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SUMMARY

Dynamic 3rd-year Bachelor of Information Technology student specializing in Optical Systems & Sensors with 2+ years of hands-on research in medical-device test development, digital signal processing, and optical prototyping. Proven track record in experimental design, statistical analysis (MATLAB, Python), and ISO-style documentation. Seeking an R&D Engineering Co-op role to apply optical and system-engineering expertise in interventional cardiology device development.

WORK EXPERIENCE

09/2024 – Present.   Research Assistant, Carleton University   Ottawa, Canada

- Collaborating with Dr. Sima Soltanpour on ECG denoising using various filtering techniques and digital signal processing (DSP).
- Applied Wiener and wavelet filters to raw ECG data; quantified SNR improvements via hypothesis testing.
- Developeing AI algorithms for early cardiovascular-disease detection, achieving significant classification accuracy.
- Designing wearable sensor-integration prototypes for real-time ECG acquisition and on-device inference.
- Documented requirement traceability and quality metrics aligned with medical-device verification standards

09/2024 – 04/2025   Research Assistant, Carleton Optical Innovation Lab   Ottawa, Canada

- Conducting fiber grating research under the supervision of Dr. Christopher Smelser.
- Engineered and validated experimental setups for optical systems.
- Executed rigorous debugging and testing for both hardware and software components.
- Authored technical reports, abstracts, and poster presentations for internal review and conferences.

07/2023 – 05/2024   Technical Support Specialist, Xplore   Ottawa, Canada

- Delivered expert technical support for a diverse range of telecommunication equipment, including fiber equipment and satellite-connected devices.
- Diagnosed and resolved complex technical issues related to fiber optics and satellite communication systems.
- Ensured seamless connectivity and optimized performance for telecommunication infrastructure.
- Collaborated with interdisciplinary teams to provide prompt and effective technical solutions.
- Offered exceptional customer support by maintaining clear and efficient communication with clients to achieve complete issue resolution.

| 08/2022 – 04/2023 | IT Help Desk, Gexel, Cogeco | Ottawa, Canada |

- Diagnosed and resolved technical issues efficiently.
- Conducted device reboots and configurations to restore functionality.
- Maintained network performance and ensured the reliability of fiber optic cables.

| 02/2022 – 06/2022 | IT Technician, LGM Solutions | Ottawa, Canada |

- Assembled and configured computer systems, including software and peripherals
- Set up workstations while ensuring proper network maintenance.

| 06/2021 – 10/2021 | Research Assistant, Snipes | Köln, Germany |

- Conducted market and technical research on retail operations and inventory systems.
- Analyzed sales data to identify trends and supported process optimization initiatives.
- Collaborated with cross-functional teams to document findings and present recommendations.

| 09/2020 – 04/2021 | Trader and IT Assistant, CoinPay — Bhent Inc | Yaoundé, Cameroon |

- Specialized in the exchange of cryptocurrencies at CoinPay
- Served as a sales representative, facilitating clients' cryptocurrency transactions.
- Conducted market analysis to inform strategic trading decisions.
- Contributed to coding in HTML, CSS, and JavaScript for web development projects at Bhent Inc.
- Authored reports, translated various documents, and assisted with content creation.
- Collaborated on website development and design as a web designer.
- Assisted with technical tasks, including configuring software and hardware components.

| 08/2019 – 06/2020 | Junior Frontend Developer, Bhent Inc. | Yaoundé, Cameroon |

- Developed a drone swarm platform, focusing on both hardware and software components.
- Engineered and assembled two drones capable of synchronized flight for measurement collection.
- Scripted drone control with gimbals for sensor attachments.
- Created custom software to enhance script-controlled drone functionality.
- Established a simulation environment for testing in both 2D and 3D using GAZEBO and an Ardupilot plugin.
- Ensured scalability by adapting scripts to accommodate multiple drones and setting up requisite environments.

SCHOOL PROJECTS

Carleton University & Algonquin College Projects
Optical & Sensor Systems Coursework Projects

- **Optical Lens & Y-Coupler Fabrication:** 3D-printed aspheric lenses and fusion-spliced fiber Y-couplers; collected efficiency and aberration data; conducted statistical analyses and produced technical documentation.

- **Zemax Design Assignments:** Modeled and optimized optical systems (telescopes, lenses) using Zemax to meet specified focal and imaging criteria.

- **Arduino Integration Projects:** Assembled and programmed Arduino-based prototypes (last project: memory game); integrated sensors and actuators, validated functionality, and documented design workflow.

EDUCATION

09/2022 – Present	Carleton University	Ottawa, Canada
	Bachelor of Information Technology (BIT), Optical Systems and Sensors	

- **Cumulative GPA**: 11.88/12 (A+ Standing)
- **Relevant Coursework**: Intermediate Programming, Machine Language, Circuits and Signals, Assembly Language, Probability for Technology, Optical Communication Networks.
- **Certifications**: WHMIS, OHSA, Carleton University Dean's List (2022–2024).

SKILLS

Python ,C++	JIRA	Creativity & Critical thinking
ARMv7 Assembly	Fusion360	Ubuntu/Linux systems
Rust	Statistical Analysis	Statistical and numerical data analysis
MATLAB&LabVIEW	Testing	
Power BI	Reporting	Technical documentation
Zeemax	Literature Research	Detail-oriented problem-solving
Arduino SET	Brainstorming	Requirement Management
GitHub	Problem-Solving &Leadership	Automated testing frameworks

CERTIFICATIONS & AWARDS

- IEEE Canadian Foundation Scholarship, $2 500 (2024–2025)

- Amplify Immersion Scholarship, $10 000 (2023–2024)

- WHMIS, OHSA

- Carleton University Dean's List (2022–2024)

LANGUAGES

English(Fluent)	French(First language)	German(Fluent)