hardware/software to its absolute limit!

HIGHLIGHTED WORK

Paired with a love for the timeless and flexible industrial design of Dieter Rams - I design/manufacture and sell elegant electronics to both consumers and engineering hobbyists alike via direct sales on Etsy and Tindie, purchase orders from Adafruit and Pimoroni, and through CrowdSupply funding. I've delivered over 4,000 units to happy makers in over 90 countries! My greatest work so far is the Emotiscope:



emotiscope

128 of the world's smallest addressable LEDs form a music visualizer from the future

DUAL CORE PROCESSOR - WIFI CONTROL - REAL-TIME TEMPO DETECTION - 300 FPS

I designed Emotiscope from the ground up as an open, powerful bridge between sight and sound. With a show that's highly reactive to notation, vibrato, tempo, and more - it uses a dual-core 240MHz ESP32-S3 and novel DSP tricks to produce very unique and pleasant-to-look-at light shows which synchronize to your music without any visible latency whatsoever.

My 20,000+ lines of C code running the show:
connor.nishiji.ma/products/emotiscope

SKILLS

Proficient:

C/C++ · Python · DFM · Microcontrollers Optimization · Documentation · Debug

Familiar:

HTML · JavaScript · Blender · Godot

EXPERIENCE

FOXCONN

2020 - 2022

TEST ENGINEER

I designed and maintained Python test routines for high-performance AWS server racks to ensure they could perform correctly under any type of workload before delivery to Amazon.

LIXIE LABS LLC.

2016 - present

HARDWARE ENGINEER

Concept art in CAD, prototyping, PCB design, budgeting, microcontroller firmware development / optimization, marketing, graphic design, customer support and shipping logistics.

PASSIONS

When I'm not staring at LEDs and datasheets, I enjoy hiking the Wasatch Front, composing music, 3D printing stuff for around the house, and playing with my two cats! I can talk for hours about UX or industrial design trends, don't tempt me!