Andrew Thompson

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EDUCATION

The Ohio State University, Columbus, Ohio GPA (4.00 scale): 3.5
B.S. Computer Science Engineering, May 2026

SKILLS

- Programming Languages: Python, Java, C
- Technical Skills: Bash scripting, networking, ReFrame
- Certifications: CompTIA A+, CompTIA Network+, CompTIA Security+

WORK EXPERIENCE

Ohio SuperComputer Center | Client Services Student Assistant | November 2024 - present

- Resolved client tickets related to HPC cloud computing, storage, permissions, and software environments
- Programmed HPC regression tests using Python, Bash, and ReFrame, adding to the CI/CD pipeline
- Validated scheduler behavior, boundary conditions, and system functionality, ensuring any misconfigurations would be identified
- Wrote internal and client-facing documentation to reduce repeat inquiries and support other teams

ManufacturingX Labs | Research assistant | May-August 2024

- Developed machine learning algorithms within an agile environment to identify patterns in microscopic welds, resulting in 90% accuracy
- Presented research results at Ohio State's 2024 Summer Research Symposium
- Utilized Python, PyTorch, and MATLAB for data analysis and model training

PROJECTS

Capstone: Honda Legacy System Replacement and Modernization

- Research endpoint replacement for AS400 system capable of handling 30,000 total connection
- Designed implementation plan with phased rollout while maintaining production availability

Comet Detection – Solar and Heliospheric Observatory (SOHO) Image Analysis

- Developed a software program to detect comets from the SOHO telescope for OSC's annual High School STEM camp, then taught six students how to make their own
- Applied image processing techniques to track comet movement frame-to-frame
- Identification algorithm is based on changes in distance and angle that match common patterns

Suricata Intrusion Detection System and Alert Visualization Dashboard

- Deployed Suricata IDS on Ubuntu Server 24.04 with custom firewall rules and remote SSH access via
- Simulated network attacks using Nmap scans and Metasploit to generate realistic intrusion scenarios
- Configured Suricata to detect malicious network traffic and generate JSON-based alert logs
- Built a custom Python dashboard to visualize IDS output and summarize attack patterns and traffic flow data with flask

ACTIVITIES AND INTERESTS

Competition and Training

- Practice offensive and defensive cybersecurity skills through CTF events and Hack The Box modules, strengthening problem solving and penetration testing skills

Volunteer

- Humanitarian trips to New Orleans and Guatemala through Ohio State University group Buck-I-Serve
- Walked and socialized Franklin County shelter dogs weekly, improving adoptability, providing exercise, and enrichment