Andrew Woodlee

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github.com/Cybersshell

Summary

Graduate of Cybersecurity Engineering at the University of Alabama in Huntsville. Proficient at developing a variety of applications including web platforms, Arduino projects, and tools and scripts. Able to comprehend new skills or programming languages efficiently and quickly. Hosts his own mail and web servers.

Education

University of Alabama in Huntsville, MS in Cybersecurity (Engineering track) — Jan 2025 – present

University of Alabama in Huntsville, BS in Cybersecurity Engineering — Aug 2019 – Dec 2024
- **Coursework**: Secure Software Development, Intro to Embedded Systems, Intro to Cybersecurity Engineering, Software Reverse Engineering, System Security, Network Security

Skills

Electrical: Soldering - Intermediate

DevOps: CI/CD - Intermediate | Git - Advanced | Gitea - Intermediate | GitHub - Intermediate | Docker - Intermediate

Systems and Servers: Linux - Advanced | C/C++ - Advanced | Go - Advanced | JavaScript - Advanced | MongoDB - Intermediate | Python - Advanced

Web Development: HTML - Intermediate | JavaScript - Advanced

Embedded Systems: ESP-32 - Advanced | Arduino - Advanced | MSP430 - Intermediate

Reverse engineering: IDA Pro - Intermediate | Ghidra - Intermediate

Experience

Research Assistant II, The University of Alabama System Management and Production Center – Huntsville, Alabama — June 2023 – July 2024
- Led Arduino programming for two Toy Fire trucks
- Added enhancements to the audio playback and movement of the truck
- Setup Linux on a Raspberry Pi for a PX 100 Robotic Arm that went on a STEM bus

Projects

Home server with remote access — Sept 2022 – present
- Used WireGuard to access home server from VPS
- Hosted some web applications like Nextcloud
- Secured SSH access over VPN

Cloud servers with backups — Sept 2023 – present
- Hosted a mail server (https://stalw.art) uses FoundationDB as a backend
- Secured FoundationDB with TLS certificates
- Hosted many applications including Gitea, Linkwarden, and others using Docker
- Backed up data regularly and securely using Restic/Autorestic
- Used Backy to automate backups

Backy (https://backy.cybershell.xyz) — Sept 2022 – present

- Allows many commands to be run on many hosts.
- Allows easy configuration of executable commands
- Allows easy configuration of package management
- Allows for commands to be run on many hosts over SSH
- Commands can be grouped in list to run in specific order
- Configuration of notifications on completion and failure

Wallet Transformer Monitor   Sept 2023 – May 2024
- Senior Design Project that monitors a single-phase 120V transformer using an ESP-32 and a web dashboard
- Wrote ESP-32 code that interfaced with an energy sensing chip, temperature sensors, WiFi, and MQTT over SSL.
- Studied and assembled voltage and current sensing, full-bridge rectifier circuits safely

Digital Telepresence (https://git.digitaltelepresence.com/digital-telepresence/)   Apr 2022 – Mar 2024
- DTP is an online application suite for the web
- Helped to build a new system from the ground up
- Independently designed novel solutions with minimal guidance
- Service-oriented MVVM development and separation of concerns

Volunteer

Cybersecurity Club at UAH
- Attended CCDC qualifiers in 2024

Awards

Merit Tuition Scholarship
- Awarded by UAH in 2019 (8K/year)