

Caleb Milne

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EDUCATION

Lakehead University

Honours Bachelors of Mathematical Physics, Minor in Music

Thunder Bay, ON

Present

Confederation College

Pre-Technology Aviation

Thunder Bay, ON

Sept. 2023 – Apr 2024

EXPERIENCE

Toxicology Technician

Aquatic Toxicology Research Centre

June 2025 - Present

Thunder Bay, ON

- Loaded tests using confidential client samples at an iso17025:2017 accredited facility.
- Calibrated highly precise testing meters for water testing.
- Worked with highly sensitive animals such as Rainbow Trout and Daphnia Magna

Telescope Volunteer

David Thompson Astronomical Observatory

April 2024 – Present

Thunder Bay, ON

- Operation of observatory telescope manual and automatic.
- Supervision of telescopes and equipment during public programming.
- Answering questions and educating visitors on the topic of space.

File Digitization Assistant

Confederation College

Oct. 2023 – April 2024

Thunder Bay, ON

- Digitization and destruction for multiple thousands of confidential files.
- Creation and organization of large database for storage of digitized files.

PROJECTS

Lua Library Expansion | C++, Lua

- Reverse engineered a popular online game.
- Assisted in writing a custom DLL utilizing function hooking to expand the games pre-existing Lua library by allowing users to call functions from the game source that were not previously able to be called such as reading player data.
- Wrote scripts utilizing injected DLL including a custom Lua function console which would allow the user to input commands to run functions from the games Lua library with custom parameters while in game.

Physics Simulator | C++

- Developed a physics planet simulation for n bodies using OpenGL, glfw and glm.
- Wrote customized shaders for rendering system which allow colored planets outside of default OpenGL values using vertex and fragment shaders.

Elementary File Encryptor | C++

- Developed a rudimentary file encryptor using bit flipping.
- Capable of decryption and encryption for any given file.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, Lua, HTML/CSS, JSON

Developer Tools: Git, VS Code, Visual Studio, CLion

Libraries: pandas, NumPy, GLFW, glm