

# Ryan Johnson

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## Education

Carleton University – Bachelor of Science: Computer Science	December 2025
• Focus in Cybersecurity.	
• Relevant courses in Applied Cryptography and Authentication, Computer Systems Security, Database Management Systems, Quality Assurance, Network Security and Operating Systems.	
• Compiled and uploaded organized notes for Computer Science courses, assisting peers in exam preparation and understanding complex topics.	

## Skills

**Programming Languages:** Java, JavaScript, HTML, CSS, C++, C, Python

**Technologies:** Git, TortoiseSVN, Postman, Linux, SQL, PostgreSQL, Wireshark, JUnit, Cypress, Cucumber, Maven

## Experience

Software Developer Intern, KiM GmbH - Germany	Summer 2024
• Tested the CADClick 3D visualization API (RESTful, JSON) using Postman to ensure accurate 3D profile rendering in the browser.	
• Developed parametric CAD models and profiles.	
• Created UI features for the CADClick 3D visualization tool using JavaScript, CSS, and HTML to display different models together, anchored, and with interchangeable profiles.	

## Projects

Linux Kernel Modules	C, Bash, Linux
• Hooked multiple syscalls (openat, execve, getdents64) by modifying read-only syscall table pages.	
• Built a backdoor by modifying task credentials during execve and grants privileged access.	
• File-cloaking functionality via getdents64 to filter directory entries in kernel memory and return a sanitized directory.	
Encrypted Password Manager	Python, SQLite, PySide6, Qt
• Developed a secure password manager with a Qt-based GUI for managing and storing credentials.	
• Implemented local storage using SQLite with Fernet symmetric encryption for sensitive data.	
• Protected master passwords with Argon2 hashing and PBKDF2-HMAC key derivation for security.	
Health Monitor Device Simulator	C++, Qt
• Created a simulation of a RaDoTech health monitoring device to replicate measurement workflows and health result generation.	
• Implemented MVC architecture and observer pattern to manage profiles, handle simulated device interactions, and display detailed results.	
Library Management System - Agile Workflow	Java, Javascript, Cucumber, Cypress, Node, Express
• Built a system that supports authentication, user book borrowing, returning, and handling of a hold queue.	
• Applied Test-Driven Development for backend logic, Behavior-Driven Development with Cucumber for feature scenarios, and Web Acceptance Testing with Cypress for end-to-end validation and UI.	

## Additional Work

Lead Bartender, Algonquin Resort - New Brunswick	May - August 2023
• Crafted drinks according to individual orders, ensuring quick service and customer satisfaction.	
• Conducted regular inventory counts for beer, liquor, and other bar supplies to maintain accurate stock levels.	
Server, Algonquin Resort - New Brunswick	May 2022 – August 2025 (Seasonal)
• Provided high-quality customer service in a fast-paced environment while managing multiple tasks, prioritizing orders, and maintaining accuracy and efficiency.	