

Shubham Sharma

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EDUCATION

Carleton University

Bachelor of Engineering, Electrical Engineering, Co-op Program

Ottawa, ON

Expected 2028

- **Relevant Coursework:** Electronics I, Electronics II, Circuits and Signals, Electric Machines and Power, Mechatronics, Switching Circuits, Physical Electronics, Digital Electronics, Systems and Simulations

PROJECTS

Self-Balancing Robot | ESP32, KiCad, C++, Fusion360

July 2026 - August 2026

- Engineered a self-balancing robot utilizing an ESP32 microcontroller and MPU6050 IMU sensor to run a real-time PID control loop for dynamic tilt correction and high-speed motor response execution and system stability.
- Designed and hand-soldered a custom 2-layer PCB in KiCad to route power from a LiPo battery through a buck converter, delivering regulated voltage across motor drivers and onboard logic circuits and microcontrollers.
- Modeled a custom multi-tier chassis shell in Fusion360 to securely house the battery, sensors, and drive units.

EXPERIENCE

Private Tutor

Thinking Tree Tutors

December 2023 - October 2024

Brampton, ON

- Delivered tailored 1-on-1 and small group instruction across various subjects for K-12 students, boosting academic test performance, coursework grades, overall subject comprehension, material mastery, and long-term retention.
- Designed customized learning frameworks and structured weekly study plans tailored specifically to individual student learning styles, target academic goals, learning pace, and foundational student skill levels.
- Fostered core competencies in time management, problem-solving, and independent study strategies while regularly communicating detailed academic progress updates, performance metrics and feedback directly to parents.

Inventory Control & Food Distribution Associate

Mississauga Ram Mandir

September 2022 - December 2022

Mississauga, ON

- Managed inventory logging and resource allocation for post-event community donations, ensuring accurate supply tracking, optimal space utilization, and organized facility storage, logistics operations, and material management.
- Coordinated with kitchen staff to package and distribute high volumes of hot meals and perishable supplies efficiently during large-scale community gatherings, cultural events and large community public ceremonies.
- Enforced strict health, safety, and hygiene standards across rigorous food preparation, facility sanitation, stock organization, inventory management, and daily operational food supply handling workflows.

TECHNICAL SKILLS

Hardware: PCB Design, FPGA, Arduino, Verilog HDL

Lab Tools: Soldering Station, Multimeter, Oscilloscope, Power Supply, Function Generator

Softwares: KiCad, Fusion 360, Multisim, MATLAB, VS Code

Languages: Java, Python, C/C++, Verilog HDL, MATLAB