

Murdock Aubry

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Education

University of Toronto

June 2024 (Expected)

H.B.Sc. Mathematics and Physics Specialist

Coursework: Computational physics, practical physics, real and complex analysis, PDEs, linear algebra, probability and statistical analysis, topology, differential geometry, quantum and classical mechanics, electromagnetism, statistical mechanics.

Experience

Research Assistant

April 2023 - Present

University of Toronto

- Conducted extensive research on numerical integration methods, focusing on optimizing algorithms using Fortran programming language.
- Designed and implemented novel numerical integration algorithms, improving accuracy, efficiency, and stability in computational simulations.
- Evaluated algorithm performance through rigorous testing, bench-marking, and analysis of real-world applications.

Teaching Assistant

April 2023 - Present

Forest Hill Tutoring

- High school math and physics tutoring, largely focused on helping grade 11 and 12 IB students.
- Develop comprehensive lesson plans, incorporating relevant curriculum materials, practice exercises, and interactive teaching methods to engage students and reinforce understanding.
- Provided effective study strategies, time management techniques, and exam preparation methods to help students optimize their learning and achieve academic goals.

Construction Handyman

April 2022 - October 2022

SKYGRiD

- Independently managed construction and renovation of small townhouse in downtown Toronto.
- Worked alongside mechanical, civil, and electrical engineers throughout entire construction process.
- Obtained a strong knowledge on structural stability and integrity of various construction materials.
- Designed and manufactured, using a variety of power tools and computational techniques, necessary components of the construction process.

Talks

CUMC 2023. The Adaptive Levin Method

Personal Development

Deep Learning With PyTorch: Image Segmentation.

June 2023

→ Certificate · Code