College Address:
829 Canyon Ridge Road, Apt.2
Unit #829-2
Blacksburg, VA 24060

Michael Naval

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(571) 462 9368

Permanent Address:
9212 Edenderry Drive
Fredericksburg, VA 22408

EDUCATION

Virginia Tech (Electrical Engineering) **Graduation: Dec 19th 2025**
Major: Controls Robotics and Autonomy Blacksburg, VA

Germanna Community College (Associate degree – AS Engineering, Electrical)
Graduation Date May 11th, 2023. **August 2021 – May 5, 2023**
Dean's List Fredericksburg, VA
Magna Cum Laude

SKILLS

Software & tools: MicroStation, Bluebeam, Microsoft Office, C++, Python
Engineering Competencies: Power System Analysis, Circuit design, Signals & Systems, Control Systems

EXPERIENCE

Electrical Engineering Intern, POWER Engineers (Member of WSP) – Richmond, VA **June 2025 - Present**

- Supported 3 active substation engineering projects during a full-time summer internship (40 hours/week), continuing part-time (20 hours/week) during the fall academic semester.
- Redesigned cable trough layout in control enclosure for improved routing efficiency, and reduced wiring conflicts.
- Updated line destination changes for P&C and Physical Projects across 70+ drawings
- Interpreted and revised one-line diagrams and control wiring schematics to ensure accuracy.
- Calculated cable lengths and enclosure dimensions to update BOMs, for accuracy.

Starbucks Barista, 1699 Carl D Silver Pkwy, Fredericksburg, VA 22401 **May 2024 – July 2024**

- Worked Full Time Over the Summer to fund College Education and Expenses.

Starbucks Barista, 1699 Carl D Silver Pkwy, Fredericksburg, VA 22401 **June 2021 – July 2023**

- Work 18 hours per week to help fund college education.
- Develop communication skills by assisting customers and finding feasible solutions to their problems.
- Collaborate with other servers, management, and cooking staff to ensure excellent customer experience.

PROJECTS

Senior Design Project – Virtual Synchronized PMU **January 2025 - Present**

- Developing a PMU for real time power system monitoring in collaboration with Dominion Energy.
- Implementing phasor estimation, signal synchronization, and data acquisition in Python.
- Ensuring compliance with IEEE C37.118.1 standards for accurate phasor data transmission.

EKG Heart Monitor System Project **November 2024**

- Designed and constructed an Instrumentation Amplifier (IA), band-pass filter, Low-pass filter, and a notch filter.
- Captured and analyzed heart signals in real time using oscilloscope (200 ms/div)
- Achieved differential mode gain of 20 and CMRR of 0.001, ensuring accurate detection of desired heart signals.

Wireless Sensor Node Project, Virginia Tech **January 2024 – May 2024**

- Programmed Arduino with Bluetooth to wirelessly transmit temperature readings every 30s.
- Designed a boost converter to regulate output at 10V for efficient battery charging.
- Validated reliable data logging and extended battery life using Power Saving Mode.