

Hayden Schultz

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EDUCATION

Worcester Polytechnic Institute

Computer Science Major, Cybersecurity Concentration, ECE Minor

Expected May 2028

GPA: 3.87

Dean's List: All semesters (Fall 2024 – Present)

Relevant Coursework: Algorithms, Software Engineering, Operating Systems, Computer Networks, Computer Organization & Assembly, Systems Programming, Object-Oriented Design, Theory of Computation

PROJECTS

Hanover Insurance CMS – Full-stack CMS built for The Hanover Insurance Group (NYSE: THG)

2026

Assistant Lead Software Engineer – React, TypeScript, Express, Prisma, PostgreSQL, Auth0, OpenAI

- Built an AI-powered natural-language-to-SQL insights feature that interprets plain-English questions as validated Postgres queries, rendering results as charts and scorecards via OpenAI structured outputs with Zod-enforced response schemas.
- Engineered a multi-layer SQL safety system – a read-only statement allowlist validator plus a least-privilege Postgres database role – to block injection and destructive queries in LLM-generated SQL.
- Integrated Auth0 with JWT-based route protection and shared React context for current-user state, and built a customizable dashboard with drag-and-drop resizable widgets and live Recharts graphs.

Music Audio Visualizer – Real-time browser audio visualizer with reactive 3D graphics

2026

Solo Project – React, TypeScript, react-three-fiber (WebGL), Web Audio API, Spotify API

- Built a real-time visualizer that captures live browser-tab audio and runs per-frame FFT spectral analysis via the Web Audio API, mapping the frequency spectrum onto reactive 3D bar graphics with Three.js/WebGL.
- Optimized the render hot path to a stable 60fps by eliminating per-frame allocations (in-place Float32Array), writing mesh transforms directly to Three.js refs to bypass React reconciliation, and rendering bloom post-process at half resolution.
- Integrated Spotify via OAuth 2.0 PKCE, synced lyrics, and album-art color extraction, coordinating three async sources with a subscriber cache and AbortController cancellation to prevent redundant work and stale state.

WORK EXPERIENCE

Town of Henrietta

Henrietta, NY

IT Intern

May 2026 – August 2026

- Authored a PowerShell tool resolving stubborn vendor software conflicts with CrowdStrike across 15 endpoints, with an audit mode for pre-deployment review and a removal mode that synthesized silent uninstall commands for packages lacking quiet uninstall strings, enabling unattended deployment via Action1 with verification and centralized logging.
- Built a Python utility compiled to a standalone Windows executable that consolidates and deduplicates timestamped meeting-transcript CSV exports, eliminating hours of manual reformatting per meeting for the Town Clerk's office.
- Automated compromised-credential response with a CrowdStrike SIEM workflow that flags users appearing in external breach data, sends notification, and enforces a password reset in Active Directory, replacing a manual per-incident process.
- Maintained 120+ endpoints across seven facilities using Action1 and PDQ Inventory/Deploy; rebuilt deployment packages to eliminate conflicts from outdated procedures; resolved helpdesk tickets for drivers, system access, and peripheral issues.

Best Buy

Henrietta, NY

Technical Sales Associate

July 2023 – January 2025

LEADERSHIP & INVOLVEMENT

Worcester Polytechnic Institute

Worcester, MA

Community Advisor

August 2025 – Present

- Led 50+ new students through orientation and provided ongoing support to first-year residents, organizing community events and serving as a first-line academic and social resource.

Lambda Chi Alpha, Pi Zeta Chapter

Worcester, MA

Brother, Social Chair

October 2024 – Present

SKILLS

- **Languages:** TypeScript, JavaScript, Python, Java, C, C++, SQL, Bash, PowerShell
- **Frontend:** React, Vite, Astro, Tailwind CSS, shadcn/ui, Three.js/react-three-fiber, HTML/CSS
- **Backend & Data:** Node.js, Express, Prisma, PostgreSQL, Supabase, REST APIs, OpenAI API, Auth0
- **Tools & Infrastructure:** Git, Linux, Docker, Proxmox, pnpm, Vitest, Windows Server, Jira/Agile, Vercel
- **Security:** SQL injection prevention, JWT authentication, least-privilege access control, threat modeling