ABHINAV PRASAD

Cybersecurity | Electrical Engineer

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PROFESSIONAL SUMMARY

Cybersecurity graduate student in Computer Science (Cybersecurity Operations and Management) at Humber College, building on a Bachelor of Engineering in Electrical Engineering. Hands-on experience developing a vulnerability scanner and remediating its findings, auditing it against ISO standards, and assessing an organization's security posture with the NIST Cybersecurity Framework 2.0. Brings an engineer's discipline to security work, from systematic testing and quality verification through clear, rigorous documentation.

TECHNICAL SKILLS

Security & Governance: Vulnerability scanning & remediation, ISO/IEC 27001 auditing, NIST CSF 2.0, security risk & gap assessment, audit documentation

Programming: Python, C, Java, MATLAB, VHDL, Assembly

Machine Learning & AI: PyTorch, transfer learning (ResNet18), SVM, PCA, Grad-CAM, feature engineering

Embedded & Hardware: STM32 (CubeIDE), Arduino, Raspberry Pi, sensor integration, PCB testing, SMT soldering

EDUCATION

Master's, Computer Science – Cybersecurity Operations and Management *Sep 2026 – Present*
Humber College, Toronto, ON

Bachelor of Engineering, Electrical *Sep 2022 – Apr 2026*
Sheridan College (Davis Campus), Brampton, ON

- **Formula SAE Team, Electrical Team Lead:** led design, wiring, and integration of the vehicle's electrical subsystems for competition.
- **Autonomous Engineering Club, President:** led club projects and initiatives in autonomous systems and robotics.

CYBERSECURITY PROJECTS

Vulnerability Scanner: Development, Remediation & ISO Audit

- Developed a vulnerability scanner to detect security weaknesses across target systems and services.
- Analyzed scan results, prioritized findings by severity, and implemented fixes to remediate the identified vulnerabilities.
- Conducted an ISO-based audit of the scanner, evaluating its controls and processes against the standard's requirements and documenting findings and corrective actions.

NIST CSF 2.0 Security Assessment

- Assessed the security posture of a fictional company seeded with deliberate flaws using the NIST Cybersecurity Framework 2.0.
- Evaluated the organization across the six CSF Functions (Govern, Identify, Protect, Detect, Respond, Recover) to uncover control gaps.
- Mapped each weakness to the relevant CSF categories and delivered prioritized recommendations for remediation.

EXPERIENCE

Engineering Technologist | Avnan Electro Inc., Mississauga, ON *May 2024 – Aug 2024*

- Tested printed circuit boards against quality standards to verify performance and reliability prior to release.
- Maintained and updated bills of materials (BOMs), sourcing replacement components to meet design and availability requirements.
- Supported engineering change requests (ECRs), using CAD software to revise designs for manufacturability.

ENGINEERING PROJECTS

Autonomous Water Contamination Sensing Vessel

- Built a fully autonomous surface vessel on a Raspberry Pi with a pH, turbidity, TDS, and temperature sensor suite for real-time water-quality monitoring, with an RC override mode served from a self-hosted onboard web server.

Brain Tumor Detector

- Built a multi-model brain tumor classification system using transfer learning on ResNet18, reaching 96.0% accuracy and 99.24% AUC across four tumor classes.