Tyler Carpenter

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github.com/tylercarpenter22 | tylercarpenter22.github.io/portfolio/

Education

University of Central Florida   Aug 2023 – May 2026
Bachelor of Science in Information Technology, Secure Comp. & Network Minor   Orlando, FL

Experience

Teaching Assistant – Computer Architecture Concepts   Jan 2025 – Present
University of Central Florida, College of Computer Science and Engineering   Orlando, FL

- Graded assignments, providing detailed feedback to improve students' understanding of key concepts such as CPU design, memory hierarchy, and instruction set architecture.
- Tutored students in areas including assembly language, pipe-lining, and cache memory, offering tailored explanations to reinforce complex technical topics.
- Assisted in debugging and optimizing student projects, applying problem-solving skills to help identify and resolve issues related to low-level programming and hardware simulation tools.

Projects

<u>Website Developement</u>   *HTML, CSS, JavaScript, User Interface Design*   April 2024 – Jan. 2025
- Designed, developed, and deployed a personal portfolio website using HTML, CSS, and JavaScript, showcasing technical projects and skills.
- Collaborated with a Human-Computer Interaction (HCI) team to design an interactive business website, utilizing Gantt charts, prototypes, and RITE method for user testing and iterative improvement.
- (In Progress) Developing an e-commerce website for a beauty and nails shop, focusing on user experience and responsive design.

<u>D&D Character Creator Apllication</u> *Java, JavaScript, JSON, Jackson Lib, Java Swing GUI*   Nov. 2024 – Jan. 2025
- Developed a full-stack application for creating and managing custom Dungeons & Dragons characters using a Java Swing-based GUI.
- Implemented back-end logic for handling character attributes, classes, and races, utilizing JSON for data storage and the Jackson library for serialization and deserialization.
- Built interactive front-end components with Java Swing, providing real-time character updates and customizable options for item selection, spells, and stats. Integrated JavaScript to enhance user interactivity and improve overall application responsiveness.

<u>Homelab: Network Security Server</u>*Python, Snort, pfSense, Linux, Firewall Server Hosting*   Aug. 2024 – Nov. 2024
- Repurposed outdated PCs into a multi-purpose server for hosting network services and security monitoring. • Designed and implemented a Network Intrusion Detection System using Python and Snort to monitor, analyze, and secure network traffic on a virtual server.
- Configured a custom firewall using pfSense on a Linux server, ensuring robust network security and access control

<u>Pet Boarding Databse System</u>*SQL, mySQL, mySQL Workbench*   Mar 2024 – Nov. 2024
- Facilitated a SQL project for a pet boarding business system, optimizing database schema for efficient management of pet bookings, owner information, and scheduling.
- Utilized MySQL and MySQL Workbench to facilitate efficient data storage and retrieval.
- Completed as part of a Database Concepts course project.

Skills & Certifications

- CompTIA Network + | CompTIA Security+ | CompTIA Linux+
Expected Completion: July 2025 (UCF CECS Certifications Program)

- Proficient in C, Java, Python, JavaScript, HTML, CSS.

- Experienced with Linux, Ubuntu, Windows, mySQL, Visual Studio Code, and Git.

- Leveraged strong communication, team-building, and time management skills, ensuring effective collaboration and timely project completion.
- Demonstrates adaptability and strong problem-solving abilities through effective troubleshooting and resolution of technical challenges.