

# Andrew Woodlee

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github.com/Cybersshell

## Education

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**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

## Experience

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**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

## Skills

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**Systems and Servers:** Linux | C/C++ | Go | JavaScript | MongoDB | Python

**DevOps:** Git | CI/CD | Gitea | GitHub | Docker

**Embedded Systems:** ESP-32 | Arduino | MSP430

**Web Development:** HTML | JavaScript

**Reverse engineering:** IDA Pro | Ghidra

**Electrical:** Soldering

## Projects

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**Backy (<https://backy.cybershell.xyz>)** Sept 2022 – present

- Used Go libraries to create a command execution tool
- Used Go's native SSH library to run commands over SSH
- Used Go libraries to create a YAML configuration
- Configuration of notifications on completion and failure

**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 server administration** 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

**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**

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**Cybersecurity Club at UAH**

- Attended CCDC qualifiers in 2024

**Awards**

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**Merit Tuition Scholarship**

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