# Alexander Stoffelmayr

School: Blacksburg, VA 24060 | Home: Winnetka, IL 60093 | Phone: (312) 391-8439 | Email: astoff@vt.edu

## 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 | 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.