CONNOR SCULTHORPE

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OBJECTIVE

Accomplished and adaptable software developer and security researcher with over four years of practical experience and extensive self-taught skills seeking a challenging opportunity to use my passion for hands-on problem solving to create innovative solutions to become a force multiplier within the workplace.

PROJECTS

Skyrim Game Engine Optimization

- Developed performance improvements to The Elder Scrolls V: Skyrim's game engine with modifications in C++.
- Optimized cell reset timers and improved memory management – reached over 700k launches from 93k unique users and amassing over 4,000k views.
- Conducted root cause analysis of the game engine's asset loading and memory allocation systems, identified legacy inefficiencies through systematic testing and experimentation to determine optimal system parameters.
- Contributed key optimization elements to the Skyrim community patch initiative and addressed memory bloat and physics object persistence issues while improving overall game stability across multiple Bethesda titles.

WORK EXPERIENCE

IT Consultant & Security Researcher as an Independent Contractor   *October 2023 – Present*
Provides hardware and software solutions, security audits, custom PC builds, and strategic IT planning for individuals and businesses locally and remotely.

- Built trust with clients by turning unfamiliar technology into approachable, judgment-free experiences, guiding them with patience and clarity, fostering confidence in unfamiliar digital tools and bolstering technical literacy.
- Serviced clients' machines, including malware removal and device repairs (Fire Sticks, Printers), and resolved CrowdStrike / Microsoft bootloops.
- Conducted a security audit and vulnerability assessment of router firmware for Micronet-Union Technologies, identifying 16 critical vulnerabilities across C++, JavaScript, and Shell code using static analysis and security tools, mapping them to CWE standards to ensure responsible disclosure and compliance with NIST guidelines alongside remediation strategies.
- Identified 11 web security vulnerabilities, including: Insecure Direct Object Reference (IDOR, CWE-639) exposing Personally Identifiable Information (PII), Content Security Policy (CSP) misconfiguration (A05:2021).

Fullstack Developer & Tutor at Preply, Inc.   *March 2021 – August 2023*
Delivered English as a Second Language (ESL) instruction via remote lessons to students across 15 countries, handling scheduling, payment and budgeting, as well as performance reviews using self-made software.

- Conducted one-on-one and group virtual tutoring sessions for students from diverse linguistic backgrounds at all levels, maintaining respect for local cultural norms for students around the globe.
- Developed a MySQL database, enforcing GDPR compliance and utilized Docker containers with automated tests to deliver secure and efficient solutions, growing long-term student base 6-fold by analyzing student data.
- Managed an Ubuntu server for 2.5 years, planning and responding to security and disaster incidents through system monitoring, backup inventory, logging, data redundancy, and battery backups (UPS) to ensure business continuity.

SKILLS

Security: Vulnerability Assessment, Secure System Design, Reverse Engineering, OWASP Top 10, Incident Response, Nmap, Cryptography, Common Vulnerabilities and Exposures (CVE), Common Weakness Enumeration (CWE)
Programming: C++, Python, C#, Java, SQL, Code Reviews, Requirements Gathering, Data Structures, Algorithms
Soft Skills: Quick Learner, Communication, Mentoring, Patience, Detail Orientation, Organization, Data Analysis, Time Management

EDUCATION

Southern New Hampshire University *(Remote)*
BS Computer Science, minor in Applied Mathematics   Expected Winter 2025
BA Mathematics   Expected Winter 2026
AS Computer Science (GPA 3.93 / 4.0)   August 2024
Honors: Inducted into 3 Honor Societies, Two-Time FIRST LEGO League Robotics Team Medalist as the Lead Programmer