

Sourav Minhas

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EDUCATION

Carleton University, Department of Computer Science

Sep 2022 – Apr 2027

Honours Bachelor of Computer Science: AI & Machine Learning - Co-op

Ottawa, Ontario

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

TECHNICAL SKILLS

Languages: Python, C++, C, Java, SQL, JavaScript, HTML, CSS, Scheme, Prolog

Libraries: PyTorch, TensorFlow, pandas, scikit-learn, Matplotlib, Hugging Face Transformers

Frameworks/Tools: React, NodeJS, JavaFX, Express, Qt, PUG, Handlebars, SQLite, Git, GitHub, SPSS, MS Office

DevOps/Cloud: Docker, Kubernetes, Jenkins, AWS, Google Cloud, OpenStack, Linux, VS Code, IntelliJ, Atom, DrRacket

WORK EXPERIENCE

Software Support Co-op

Sept 2025 – Present

Nokia

Kanata, Ontario

- Supported Nokia Service Router software in large-scale customer environments, working with real-world scenarios to improve reliability and contributing to solutions that enhanced performance and strengthened overall network systems
- Identified, diagnosed, and resolved software issues discovered by customers and internal testing, leveraging insights from complex use cases to propose meaningful improvements and implement targeted solutions across NSP platforms
- Designed and executed comprehensive strategies by simulating network management activities, configuring labs mirroring production conditions, and applying automation to ensure new features meet performance and reliability goals

Software Engineer Intern

June 2025 – Aug 2025

Pepperdata

Toronto, Ontario

- Implemented a GPU benchmarking suite that measured performance and cost efficiency across diverse fine-tuning and batch inference workloads, integrating results with Pepperdata's optimization platform to reduce GPU costs up to 70%
- Developed scalable PyTorch workloads on AWS and Google Cloud with Kubernetes, building reproducible training and benchmarking pipelines with Docker and Jenkins to collect GPU metrics and cut cluster costs for Fortune 500 companies
- Built an internal tool that transcribed 100+ videos using Whisper and leveraging Vertex AI with GKE or EKS to preprocess and fine-tune an LLM-based QA model that enabled employees to review design discussions quickly and effectively

IT Technician

May 2024 – Aug 2024

S.M I.T Services

Brampton, Ontario

- Resolved problems on 40+ laptops/PCs using a methodical approach and critical thinking for efficient troubleshooting
- Built positive client rapport with personalized advice, leading to near-perfect satisfaction and fostering long-term trust
- Reduced resolution time by 15% with proactive workflow optimization and process streamlining for better efficiency

PROJECTS

Digital Image Classifier

Nov 2024 – Dec 2024

AI Developer

Ottawa, Ontario

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

GeoDasher – Pathfinding AI

Oct 2024 – Nov 2024

AI Model Developer

Ottawa, Ontario

- Built an ensemble AI in Python using reinforcement learning and genetic algorithms to optimize 2D pathfinding tasks
- Produced a Pygame-based simulation to analyze AI behaviour, focusing on pathing logic and performance optimization
- Utilized Matplotlib visualizations to monitor AI learning trends, reward structures, and error rates throughout training