

SAMIKSHA GUPTA

613-879-9200 | guptasamiksha2112@gmail.com | [linkedin](#) | [github](#) | [Website](#)

Technical Skills

Languages: C/C++, Java, Python, CSS, HTML, JavaScript, SQL

Tools: Raspberry Pi 3, ARM, multi-meter, oscilloscope

Technologies/Frameworks: GitHub, Fusion 360, MATLAB, LABVIEW, SPSS, Ciena Site Manager, VS Code, MS Office, Ubuntu, Zemax

Education

Carleton University and Algonquin College, Ottawa

Sep. 2022 - Present

Bachelor of Information Technology with specialization in Optical Systems and Sensors

Ottawa, Ontario

Fourth year standing | CGPA: 8.63 /12 |

Relevant Coursework

- Digital Signal Processing
- Software Design (Python, UML, BPMN)
- Data Structure (JAVA)
- Signals and Systems
- Intermediate Programming (C/C++)
- Intro to Automation-Simulation (MATLAB/LABVIEW)
- Real-Time Embedded Systems (Assembly, Embedded C, Arduino Uno)
- Project Management (Risk Assessment, Budgeting, Scheduling, Case-Based Techniques)

Projects

Embedded Systems Project | *Arduino Uno, Embedded C*

April 2025

- Built a real-time night light system using direct register-level programming (no Arduino libraries), with components including a photocell sensor, 16x2 LCD (8-bit mode), 7-segment display via shift register, buzzer, and an external-interrupt-controlled push-button.
- Implemented core embedded features such as ADC for light detection, USART for communication, timers for delay handling, and GPIO for efficient system control and output management.

Productivity Tool | *Python, Tkinter, SQLite3, GUI, UML/BPMN Diagrams*

Dec 2024

- Designed and implemented a modular Productivity Tool using Tkinter, Ttk, and SQLite, featuring a timer with Pomodoro functionality, a task calendar, and a planner for efficient task management. Created comprehensive UML and BPMN diagrams to model system design, interactions, and workflows, ensuring clarity in architecture and process flow.

Designing a Lens | *Fusion 360, 3D printing*

Oct 2023

- Designed and created a 3D model of a lens using Fusion 360, applying advanced CAD skills and knowledge of optics and geometry.
- Printed the lens prototype using 3D printing technology, ensuring high quality and accuracy of the final product.

Designing an Optical Y Coupler | *Fabrication, sandpaper polishing*

Feb 2023

- Fabricated a Y-coupler from optical materials using advanced techniques, such as sandpaper polishing, to improve the optical quality and performance of the device.
- Tested and verified the Y-coupler's functionality in a specific optical setup, ensuring accurate signal splitting, low loss, and high efficiency.

Personal Portfolio | *HTML, CSS, Javascript, Bootstrap*

Nov 2020

- Designed and coded a personal portfolio website using JavaScript, HTML, and CSS, demonstrating skills in web design and development, user interface design, and responsive web design.
- Implemented various features and functionalities on the portfolio website, such as a contact form, a navigation menu, using JavaScript libraries and frameworks, such as Bootstrap.

Ciena Site-Manager (OSS)

- Proficient in Adaptive Optical Communication Networks utilizing 10Gb/s-200Gb/s Packet-Optical Platforms, WaveServers, OTN, flexible WaveLogic Photonics, ROADM, SONET/SDH, and programmable network technologies.
- Extensive hands-on experience in Optophotonics Lab, specializing in OAMP, facility/equipment management, synchronization, bandwidth management, and performance monitoring for optimized network functionality.
- Proficient in managing and provisioning metro and long-haul optical networks, including SONET/SDH systems, protection switching, and alarm monitoring.
- Hands-on experience with network configuration, data communication, security management, and backup/restoration using Transaction Language One (TL1).

Work Experience

McDonald's, Billings Bridge, Ottawa, ON

Jan 2023 - Apr 2024

Crew Member

- Operated POS and kiosk systems efficiently under high-pressure conditions, ensuring accurate transaction processing, quick issue resolution, and minimal downtime during peak hours.
- Applied strong multitasking, problem-solving, and workflow optimization skills to support team operations, demonstrating adaptability, system compliance, and a consistent focus on efficiency and customer satisfaction.

Leadership / Extracurricular

IEEE Ottawa Robotics Competition

May 2025

Volunteer Coordinator

- Distributed name tags and assisted with check-in for volunteers at the IEEE Ottawa Robotics Competition. Coordinated shift assignments for volunteers to ensure smooth event coverage.

SPAC, IEEE Student Professional Awareness Conference

Nov 2024

Volunteer

- Volunteered as a SPAC Reception Volunteer at The IEEE Student Professional Awareness Conference, managing attendee check-ins, distributing event materials, and providing on-site assistance at a professional networking event.

GALA, IEEE

Apr 2023

Volunteer

- Participated as a volunteer at the Engineering Institute of Canada (EIC) and Institute of Electrical and Electronics Engineering (IEEE) Gala event, helped organize awards, distribute pamphlets, and ensured orderly seating with name cards.