

NATHANIEL A. MUHS

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EDUCATION

West Virginia University, Morgantown, WV

Expected: May 2027

Bachelor of Science in Electrical Engineering (ABET-accredited)

Overall GPA: 3.5

TECHNICAL SKILLS

Programming Languages: Java, Python, C++, VHDL

Electronics and Hardware: Arduino (C/C++), oscilloscopes, function generators, power supplies

Software and Design Tools: SolidWorks, MATLAB, Microsoft Office Suite, LTSpice, Blender

WORK EXPERIENCE

NASA IV&V, Fairmont, WV

May 2025 – August 2025

Threat Researcher

- Conducted research into publicly reported vulnerabilities to support mission resiliency

WVU Wehrle Global Supply Chain Lab, Morgantown, WV

August 2024 – May 2025

3D Printing Technician

- Refined defective meshes for printability using the creative modeling software Blender
- Optimizing printer reliability with routine cleaning, slicing, and Maintenance procedures

WVU Hardware Security Lab, Morgantown, WV

August 2023 – December 2023

Research Assistant

- Coordinated meetings with professors and researchers to carry out 10+ side channel attacks monthly
- Authored the standard operating procedure (SOP) for the Riscure side channel attack hardware
- Operated lab tools such as oscilloscope, Multimeter, Power Supply, and Function Generator daily

ENGINEERING PROJECTS

Amateur Radio Outreach and Education, Morgantown, WV

May 2025 – August 2025

Self-contained Morse Code Practice Unit

- Designed the circuit diagram and physically wired a Morse code translator for students learning Morse code
- Programmed an Arduino Nano in Arduino IDE to display decoded Morse inputs on an LCD

Introduction to Computer Engineering, Morgantown, WV

December 2024 – May 2025

Designed a Computer Processor Unit in VHDL

- Designed a computer processing unit (CPU) in VHDL to store operate on and display an 8 by 32-bit number
- Utilized Finite state machine, Block Diagrams, and Waveform analysis to visualize and build the CPU
- Implemented an Arithmetic Logic Unit (ALU) to perform addition, subtraction, bitwise OR, and bitwise AND

EXTRACURRICULAR ACTIVITIES

Artificial Intelligence WVU, Club

August 2023 – Present

Vice President

- Educated students about AI, built tangible projects, and connected members to educators and industry
- Placed 5th nationally in the APL/NASA Lunar Autonomy Challenge

October 2024 – May 2025

IEEE, WVU Chapter

August 2023 – Present

Member

- Attending biweekly university chapter meetings, workshops, and networking events, to learn and network