

Winny Dariska Domkem Kameni

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SUMMARY

Dynamic 4th-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

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| 09/2024 – Present. | Research Assistant, Carleton University | Ottawa, Canada |
| | <ul style="list-style-type: none">• 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.• Developing 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 |
| | <ul style="list-style-type: none">• 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 |
| | <ul style="list-style-type: none">• 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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.
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EDUCATION

09/2022 – Present	Carleton University Bachelor of Information Technology (BIT), Optical Systems and Sensors	Ottawa, Canada
<ul style="list-style-type: none">• 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++ ARMv7 Assembly Rust MATLAB&LabVIEW Power BI Zeemax Arduino SET GitHub	JIRA Fusion360 Statistical Analysis Testing Reporting Literature Research Brainstorming Problem-Solving &Leadership	Creativity & Critical thinking Ubuntu/Linux systems Statistical and numerical data analysis Technical documentation Detail-oriented problem-solving Requirement Management Automated testing frameworks
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CERTIFICATIONS & AWARDS	<ul style="list-style-type: none">• IEEE Canadian Foundation Scholarship, (2024–2025)• Amplify Immersion Scholarship, (2023–2024)• WHMIS, OHSA• Carleton University Dean’s List (2022–2024)
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LANGUAGES

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