
EDUCATION

McGill University (Montreal, QC)

2023-2027

B.Sc Joint Major in Computer Science and Biology, U2

- Cum. GPA: 3.95/4.00
- Awards: McGill Major Renewable Entrance Scholarship (Prestige) – *J.W. McConnell Scholarship* (\$40,000); Tomlinson Engagement Award for Mentoring (\$300)

Seaquam Secondary School (Delta, BC)

2019-2023

IB Diploma; BC Dogwood Diploma

- Percent Average: 99.60% IB Score: 43/45
- Awards: Senior Scholastic Award; Senior Math Award; Top IB Biology/IB Chemistry Award; Outstanding IB Student Award; Principal's List Award; Honour Roll

EXPERIENCES

NSERC USRA Undergraduate Researcher @ Lauzon Lab (RI-MUHC)

2025→

- NSERC USRA recipient at the McGill University Health Centre Research Institute investigating molecular mechanics underlying latch-state phenomenon in smooth muscle. Focusing on actin-regulatory protein (calponin, caldesmon) influence on the maintenance of force via stabilization of actomyosin interactions during MLC dephosphorylation.
- Currently applying custom-designed in-vitro motility assay experimentation and MATLAB analysis for assessment of myosin activation level impact on actin filament velocity

Undergraduate Researcher @ Sakata-Woolley Lab (McGill)

2023→

- Currently investigating perineuronal net formation and degradation in the deep cerebellar nucleus and primary/secondary motor cortices of mice learning motor coordination involved in balance. Independently developed a deep-learning network via Cellpose to automate perineuronal net and parvalbumin-positive neuron classification in Wisteria floribunda agglutinin (WFA)-stained cortex tissue of mice.
- Previous work: Microscope image acquisition and quantification of aggrecan/WFA-stained cortex tissue of mice in FIJI(ImageJ) and ZEN; image processing of EGR1/DARPP-32 activity in lateral magnocellular nucleus of the anterior neostriatum (LMAN) and robust nucleus of the arcopallium (RA) for dopaminergic signalling patterns in Zebra finches; precision and sensitivity testing of Cellpose software for automated quantification of cells

Intensive Care Unit Volunteer @ Montreal General Hospital

2024→

- Wayfinding and organizing visitation between patients and family members. Shadowing ICU staff (e.g. physicians, physiotherapists, surgeons) and participating in critical care rounds. Assisting with bedside procedures in the ICU (e.g. PICC line insertion, spinal tap, ultrasound, tracheostomy, etc.)

Orthopaedic Research Intern @ Wilson Biomechanics Lab (UBC)2024
May-Sept

- Summer position assisting with research at UBC/Vancouver Coastal Health Research Institute on osteoarthritis diagnosis and treatment via MRI imaging, specifically hip osteoarthritis prevention. Work involved optimizing femoral torsion/version, acetabular coverage/version measurements via Upright Open MRI images of patients with femoroacetabular impingement; developing MATLAB programs for joint angle calculation; conducting extensive literature reviews; developing new methods of acetabular coverage calculation via 3D Slicer Software; extensive segmentation of MRI images of the pelvic region; preparing cadaveric specimens for cartilage and joint analysis.

Vice President of Communications @ McGill Women in Computer Science

2024→

- In charge of managing organization's external communications, including but not limited to: Instagram, LinkedIn, Linktree, Discord, & biweekly newsletter.

AWARDS

- NSERC Undergraduate Student Research Award (USRA) valued at \$8,800 (2025)
- BC Children's Hospital Research Institute (BCCHR) Brain, Behavior, and Development Research Studentship valued at \$6,000 (2025, awarded but declined)
- BC Professional Employees Association Scholarship valued at \$1,000 (2024)
- J. W. McConnell Prestige Major Entrance Scholarship valued at \$40,000 (2023-Present)
- BC Achievement Scholarship valued at \$1,250 (2023)

LICENSES AND CERTIFICATIONS

- McGill Laser Safety Training (2025-2028)
- UBC Biosafety for Study Team Members (2024-2029)
- ARCT Associate Diploma in Oboe Performance (2023)
- VCHRI Biosafety for Laboratories (2024-)
- WHMIS 2015 (Sept 2023-2026)
- CIHR Core Competency Module for Sex and Gender in Biomedical Research (Mar 2024)
- Standard First Aid w/ CPR HLP/BLS and AED (Jul 2024-2027)
- VCHRI Radiation Safety Level 1 (2024-)

SKILLS

- Microscopy
- Immunocytochemistry
- Tissue slicing and mounting
- Cadaver preparation
- Programming (Python, Matplotlib, Numpy, Scikit, Cellpose, Matlab, Bash, Java, C, MATLAB)
- Analyze 10.0 and 14.0
- 3D Slicer
- ImageJ/FIJI
- English, Mandarin, French, Spanish