# *Jack Sides*

Outgoing and conscientious engineering student seeking an internship in robotics, computer engineering, or computer science.


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## EXPERIENCE

### *NanoVox*, Corvallis, OR - Staff Computer Scientist

May 2024 - Present

Developing refraction index visualization software for customers

Creating a slicing program to improve error diffusion of printed lenses

Optimizing complex air diffusion equations with metaheuristic algorithms

### *George Fox University* - Engineering TA

January 2024 - Present

Teaching assistant for Intro to Engineering II and Digital Logic Design

Taught CircuitPython to control Raspberry PI powered robots

Digital Logic lab assistant: helped with Verilog and electronics labs

Set up and maintained an automatic grader for programs

### *Portland Community Church* - Tech Director

May 2023 - September 2023

Managed and directed weekly church sound, lights & live streams

Built and maintained Dante network system

Trained volunteers on various technical equipments

### *George Fox University* - Summer Engineering Work Study

May 2023 - August 2023

Organized, designed and manufactured products for other departments

Designed curriculum & projects for high school engineering camps

Programming lead for high school engineering camps

### *George Fox University* - Engineering Maker Hub Tool Room Manager

September 2022 - May 2024

Loaned & maintained high dollar tools

Rapid prototyping lab assistant & trainer (3D printing & laser cutting)

Organized/distributed components & raw materials for class projects

### *Carrot Medical* - Biomedical Field Service Engineer

August 2021 - January 2023

Repaired various medical equipment

Recalled bezels on Ventilators and Interfaced with hospital staff

Created, filled out, and closed work orders

## EDUCATION

### George Fox University:

**Triple Major**: Electrical Engineering, Computer Engineering and Computer Science

**Engineering GPA**: 3.96/4.00, **Cumulative**: 3.91/4.00

116.25 Credit hours

Will be a rising Senior as of May 2025

## AWARDS

**2023 ICPC Oregon Regionals**, Programming Competition, 1st place

**Early College High School**, Valedictorian, 4.12/4.00

**Scouts BSA**, Eagle Scout

## RELEVANT COURSEWORK

Digital Logic Design w/ Verilog & FPGAs, Electrical Circuit Analysis, Electrical Power Systems, Analysis of Algorithms, Electronic Devices & Circuits I & II, Microprocessor Architecture, Electrical Signals & Networks, Embedded Systems Design, Microwave Engineering, Operating Systems, Data Structures, Differential Equations & Linear Algebra

## RELEVANT PROJECTS

My projects involving Arduino, I2C and programming are detailed and listed on **my website**.

## SKILLS

**Tech Skills:** Java, Verilog, C++, C#, Python, Arduino, Scala, I2C, FPGAs, oscilloscopes, signal generators, multimeters, building computers

**3D Modeling:** SOLIDWORKS & Fusion 360

**Rapid prototyping:** FDM and resin 3D printing, laser cutting, soldering

**Machining:** Lathe, mill, contour saw, water jet cutting, metal laser cutting, welding, CNC milling

## REFERENCES

**Dr. Gary Spivey**: Prof. of Electrical Engineering, GFU

**Sam Grimm**: Writing Systems Manager, NanoVox

**Justin Johnson**: Senior Engineering Technician, GFU