Samuel A. Howard

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in samuel-howard-1259b8221 • 🗎 20252379/samuel-howard

Objective

I aspire to create a safer digital world for everyone through a career in Cyber Security. I would like to support the public infrastructure of Tennessee and beyond to protect our way of life.

Education

May 2025
Bachelor of Computer Science
Tennessee Technological University, Cookeville, TN
Focus: Information Assurance and Cyber Security
GPA: 3.86

May 2021
High School Diploma
Cherokee High School, Rogersville, TN

Experience

May 2025 – Present
Graduate Research Assistant
Tennessee Technological University, Cookeville, TN
May 2024 – May 2025
Undergraduate Research Assistant
Tennessee Technological University, Cookeville, TN

- Applied knowledge from homelab and coursework to develop novel solutions at the intersection of Cyber Security and AI.
- Utilized NumPy and PyTorch for efficient, vectorized, AI-assisted analysis of malicious software samples.
- Supported research group members with problem-solving tasks.

Jan. 2023 – May 2025
Teaching Assistant for CSC 2310, Object Oriented Programming
Tennessee Technological University, Cookeville, TN

- Fulfilled TA duties, including grading assignments, providing assignment overviews, and offering personalized academic support to foster student success.

Summer 2023
Intern
Indigitous US, Remote

- Designed, tested, built, and automatically deployed an innovative Bible app utilizing Node.js with Express.js in Docker.
- Wrote comprehensive documentation for the backend functionality.
- Collaborated using Git and GitHub in an agile software development setting.

Aug. 2020 – July 2023
Back of House Trainer
Freddy's Frozen Custard and Steakburgers, Morristown, TN

- Crafted high-quality smash burgers and prepared sides to company standards.
- Trained new team members effectively.
- Assisted customers with order-related inquiries, escalating complex situations to management as needed.

Skills

Proficient in: C++, Docker, Flask, Git, GitHub Actions, Java, JavaScript, LaTeX, GNU/Linux, Markdown, Mermaid.js, PlantUML, Python, NumPy, OpenCV, PyTorch, VirtualBox, YAML

Novice in: Ansible, Bash, C, C#, CSS, HTML, SQL, Pandas, R, Microsoft Windows Operating System

Worked with: Azure, Firebase, GitHub, GitLab, Google Cloud Platform (GCP), iptables, Jira, Microsoft Azure, MongoDB, OpenVPN, Transact SQL (MSSQL), TensorFlow, Ubiquiti Unifi, ufw

Organizations and Leadership

Cyber Eagles: Member (2021 – Present)
Hall Council: Vice President (2021 – 2022)

Projects

selfhosted-bible: Self-hosted Bible progressive web app with multiple translations, reactive search, and multiple split-reading views.

bible_search: (C) Python package for searching Bible texts built using a inverted index search to achieve μs query times.

skin_segmentation: Various methods (including machine learning) for skin segmentation.

ta-s-aid: Scripts to assist Computer Science TAs.

logistics-dashboard: Custom logistics analytics dashboard for a Fortune 100 client using Python, C#, MSSQL, and Leaflet.js; primarily a backend developer.

tcpy-tarpit: Generalized TCP tarpit that mimics HTTP responses to trap malicious bots.

transformer-malware-classification: Transformer-based malware classifier trained on PE binaries representations.

rembg-trainer-cuda: Optimized CUDA training code for U^2-Net on the rembg background removal dataset.

References available upon request