Sourav Minhas

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EDUCATION

Carleton University, Ottawa, Ontario **Sep 2022 – Apr 2027**

Honours, Bachelor of Computer Science: Artificial Intelligence & Machine Learning - Co-op

- **Awards/Achievements:** General In-Course Scholarship, VRC Robotics Design/Build Award
- **Relevant Courses:** Discrete Structures I & II, Abstract Data Types and Algorithms, Fundamentals of Web Applications, Statistical Modelling, Systems Programming, Object Oriented Software Engineering, Database Management Systems, Machine Learning, Artificial Intelligence, Linear Algebra I & II, Calculus I, II & III
- **Current Standing & GPA:** Third Year, 10.0/12.0 (A-)

TECHNICAL SKILLS

Languages: Java, C++, C, Python, SQL, JavaScript, HTML, CSS
Frameworks/Tools: NodeJS, Express, Handlebars, PUG, SQLite, GIT/GitHub, React, SPSS, MS Office, TensorFlow, Qt
Operating Systems: Windows, macOS, Linux

PROFESSIONAL EXPERIENCE

IT Support Technician **May 2024 – Aug 2024**

S.M I.T Services, Brampton, Ontario

- Resolved issues on 25+ laptops/PCs through critical thinking, and step-by-step structured troubleshooting
- Fostered positive client relationships with supportive advice, reaching a near-perfect customer satisfaction rate
- Shortened resolution time by 15% through proactive workflow optimizations and efficient process streamlining

Multidisciplinary Tutor **Aug 2020 – Present**

Pathways 2 Excellence Tutoring, Brampton, Ontario

- Earned a 90% student/parent satisfaction rate using engaging and tailored Math and Computer Science lessons
- Improved grades by 5-15% for 100+ students in 300+ dynamic classes across various grades and age groups
- Created 30+ unique educational resources, designed to enhance student learning in English, Math and French

APPLIED PROJECTS & CERTIFICATIONS

Digital Image Classifier **Nov 2024 – Dec 2024**

Carleton University, Ottawa, Ontario

- Developed a Convolutional Neural Network (CNN) in Python using TensorFlow for robust image classification
- Optimized model performance with Adam, achieving 80%+ validation accuracy through tuning hyperparameters
- Utilized data loading, augmentation techniques, preprocessing, and training to streamline the classification task

Elevator System Simulation **Oct 2024 – Nov 2024**

Carleton University, Ottawa, Ontario

- Created the simulation using C++ and Qt featuring real-time interactions and events designed on a Linux system
- Engineered a control system using Qt's slots and signals to handle scheduling and optimize routes by over 70%
- Implemented a GUI using Qt Runner to manage interactions, state changes, tracking and outgoing user requests

Ghost Hunt Game **Nov 2023 – Dec 2023**

Carleton University, Ottawa, Ontario

- Built a multithreaded Linux simulation using C showcasing game synchronization with semaphores and mutexes
- Designed modular gameplay using linked lists and arrays to create evidence collection, and room connections
- Optimized project performance by incorporating Makefiles and Valgrind to identify and resolve memory leaks

Harvard Computer Science 50 **Jun 2023 – Present**

Cambridge, United States

- Acquired essential computer science principles, encompassing sorting algorithms, data structures and OOP
- Practiced multiple programming languages through projects and assignments using GitHub for version control
- Strengthened problem-solving skills by tackling questions that require innovative solutions and UML diagrams