

Zachary Ryan

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EDUCATION

Robert Morris University

Bachelor of Science in Cybersecurity
Dean's List Recipient

Pittsburgh, PA

August 2024 - December 2026

Community College of Beaver County

Cybersecurity
President's List Recipient

Monaca, PA

Jan 2024 - May 2024

SKILLS

Languages: Python | Java | Bash | PowerShell | HTML | CSS | SQL

Technical: Linux | Operating Systems | Digital Forensics | TCP/IP | Networking | Computer Hardware | Docker | Git/GitHub

Conceptual: SIEM | Wireshark | tcpdump | Ethical Hacking | Virtualization | Firewalls | SSL/TLS | Nmap | NIST RMF

Core Competencies: Leadership | Attention to Detail | Verbal Communication | Critical Thinking | Problem-Solving

LICENSES AND CERTIFICATIONS

- Secret Clearance - DOD Issued
- Google Cybersecurity Specialization Certificate [\[Certificate Link\]](#)

EXPERIENCE

United States Navy | Machinist Mate - Nuclear Reactor Department | Norfolk, VA

July 2020 - September 2023

- Operated and maintained nuclear propulsion systems, ensuring safe, efficient, and reliable performance at sea
- Functioned under high-pressure conditions while maintaining strict attention to detail and compliance with safety standards
- Conducted scheduled and emergency repairs on pumps, turbines, valves, and other mechanical systems
- Handled incident response, system monitoring, diagnostics, and secondary nuclear reactor equipment troubleshooting
- Demonstrated teamwork and communication, collaborating with multiple teams to maintain operational standards
- Maintained secure reactor operations by enforcing layered access controls, reviewing system status logs, and detecting abnormal system behavior, ensuring operational continuity, technical resilience, and safety in mission-critical environments

Sewickley BMW/Audi/Porsche Dealership | Car Detailer and Photographer | Sewickley, PA

September 2023 - August 2024

- Leveraged advanced auto detailing techniques to represent Audi, BMW, and Porsche brands at the highest level
- Collaborated with sales and service teams to maintain consistent alignment with customer expectations and brand values
- Detailed luxury vehicles to showroom standards while highlighting key design and performance features

PROJECTS

AI Powered Phishing Email Detection & Safe Rewrite System | [\[Github\]](#)

- Built a full-stack phishing detection platform using FastAPI and React to classify emails as SAFE, SUSPICIOUS, or PHISHING
- Implemented explainable risk scoring logic using keyword analysis, links, and SPF/DKIM/DMARC email authentication headers
- Developed a safe email rewrite engine that removes malicious content and highlights changes using HTML diff visualization
- Designed persistent SQLite storage to log analysis history and support auditing and historical review through the frontend
- Built restful API endpoints enabling automated email analysis, rewriting, and history retrieval workflows

Docker-Based Segmented Network Environment | [\[Github\]](#)

- Designed a segmented multi-container environment simulating frontend, API, database, and management networks
- Implemented firewall rules using iptables to enforce network access controls between segments
- Created a lightweight monitoring dashboard to visualize network events and security rule effectiveness
- Built an attacker container to demonstrate real-world lateral movement and firewall bypass attempts
- Hardened individual containers by restricting privileges and minimizing exposed services

AI Network Anomaly Lab | [\[Github\]](#)

- Built a full-stack SOC-style network anomaly detection platform using FastAPI, Docker, and React to analyze traffic patterns
- Implemented unsupervised machine learning (Isolation Forest) to score and flag anomalous real-time network traffic
- Developed a traffic simulation engine generating traffic flows, attacker behavior, and port scan anomalies
- Stored all network events in SQLite with timestamps and anomaly flags to support alert review and trend analysis
- Exposed RESTful API endpoints to ingest network flows and retrieve events and alerts for real-time analysis

CO-CURRICULARS AND ACHIEVEMENTS

- Member of Top Secret Colonials (TSC) - Campus Cybersecurity Club at Robert Morris University (RMU)
- Capture the Flag (CTF) team member at RMU
- Honor Society Nomination - Issued by the National Society of Leadership and Success [\[Link\]](#)