

# Alexander Stoffelmayr

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## OBJECTIVE

I am looking for an internship related to computer engineering, especially embedded systems, signal processing, and hardware engineering.

## EDUCATION

### **Bachelor of Science, Computer Engineering;**

**Minor: Science Technology and Law**, expected December 2025

Virginia Tech, Blacksburg, VA

GPA: 3.06

### **Related Courses**

Digital Design & Digital Systems

Embedded Systems

Intro to Computer Networking

Signals and Systems

Physical Electronics

Principals of Computer Architecture

Data Structures & Algorithms

Computational Engineering

## SKILLS

### **Current security clearance (Inactive)**

SPICE, Verilog, MATLAB, Code Composer Studio (CCS), Quartus Prime, Model Sim

Oscilloscope and Spectrum Analyzer Usage, AutoCAD/SolidWorks, Microsoft Office

Programming: Java, Python, C, C++, MIPS Assembly & Instruction Set Architecture

## PROJECT WORK

### **Graphic Equalizer & Class D amplifier**

Worked in a team to design and develop an audio system with a graphic equalizer and class D amplifier using active filtering, op-amps, MOSFET transistors, and Arduino input.

- Extensively researched and implemented active filtering, amplification circuits, and PWM signal generation and processing.
- Drafted and designed a complex circuit using SPICE simulation software.
- Built the circuit in hardware and extensively tested the real-world function of the system.

### **Digital Systems Computer Design Project**

Designed and wrote a 16-bit processor in the Verilog HDL.

- Heavily used Verilog, Quartus Prime, and ModelSim.
- Designed an arithmetic logic unit, memory structure, and data path using transistors, gates, and larger architecture units.
- Created instruction set and ran programs in machine and assembly code on the simulated processor.

### **Robot Using Ultrasonic Distance Sensing and Machine Learning**

Built and programmed a robot equipped with a rotating ultrasonic distance sensor to map surroundings and interpret results with simple machine learning.

- Experience working with Arduino and various sensors and actuators.
- Used k-means clustering to group data points and detect objects.

## WORK EXPERIENCE

### **Access Monitor**, Ravinia Festival Music Venue, Jul - Aug 2021

- Reviewed credentials and managed access for employees, deliveries, and musicians.
- Provided customer service and help to festival attendees.