Shreyan Talukdar

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Skills

Programming: Python, C++, HTML/CSS **Libraries:** Streamlit, OpenCV, MediaPipe
Tools: Git, GitHub, AutoCAD in MTE 100, Arduino IDE, Linux, Visual Studio Code
Leadership: Flight Sergeant, Royal Canadian Air Cadets (supervised 40+ cadets); President, Business Club (led 40+ members and launched a 20+ member case-competition team); Co-President, Programming Club (Python and Linux workshops)

Experience

Biomechatronics and NeuroSpine Lab, Simon Fraser University **April 2025 – July 2025**
Lab Research Intern *Burnaby, BC*

- Reviewed video observations for an ICBC-funded electric-scooter speed and safety study and developed a standardized operating procedure (SOP) for documenting rider behaviour, helmet use, surface conditions and incidents.
- Flagged uncertain observations and camera-calibration issues to improve classification consistency and data quality.
- Assisted researchers with human-body injury simulations using MADYMO software.

Junior Achievement of British Columbia - KPMG **Jan. 2024 – June 2025**
Vice President of Operations and Production *Vancouver, BC*

- Led development and assembly of BreatheWell, a compact bedside air purifier, coordinating material procurement, component customization and product iteration.
- Managed production workflows, inventory, pricing and quality checks while coordinating manufacturing responsibilities across the student company.
- Supported social-media marketing and competition presentations, helping generate over $500 in profit and contributing to the 2025 JABC Junior Entrepreneur Award.

Waterloo Formula Electric (UWFE) | *Tractive Systems Team Member* **Sep. 2026 – Present**

Electrium Mobility | *Electrical Team Member* **Sep. 2026 – Present**

Projects

Gauntlet – Gesture-Controlled Workspace Launcher | *Python, OpenCV, MediaPipe* **2026 – Present**

- Developed a hands-free Windows workspace launcher that recognizes a snap gesture and arranges four productivity applications across two displays.
- Implemented real-time webcam processing with OpenCV and MediaPipe to validate camera frames and extract 21 landmarks from each detected hand.

Arduino Attendance and Time-Tracking System | *C++, Arduino Uno, IR Receiver, 16x2 LCD* **2026**

- Built a classroom attendance prototype using infrared remote inputs to identify users and record check-in and check-out events.
- Integrated a 16x2 LCD and attendance-state logic to display user status and session duration while recording timestamps through the serial monitor.

Awards

University of Waterloo President's Scholarship; University of Calgary Chancellor's Scholarship; BC District/Authority Scholarship; Langley Teachers' Association Scholarship; 2025 JABC Junior Entrepreneur Award

Education

University of Waterloo **Sep. 2026 – May 2031**
Bachelor of Applied Science in Mechatronics Engineering, Honours