

Owen Crouse

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EDUCATION

Wilfrid Laurier University

Bachelor of Science in Computer Science

Waterloo, ON

Sept. 2021 – Aug 2025

EXPERIENCE

General Labourer

April – Sept, 2021 – 2025

Ghent Landscape

Petersburg, ON

- Assist with retaining walls, interlock patios, excavations and various other commercial landscape hardscape or earthworks projects
- Safely and efficiently operate all landscape construction equipment and tools
- Maintain a professional and courteous demeanor when interacting with clients and coworkers.
- Communicate with the Foreman to ensure project goals are met and job satisfaction is achieved.

Personal Trainer

Sep. 2021 – Present

Wilfrid Laurier University

Waterloo, ON

- Coordinate with clients and fitness center staff to schedule and manage training sessions
- Evaluate clients' physical conditions and address any concerns or limitations affecting workouts
- Ensure proper maintenance and setup of training equipment and workout areas for optimal safety and performance

Retail Associate

Dec 2016 – Aug 2020

Athena Art and Gift Store

Kitchener, ON

- Manage inventory and maintain organized, appealing product displays
- Deliver a high level of customer service by assisting and engaging with clients
- Handle cash and operate the register to process both cash and credit card transactions

PROJECTS

Firewall + IDS/IPS | *Linux, iptables/nftables, Snort, Suricata*

July 2025 - Present

- Created and expanded a basic firewall into a Unified Threat Management (UTM) system by combining iptables/nftables with Snort/Suricata intrusion detection capabilities
- Created attack simulations including port scans, brute force attempts, and SQL injection tests to evaluate system resilience
- Captured and analyzed logs to monitor attack patterns and validate intrusion detection responses

LED Distance Display | *Python, Raspberry Pi, GPIO*

Jan 2025 – May 2025

- Designed and built a multi-modal distance sensing system using Raspberry Pi, integrating an ultrasonic sensor (HC-SR04), servo motor (MG90), analog potentiometer (via PCF8591 ADC), and an 8x8 LED matrix (MAX7219)
- Used RPi.GPIO to read potentiometer input and dynamically control the frequency of ultrasonic measurements by mapping analog values to sensing delay intervals
- Calculated object distance using echo pulse timing from the ultrasonic sensor and translated the result to display on an 8x8 LED matrix

Inventory Web Server | *PHP, JavaScript, MySQL, Apache*

June 2025 – July 2025

- Designed and implemented a three-tier client-server inventory management system enabling users to log in, search, update, and delete product and supplier records
- Developed secure database interactions using prepared SQL statements to prevent SQL injection and maintain data integrity across linked tables via foreign keys and joins
- Built an interactive JavaScript-based frontend with PHP-driven server-side logic hosted on an Apache web server, ensuring real-time data updates from a MySQL database

TECHNICAL SKILLS

Languages: Java, Python, C/C++, MySQL, JavaScript, HTML/CSS, PHP, VBA, R

Developer Tools: Git, VS code, Eclipse, Oracle VirtualBox/VMware

Libraries: Pandas, NumPy, nltk

Additional Tools: Powershell, Microsoft 365, Google Drive, Excel, CAD