**Alexander Stoffelmayr**

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**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 Physical Electronics

Embedded Systems Principals of Computer Architecture

[Network Application Design](https://canvas.vt.edu/courses/205237) Data Structures & Algorithms

Signals and Systems 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**

**Technical Lead - Radar Integration on an Unmanned Arial System (Current)**

Currently holding the technical lead position on a five-person team for a two semester design project sponsored by the MITRE Low-Cost Unmanned Swarming Technology (LOCUST) team.

* Defining goals specific to technical implementation of systems.
* Developing a framework for integrating SIMRAD Halo 20+ marine radar on a sUAS system.
* Conducting extensive testing of the systems the team designed and implemented.

**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.