

Lillian Skyler Danforth

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Education

Cyber Security & Network Administration

January 2023 — May 2025

Virginia Western Community College, Roanoke VA

Relevant Studies: Cisco Networking, Linux Server Administration, Windows Server Administration, Database Management, Cloud Computing AWS, Cyber Security, Python, Java, Computer Troubleshooting and Repair, Agile, Scrum

Electrical Engineering

September 2021 — May 2022

Rose-Hulman Institute of Technology, Terre Haute IN

Relevant Studies: DC Circuits, Python, Java, Arduino, Calculus, Physics, Engineering Team Robotics Project

Trade and Industrial Education: Electronics Technology

August 2017 — May 2021

Floyd S. Kay Technical Center, Lexington VA

Relevant Studies: DC Circuits, AC Circuits, Digital Electronics, Robotics, Computer Programming, Computer Repair, Soldering, Electronic Prototyping

Experience

Technical Book Editor

March 2024 — May 2024

First pass and technical edit of the "Introduction to Python and Spice for Electrical and Computer Engineers" textbook authored by Jim Squire.

Skills

- **Linux:** 6+ years experience with desktop, laptop, and server environments.
Proficient with main Distro families: NixOS, Debian, Arch, Red Hat and Gentoo.
Additional experience with derived distros like Ubuntu Server, Fedora, PopOS!, EndeavourOS and Nobara.
Experience with managing remote and local installations including automatic updates, fully automated installations with nixos-anywhere, and fully declarative whole system configuration.
Experience running various self hosted services including: Jellyfin, TheLounge IRC Client, NextCloud, Minecraft, FreshRSS, Copyparty, SAMBA, hosted with Caddy to act as the reverse proxy and to provide HTTPS.
Experience with many server based tooling such as: Docker, Podman, Git, ZFS, Sanoid/Syncoid, Restic, QEMU, KVM, SOPS, Caddy, WireGuard, EXT4, UEFI, SSH, SSHFS, PAM, SQL, and Vim.
- **Other Operating Systems:** Experience with Windows 10/11, Windows Server, WinGet, Hyper-V, MacOS Tiger through Sequoia, various Apple services, IOS, and Android.
- **Programming:** Extensive NixOS configuration and packaging for Nix, Experience with Arduino in hobbyist robotics competitions, Experience with Bash scripting for Linux automation, Basic knowledge of Python, Basic knowledge of Java.
- **Hardware:** Extensive experience soldering, Experience with repairing and building desktops, laptops and servers, Experience with basic A/V equipment, Experience with basic networking equipment.

Standout Projects

- Configured two-factor authentication for SSH key access using FIDO2, leveraging the motherboard TPM and/or a YubiKey as hardware authenticators. Thus allowing hardware locked SSH keys.
- Setup a fully automated backup solution involving: A 48 TB HDD array with ZFS as the filesystem, Sanoid/Syncoid for ZFS snapshots and backups to a second pool, and Restic for offsite backups to Backblaze B2 using mounted ZFS snapshots to allow fully atomic incremental backups.
- Fully automated remote installation and declarative NixOS configuration using NixOS Anywhere with disko for declarative drive configuration. Allowing 98% automated setup/reinstall of the server environment with the only manual step being authentication for secret access.
- Declarative sops based secret management shared across multiple machines with a shared NixOS configuration and stored securely on a public GitHub repo without leaking secrets.