

Khizr Siddique

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EDUCATION

University of Waterloo

Bachelor of Applied Science in Nanotechnology Engineering

Sept. 2023 – Aug. 2028

Waterloo, ON

EXPERIENCE

Loblaw Companies Limited

Software Engineer

Jan. 2026 – Apr. 2026

Brampton, ON

- Owned end-to-end development and deployment of a Python/Flask analytics dashboard on Linux, migrating legacy PHP reports and improving scalability of replenishment optimization metrics
- Improved page load times by **90%** by implementing multithreaded SQL queries using Python's **ThreadPoolExecutor**
- Revamped report generation by implementing an improved processing algorithm to support larger export sizes, improving reliability for data extraction

Canadian Imperial Bank of Commerce (CIBC)

Project Manager

Sept. 2025 – Dec. 2025

Toronto, ON

- Built Power BI dashboards and automated Excel reporting workflows, improving observability for critical projects
- Led recurring project meetings to communicate status and updates across a large corporate environment

Bora Pharmaceuticals

Project Manager

Jan. 2025 – Apr. 2025

Mississauga, ON

- Owned procurement reporting across **100+** daily purchase orders, delivering supplier performance insights to engineering, quality, and operations stakeholders
- Identified and escalated process risks across procurement and production workflows, driving cross-functional alignment to implement data-driven improvements through SAP4HANA

Smurfit WestRock

Process Engineer

May 2024 – Aug. 2024

Etobicoke, ON

- Designed and implemented a production database to track manufacturing recipes and process parameters, contributing to **\$350K+** in annualized cost savings
- Earned Six Sigma Yellow Belt by leading a data-driven process improvement initiative analyzing workflow constraints and operational bottlenecks

PROJECTS

QuantCalc | JavaScript, Python, React, Qiskit

2026

- Built a browser-based quantum circuit simulator from scratch, implementing state vector math and 7 quantum gates via raw linear algebra in JavaScript, with animated probability visualization and a Bloch sphere renderer
- Validated simulator accuracy by running Grover's search algorithm on a real IBM quantum computer. 43-gate circuit trans-compiled to 240 hardware-native gates, confirming predicted outcome against live hardware result

Li-ion Battery Pack | Hardware Instrumentation, Embedded Sensing

2026

- Instrumented individual cells with voltage and current sensors, logging measurements via serial communication to characterize pack behavior and detect cell imbalance under load
- Defined expected protection circuit behaviors and validated cutoff thresholds against simulated fault conditions, mirroring property-based verification workflows

Material/Optics Characterization Lab | NE 220L

2026

- Measured I-V characteristics of PN junction, Zener, and avalanche diodes using oscilloscope X-Y mode; determined breakdown voltages and temperature coefficients for 3.3 V and 6.2 V Zener diodes
- Characterized n-channel enhancement MOSFET threshold voltage and body effect using DC power supplies, ammeter, and voltmeter; swept VGS/VDS across saturation and triode regions
- Analyzed carrier resistance as a function of temperature and light intensity on fabricated IC test structures using DMM, IR thermometer, and heat gun — direct hands-on hardware debugging

SKILLS

Languages: C++, Python, Java, JavaScript, TypeScript, SQL, SystemVerilog, Verilog

Tools & Platforms: Linux, Git, Docker, PostgreSQL, React, Teradata, Power BI, SAP 4HANA, JIRA

Hardware & Lab: Oscilloscopes, multimeters, NTC thermistors, voltage/current sensing, serial communication, I²C