Samiksha Gupta

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Tuesday, October 10,2023

Hiring Manager
Human Resources
Ciena | Ottawa, ON
385 Terry Fox Dr, Ottawa, ON K2K 0L1

Re: Optical Communication System Data Analysis Co-op

Dear Hiring Manager,

I am writing to express my keen interest in the Optical Communication System Data Analysis Co-op position at Ciena, as advertised. As a dedicated and forward-thinking second-year student pursuing a Bachelor's degree in Optics at Carleton University, I am enthusiastic about contributing to Ciena's cutting-edge work in fiber optic transmission technology.

Ciena's reputation as a leader in the industry, combined with its emphasis on experimental verification of digital signal processing algorithms and hardware designs, aligns perfectly with my academic pursuits and passion for optical communication systems. I am excited about the opportunity to join the WaveLogic Science team and leverage your advanced research lab capabilities to drive innovation in high-speed optical systems.

My coursework has equipped me with a strong foundation in optical physics and digital signal processing. Through hands-on projects and laboratory work, I have gained practical experience in designing and conducting experiments related to optical communication. I am proficient in MATLAB, allowing me to analyze, document, and present complex experimental data effectively. Additionally, my exposure to lab environments involving optical and RF technologies has honed my skills and provided me with a solid understanding of industry practices.

What excites me most about this opportunity is the prospect of contributing to meaningful experiments and collaborating on technical designs with cross-functional teams. I am confident that my ability to design and run experiments, coupled with my analytical and communication skills, will enable me to excel in this role. Moreover, I am eager to learn and adapt, and my proficiency in MATLAB and willingness to learn Python make me versatile in tackling diverse challenges.

Enclosed is my resume, which further outlines my academic background, skills, and experiences. I am enthusiastic about the opportunity to discuss how my passion for optical communication, coupled with my technical abilities, aligns with Ciena's mission and objectives. I am available at your earliest convenience for an interview and can be reached via email or phone.

Sincerely,
Samiksha Gupta

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EDUCATION **September 2022- present**

Bachelor of Information Technology with specialization in Optical Systems and Sensors
Carleton University & Algonquin College, Ottawa, ON

- Second Year Standing
- CGPA – 8.00/12
- Award of Excellence for International
- University Entrance Scholarship
- Expected Graduation Date: April 2026

AVAILABILITY

Available for 4- months beginning May 2024

RELEVANT SKILLS, EXPERIENCES AND ACCOMPLISHMENTS

Technical Skills

- Skilled in analyzing, documenting, and presenting results from complex experiments and datasets using MATLAB.
- Engaged in software development projects using C/C++ and Java, developed optimized code modules and data structures, ensuring bug-free software solutions, and enhancing project functionality for seamless operations.
- Demonstrated proficiency in handling basic lab optical components such as lenses, mirrors, and detectors, ensuring proper setup and calibration for experiments.
- Contributed to the seamless execution of experiments, enabling reliable data collection and analysis for research purposes.
- Implemented LABVIEW automation scripts, enabling faster iterations for more productive research outcomes.
- Utilized MS-Office tools (Word and Excel) to create professional reports, charts, and presentations, ensuring clear communication of research methodologies and results to team members.
- Created and maintained a GitHub portfolio with coding projects, demonstrating technical proficiency and collaboration skills for potential employers' assessment.

Communication Skills

- Interacted with diverse customers at McDonald's, demonstrating active listening and clear communication to enhance satisfaction and resolve concerns efficiently.
- Engaged in group projects, presentations, and discussions, effectively conveying ideas, and contributing to a collaborative learning environment.

WORK EXPERIENCE

Mc Donald's crew member **January 2023- Present**

- Managed customer orders at the front end, ensuring prompt and friendly service.
- Maintained cleanliness, managed cash handling, and organized supplies, enhancing operational efficiency.
- Upheld high standards of quality, processed payments efficiently, and contributed to a successful team through task completion and excellent customer interactions.

APPLIED PROJECTS

Designing and 3D printing a lens **October 2023**

- Utilized CAD (Fusion 360) software to design a 3D model of a lens, ensuring precise dimensions and optical properties, and successfully printed it using 3D printing technology.

Designing an Optical Y Coupler **February 2023**

- Tasked with creating an optical Y coupler for light signal splitting in a specific optical system, ensuring precise signal splitting, minimal loss, and optimal performance in the intended optical setup.

VOLUNTEER EXPERIENEC/EXTRA-CURRICULAR ACTIVITIES

The EIC Gala - IEEE **April 2023**

- Participated as a volunteer at the Engineering Institute of Canada (EIC) and Institute of Electrical and Electronics Engineering (IEEE) Gala event.
- Helped organize awards, manage food arrangements, distribute pamphlets, and ensured orderly seating with name cards. Played a key role in the event's success, contributing to seamless execution and efficient guest management.

Involvement in Visual Arts Carleton **January-present**

- Contributed creative skills to the club, actively sharing ideas, supporting fellow artists, and fostering a vibrant artistic community.

RECORD OF GRADES

Student Name: **Samiksha Gupta**

Degree Program *(full name)* and Year Standing: **Bachelor of Information Technology with specialization in Optical Systems and Sensors, Second Year Standing**

Carleton University

Cumulative Grade Point Average: XX/12 (letter grade): 8.00/12
Number of Academic (4 month) Terms Completed: 2.0

Co-op (4 Month) Work Terms Completed: 0.0

Graduation Date: April 2026

Course Number	Course Name	Letter Grade
Year One:		
30517	Calculus	D-
30519	Newtonian Physics	C-
30521	Introduction to Programming and Problem Solving	C
34612	Applications in Photonics & Optoelectronics	B+
34615	Introduction to Automation and Simulation	B+
10521	Linear Algebra	A
10523	Electromagnetism & Modern Physics	A
10545	Intermediate Programming	A-
14355	Optics/Optical Fibers (Principles)	A-
14358	Introduction to Optics	A-
Year Two:		
34611	Assembly and Machine Language	In progress
34608	Manufacturing Photonics Components	In progress
30542	Differential Equations & Multivariate Calculus	In progress
34606	Circuits and Signals	In progress
34602	Fundamentals of Light Sources	In progress
10529	Probability for Tech	In progress
14419	Optical Communication Networks	In progress
14422	Laser Systems	In progress
14426	Integrated Circuits	In progress
14429	Signals and Systems	In progress

Option 2: Optical Communication System Data Analysis Co-op, Ciena

About Us

Ciena is recognized as a leading supplier of state-of-the-art fiber optic transmission technology, and an important aspect of this development is lab work. Join the WaveLogic Science team and leverage our advanced research lab capabilities to experimentally verify new digital signal processing (DSP) algorithms and hardware designs for next generation high-speed optical systems.

Responsibilities

- Design and run experiments to evaluate DSP algorithms and hardware for next-generation high-speed optical communication systems
- Analyze, document, communicate, and present the results from complex experiments and large data sets
- Support other Ciena teams through automation and analysis of optical experiments.
- Interface and collaborate on technical designs with DSP, hardware, firmware, electro-optic, and systems teams

Requirements

- Enrolled in an accredited degree program in Engineering, Math, or Physics with a focus on optical physics, DSP, or communications
- Experience working in a lab environment with optical and/or RF technologies
- Experience with MATLAB
    - Experience with Python would be considered an asset