CONNOR NISHIJIMA

https:// **connor.nishiji.ma**

embedded C/C++ engineer // hardware designer

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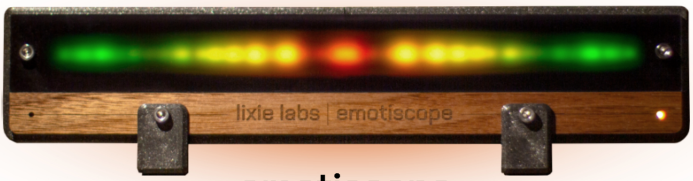
SUMMARY

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!