

# Adam Neulight

A Computer Engineering student seeking a Co-op for Fall 2022

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## EDUCATION

**Rochester Institute of Technology** | B.S. in Computer Engineering

August 2019 - May 2024

## PROJECTS

**3D Printer Mods and Improvements** | Marlin Firmware, CAD Design

July 2019 - Present

- Designed and implemented a case for an SKR 1.4 mainboard with an LCD screen. The case is detached from the printer and wired by a tether connected to the printer via DIN terminal blocks.
- Implemented a direct drive extruder with an attached BLTouch bed leveling sensor along with a custom designed fan shroud for it. Upgraded to dual Z-motors in order to fix X-gantry sag due to the heavier extruder assembly.

**Tethered Underwater ROV** | CAD Design, Python, 3D Printing

February - April 2019

- Worked as part of a two man team to develop a final project for an engineering class in High School.
- The ROV consists of three brushless thrusters to control direction and altitude, a Raspberry Pi controller programmed in Python, PVC pipe and 3D printed electronics enclosure, 4-axis motion controlled gimbal with an attached camera live streamed back to the operator on the surface, and a waterproof armored Ethernet tether.

**175 LED Sign** | Electronics Assembly/Soldering, Electronics Design, C++

January 2018

- Designed a 175 LED sign using off-the-shelf 3mm LED's, two 9-volt batteries, 7805 voltage regulator, MAX6971 16-bit shift register LED drivers, and an ATtiny 85 microcontroller programmed using Arduino C++.
- Constructed and soldered onto three large pieces of perfboard, each board was connected using a DIY pin-header connector, which transferred power and data to the LED drivers on each board.

## SKILLS

- **Languages:** Java, Python, C++, ARM Assembly, MIPS Assembly, MATLAB, VHDL
- **Software:** LTSPICE, Autodesk Fusion 360, Autodesk Inventor, AutoCAD, Linux, IntelliJ, Keil  $\mu$ Vision, Xilinx Vivado, Quartus II, ModelSim, Microsoft Office
- **Hardware:** Oscilloscope, Digital Multimeter, Signal Generator, Raspberry Pi, Arduino, Soldering, Wiring, 3D Printing

## EXPERIENCE

**Oceaneering Int'l** | Electrical Engineer Intern

September 2021 - December 2021 & May 2022 - Present

- Worked with a team of electrical engineers to design the electrical system for an underwater Remotely Operated Vehicle, and generated slides to present the system to the customer.
- Researched and designed the fiber optic communications system used to control the ROV and receive photos and real time video back from the cameras. Generated and managed the optical power and bandwidth budget.
- Designed and performed multiple test procedures for which I designed and built electronic circuits to simulate and test several parts of the system.

**Home Depot** | Customer Service Associate

June 2020 - August 2021

- Worked closely with managers and other associates at the front end responsible for answering phones, handling returns, providing excellent customer service, and ensuring customers' issues are being resolved. Often relied upon by other associates to give guidance in difficult situations.
- Maintained a working knowledge of most products in the store and their locations.

## EXTRACURRICULARS

**Computer Science House** | Member, 3D Administrator

August 2019 – Present

- Computer Science House is a living and learning community that provides a helpful environment emphasizing hands-on learning and projects outside of the classroom.
- As a 3D Administrator, I maintain the House's 3D printers, as well as assist and educate other members with CAD and how to print 3D designs effectively.

**Technology Student Association** | Member

December 2018 - March 2019

- In high school, I worked with a team of other young engineers to complete multiple engineering and technology related projects to compete against other teams in the state.