

Nathan Kiesman

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Experience

Generac Clean Energy, EE Integration Engineering Intern

May 2022 - August 2022

- Wrote and deployed real-time production code for residential solar/battery installations
- Worked on an agile development team maintaining a large multi-core embedded C codebase
- Designed, ran, and documented tests characterizing prototype power electronic systems
- Contributed to interoperability standards between Generac CES's products

Spin Analytical, Electrical Engineer

June 2017 - August 2021

- Designed, built and delivered an automated, microfluidics platform to incubate, measure and purify radioactive solutions for a top pharmaceutical manufacturer's pilot program to automate drug synthesis.
- Integrated hardware including a sensor array, robotic gantry and pipet system.
- Planned and wrote user interface, component drivers, analysis protocol and bench test modules.
- Created hardware and software for optical centrifuge rotor calibration deployed in over 50 research labs. This enabled faster and more accurate charge measurement of protein solutions.

!!Con, Speaker

May 2021

- Presented talk on the use of the Teensy Microcontroller to play real instruments in rhythm games.

Small File Film Festival

August 2020

- Won *Best Cross-Platform Work* for entry "New Beginnings", created for the Gameboy Advance

Writer, 2600

April 2020

- Wrote an article on Internet preservation and archival for hacking/technology magazine 2600

Permit Log

February 2017-2019

- Won first place in the Maine Apps Challenge and was awarded a \$6000 scholarship
- Worked on a team of three to develop "Permit Log" to help teen drivers track their driving
- Supported over 3000 active Android users over multiple versions
- Won third place the following year for our next app, "Class Act"

Independent Projects

Restored and internet enabled a Teletype Hacked an EEG interface to work over networks
Used real-time internet audio streaming to restore a defunct 1990s modem network

Education

Columbia University SEAS '24, Major in Electrical Engineering, Minor in history, 3.47 GPA
Dartmouth College, Microprocessors in Engineered Systems (ENGS 62)
Marshwood High School, South Berwick, Maine

Membership

President, Columbia Taiko Drumming Air Force Cyberpatriots InfoSec League
ESP/MIT Splash Teacher Port City Makerspace, Portsmouth, NH

Awards

Freshman Science Student of the Year Marshwood Math Team (6th place team in Maine)
Cyberpatriots (1st in Maine, 36th worldwide) 350,000 Youtube Views

Skills

EAGLE, KiCad, Arduino, Teensy, Raspberry Pi, ESP32, STM32F4, C, C++, Qt, Java, Python, Pascal/Lazarus, Analog and digital electronics design, PCB design and manufacturing, Final Cut Pro, Adobe Premiere