

Hayden Murphrey

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haydenmurphrey.site (Portfolio)

EDUCATION

James Madison University, Harrisonburg, VA

Graduation Date: December 2025

Bachelor of Computer Science

Minor in Music

Relevant Coursework: Data Structures, Algorithms/Algorithm Analysis, Computer/Operating Systems, Web Development, Software Engineering, Programming Languages, Discrete Structures

SKILLS

Technical Skills: Agile Methodology (SCRUM), API Integration, CLI, Git, Linux Admin, SSH, SVN, Virtualization (Proxmox)

Languages: C, CSS, Haskell, HTML, Java, JavaScript, Python, Ruby, Rust, Swift

Frameworks/Libraries: Bootstrap, CMake, Docker, JSON, NumPy, OpenCV, pandas, Pi-hole, pytest, ROS2, Tailwind, YAML

Certifications & Professional Memberships:

- ❖ (ISC)2 Certified in Cybersecurity (Issued Feb: 2025)
- ❖ Association for Computing Machinery (ACM), Student Member

WORK EXPERIENCE

DataAnnotation, freelance remote

May 2025 - Present

Software Validation - AI trainer (contract)

- ❖ Review, correct, and validate code results against specifications and test cases to improve quality
- ❖ Work extensively with JSON and Node.js to reproduce issues, debug logic errors, and verify fixes

Townes Site Engineering, Midlothian, VA

May 2021 - August 2025

Geotechnical Technician

- ❖ Worked full time alongside a team of engineers & geotechs
- ❖ Conducted on site and in lab independent testing/inspections on materials including soil, concrete, and steel

PROJECTS

Personal Homelab & Network Infrastructure

November 2025 - Present

- ❖ Managed a Proxmox VE hypervisor on an HP EliteDesk 800 G1, orchestrating multiple VMs and LXC containers
- ❖ Configured a Cisco 3750 multilayer switch to manage local traffic, focusing on Layer 2/3 switching fundamentals
- ❖ Utilized a Raspberry Pi 5 to handle ad/tracker blocking (Pi-hole), remote access & VPN connectivity (Tailscale), private data synchronization (Obsidian Sync), and a custom Homepage dashboard to monitor my environment

PintOS (CS 450: Operating Systems), Harrisonburg, VA

Fall 2025

James Madison University

- ❖ Collaborated with a team to plan milestones, stay on timeline, do code reviews, and integrate features for PintOS
- ❖ Reimplemented the timer subsystem (timer_sleep) with interrupt-driven sleep queues, eliminating busy-waiting and improving CPU utilization/thread scheduling
- ❖ Implemented user-mode processes and expanded syscalls (exec/wait, file I/O & management) to enable realistic user programs and file browsing

Application Development (CS 343), Harrisonburg, VA

Fall 2025

James Madison University

- ❖ Built a fully client-side web app that serves real users, performs full CRUD with localStorage persistence, and integrates third-party APIs via asynchronous JavaScript; deployed to a public URL
- ❖ Implemented an accessibility first design following WCAG (Web Content Accessibility Guidelines) standards