DHANUSH BAJAJ

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PROFESSIONAL SUMMARY

Motivated Computer Engineering Technology graduate with a 3.4 GPA and hands-on software development experience at the Communications Security Establishment Canada (CSE). Proven ability to write clean, testable code across Java, Python, JavaScript, and C, and to develop full-stack web applications in a production environment. Experienced diagnosing and fixing bugs, writing unit and integration tests, and participating in Agile workflows and peer code reviews. Skilled with Git/GitHub for version control, Docker/Kubernetes for containerization, and REST APIs for integration. Strong communicator and collaborative team player with a genuine curiosity to learn modern engineering practices.

EDUCATION

Algonquin College Ottawa, ON

Computer Engineering Technology | GPA: 3.4 | Dean's List April 2025

Relevant Coursework: Data Structures and Algorithms, Operating Systems, Software Engineering, Database Systems, Computer Networks, Compilers

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript (ES6+), C, C++, C#, SQL, PHP, TypeScript, Bash, R

Web Development: HTML5, CSS3, React, Node.js, JEE (Jakarta EE), .NET, REST APIs, JSON

Databases: SQL (MySQL, relational databases), Database Design, Data Modeling, CRUD Operations

Tools & Version Control: Git, GitHub, VS Code, Visual Studio, Eclipse, NetBeans, Docker, Kubernetes, Arduino IDE

Testing & Quality: Unit Testing, Integration Testing, Debugging, Troubleshooting, Code Reviews, Test-Driven Development

Methodologies: Agile/Scrum (Stand-ups, Sprint Planning, Retrospectives), Object-Oriented Programming (OOP), CI/CD, Microservices, Client-Server Architecture

PROFESSIONAL EXPERIENCE

Communications Security Establishment Canada (CSE) — Software Developer Intern Ottawa, ON

September 2024 – April 2025

- Developed "Kyubes," a Kubernetes-based web application that enabled the organization to centrally manage, deploy, and monitor software tools across containerized environments.
- Served as team lead for the Kyubes project, coordinating task assignments, setting sprint priorities, and ensuring on-time delivery of features across a team of developers.
- Wrote clean, modular, and testable front-end and back-end code using JavaScript, HTML5, CSS3, and REST APIs, following team coding standards and best practices.
- Collaborated with senior engineers and cross-functional team members in an Agile environment, participating in daily stand-ups, sprint planning, and retrospective meetings.
- Participated in peer code reviews on GitHub, providing and incorporating feedback to maintain high code quality and consistency across the codebase.
- Diagnosed and resolved bugs in container orchestration workflows and deployment pipelines, improving application stability and reliability.
- Wrote unit and integration tests to validate deployment logic and API endpoints, ensuring code reliability before releases.
- Configured and maintained Docker containers and Kubernetes clusters, gaining hands-on experience with CI/CD pipelines and environment management.
- Contributed to technical documentation for deployment procedures and system architecture, supporting onboarding and knowledge sharing within the team.

Tim Hortons — Assistant Manager Ottawa, ON

September 2022 – May 2026

- Led a collaborative team of 10+ employees, coordinating daily stand-ups and shift planning to consistently exceed performance targets.

- Diagnosed and resolved operational issues in real time, demonstrating strong troubleshooting and problem-solving skills.
- Communicated effectively across team members and management, fostering a collaborative team mindset focused on continuous improvement.

Home Depot — Cashier Ottawa, ON
March 2026 – Present

- Delivered efficient service in a fast-paced environment, demonstrating attention to detail, adaptability, and strong communication skills.
- Collaborated with team members to resolve customer issues and optimize workflow during high-volume periods.

PROJECTS

Sliders — Full-Stack Web Application

- Developed a full-stack web-based game with clean, testable code using Jakarta EE, implementing new features including user authentication, session management, and role-based access control.
- Diagnosed and resolved bugs across the front-end (HTML5, CSS3, JavaScript) and back-end (Java, SQL), improving application stability and user experience.
- Wrote unit and integration tests to validate user management logic, input validation, and database operations, ensuring code reliability.
- Implemented security best practices including password hashing and SQL injection prevention.
- Technologies: Java, JEE, HTML5, CSS3, JavaScript, SQL, Git, Apache Tomcat

My Personal Speech Therapist — Cloud-Based Application

- Built a speech therapy application using Python and Microsoft Azure, integrating cloud APIs for real-time speech-to-text processing.
- Debugged API integration issues and wrote tests to validate speech recognition accuracy and error handling.
- Technologies: Python, Microsoft Azure, REST APIs, JSON, Git

Turing Machine — Client-Server Application

- Developed a multithreaded client-server application in Java to simulate Conway's Game of Life, writing testable code with clear separation of concerns.
- Diagnosed and fixed concurrency bugs related to thread synchronization and socket communication.
- Technologies: Java, Multithreading, Socket Programming, OOP, Git

GoLite — Custom Compiler

- Engineered a compiler from scratch in C, implementing lexical analysis, parsing, semantic analysis, and code generation.
- Wrote comprehensive tests for each compiler phase, systematically troubleshooting edge cases and unexpected inputs.
- Technologies: C, Data Structures, Algorithms, Debugging, Testing

User Management — Linux Automation Script

- Wrote a Bash script to automate user provisioning, permission management, and account lifecycle on Linux servers.
- Technologies: Bash, Linux, Shell Scripting, Git

Temperature Monitor — IoT Device

- Built a real-time temperature monitoring device using Teensy 4.0 and Arduino with live data visualization.
- Technologies: C/C++, Arduino, Embedded Systems, Debugging