Aubrey McKinney

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EDUCATION

Old Dominion University, Norfolk, VA
Bachelor of Science in Engineering **Graduation:** May 2026
Major: Computer Engineering **Minor:** Computer Science
GPA: 3.85
Dean's List: Spring 2023, Summer 2023, Fall 2024, Spring 2024, Summer 2024, Spring 2025

Naval Nuclear Power Training Command
Nuclear/Nuclear Power Technology/ Technician **Graduation:** August 2021
GPA: 3.36
Graduated: 8th in Class

Delta Community College, Bay city, MI
Intro to Engineering **Attended:** Sept. 2018 – Feb 2020

Relevant Naval Courses: Classroom and hands on training in Electrical Theory, Heat Transfer & Fluid Flow, Reactor Physics, Reactor Principles, Reactor Theory, Reactor Chemistry, Electrical Motors and Generators.
Electrical & Computer Engineering Curriculum: C++ & Java Programming languages, Data Structures and Algorithms, Discrete-time Signal Processing, Linear Systems, Microcontrollers, Digital System Design, Electronic Circuits.

RELATED EXPERIENCE

U.S. Navy – Norfolk, VA
Electricians Mate Nuclear April 2020 – February 2023

- Operation and Control of generators, switchboards, control equipment and electrical equipment associated with reactor plants.
- Maintenance on power and lighting circuits, fuse panels, motors, generators, voltage and frequency regulators, and distribution switchboards.
- Test for shorts, grounds, and other casualties; Rebuild electrical equipment including solid state circuitry elements.

K&M International, North Branch, MI
Welder January 2020 – April 2020

- Fabrication of propane fired asphalt trailers and infrared asphalt recyclers.
- Mig welding, grinding, and support fabrication to ensure quality and safety of finished materials.
- Interpreting blueprints and precise measurements.

Sebewaing Tool & Engineering Company, Sebewaing, MI
Machining Internship September 2018 – May 2019

- Design and manufacturing internship to include machining of bracketry and mounting hardware for actuators, positioners, limit switches and other valve accessories for petrochemical (plastic) companies.
- Fabrication of pumps, mixers, granulators, strand die assemblies for the petrochemical industry.

PROJECTS/ CERTIFICATIONS

Development and Deployment of a Lightweight Skeleton-Based Person Re-Identification System for Real-Time Security Applications onto a Raspberry Pi Microcomputer

Senior Design Project September 2025 – May 2026

- This project aims to develop and deploy an efficient person re-identification security framework onboard a Raspberry Pi microcomputer.
- The system identifies and tracks individuals by analyzing skeletal joint movements captured using state-of-the-art camera systems, offering robust security systems that is not reliant on visual features such as clothing.
- The framework is cost-effective, scalable, and suitable for real-time applications such as surveillance, smart environments, or human-computer interaction.
- Acquiring hands-on skills in hardware interfacing, machine/deep learning, data collection, coding, and end-to-end system development.

Global Impact of Discrete-time signal processing

Research Project January 2025 – May 2025

- Explore the broader impacts that discrete-time signal processing has had on our everyday lives.
- Identifies the broader impact of digital signal processing in the social, economic, and global context.
- Presents historical/ hands on knowledge of the digital signal processing development

BJT & MOSFET Amplifier

Design Project September 2024 – December 2024

- Using Metal-oxide semiconductor parameters and BJT calculations to design single stage transistor amplifiers.
- Design and implementation of the amplifiers using a common source MOSFET and a common emitter BJT.

NVIDIA Accelerated Computing in CUDA C/C++

Certification July 2024

- Completion of 8-hour certification in “Getting started in Accelerated Computing in CUDA C/C++

LEADERSHIP

Title of Affiliation: Indoctrination Coordinator/ CPPA July 2022 – February 2023

- Led 19 Administrative Personnel in the successful and timely gain of 312 Individuals across 23 Naval Commands.
- Facilitated process improvements that streamlined administrative processing from two weeks to three days.
- Increased Personnel readiness and supported mission accomplishment across the submarine force.
- Received Navy and Marine Corps Achievement Medal for performance and devotion to duties listed above.

SKILLS

Electrical technician – Electrical Safety, Troubleshooting, Power Distribution, organizational and intermediate maintenance.

Administrative Assistant – Microsoft office, Navy Personnel and Pay, Command Pay and Personnel Administrator.

Welding/ fabrication – Mig welding, grinding, Oxy- acetylene, Arc Welding.

Machining – Manual Lathes, Mills, Basic CNC, Surface Grinding, Basic CAM/CAD.

Computer Programming – C/C++, MATLAB, JAVA, VHDL, Linux Based Systems, Github, Assembly Language.

Construction – Framing, intermediate plumbing, intermediate roofing, drywall, intermediate residential electrical.

Nuclear Technician – Nuclear Chemistry, Radiological Safety, steam turbine systems, Records Management, Hazardous Materials Operation.
