Mia Kiesman

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Experience

MIT Lincoln Labs, Energy Systems Group, Research Intern   June 2023 – August 2023
- Developed automated IP network infrastructure analysis tools for use in power grid settings
- Integrated industrial internet protocols into Hardware in the Loop (HiL) testing infrastructure to enable faster deployment of new devices and richer data collection for device testing
- Evaluated Software Defined Networking solutions for their suitability in industrial applications
- Obtained a secret level Department of Defense security clearance, valid through 2033

Generac Clean Energy, EE Integration Engineering Intern   May 2022 – August 2022
- Wrote and deployed real-time production code for residential solar/battery microgrid 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.

Permit Log, Developer   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"

!!Con, Speaker   May 2021
- Presented talk on the use of the Teensy Microcontroller to play real instruments in rhythm games.

Small File Film Festival, Filmmaker   August 2020
- Won *Best Cross-Platform Work* for entry "New Beginnings", created for the Gameboy Advance

2600, Writer   April 2020
- Wrote an article on Internet preservation and archival for hacking/technology magazine *2600*

Education

Columbia University, Electrical Engineering, 3.64 GPA   Class of 2024
Embedded AI/ML, FPGA SoC design, Power Electronics, Vision in Robotics, Communication Circuits

Independent and University Projects
- XTrip: Real-time internet audio streaming adapter to restore a defunct 1990s modem network
- CondWand: Machine Learning interface to train orchestra conductors using accelerometer data
- VGASeal: A proof-of-concept VGA graphics card accessible over USB using an FPGA
- MOP3: Rust based social networking protocol connector for POP3 email clients

Skills   KiCAD, LTSPICE, EAGLE, RP2040, Arduino, ESP32, STM32, C, C++/Qt, Java, Python, Rust, TensorFlow, Pascal, Mathematica, Linux/Windows/MacOS development, Analog/Digital PCB design, Final Cut Pro, Adobe Premiere