

Caleb Milne

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EDUCATION

Lakehead University <i>Honours Bachelors of Mathematical Physics, Minor in Music</i>	Thunder Bay, ON Present
Confederation College <i>Pre-Technology Aviation</i>	Thunder Bay, ON Sept. 2023 – Apr 2024

EXPERIENCE

Toxicology Technician <i>Aquatic Toxicology Research Centre</i>	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 <i>David Thompson Astronomical Observatory</i>	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 <i>Confederation College</i>	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