Phillip Steeves

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Education

Bachelor of Software Engineering - University of Victoria Sept 2021 - August 2026

Relevant Coursework: *Advanced Programming Techniques for Robust Efficient Computing, Artificial Intelligence, Operating Systems, Practice of Information Security and Privacy*

Technical Skills

- **Programming Languages**: C/C++, Python, Java, R
- **Testing & Integration**: Robot Framework, Selenium, Appium, Catch2, Hardware-Software Integration, Automated Testing
- **Development Tools**: Git, Docker, CMake, TeamCity, Azure, ROS2
- **Operating Systems**: Linux (Ubuntu, Debian), Windows, macOS

Work Experience

Natural Resources Canada - Geological Survey of Canada, Sidney BC

Coastal Dynamics Remote-Sensing Developer (Casual) October 2026 - Present

- Work on the C-SIDES scientific software project, supported satellite-derived shoreline analysis and coastal research workflows
- Develop and maintain Python-based analysis workflows and graphical user interface functionality, including input parameters, execution, and data-processing reliability
- Investigate technical performance and scientific processing issues involving shoreline analysis and beach-slope estimation

Coastal Dynamics Remote-Sensing Developer (Casual) May 2025 - August 2025

- Selected to remain after co-op term to supervise the Coastal Dynamics Shoreline-Change Project, overseeing two new students
- Presented results to NRCan and outside scientists, spoke during a field trip at the 2025 Glacial Isostatic Adjustment Workshop (https://polenet.org/2025-gia-workshop/)

Coastal Dynamics Remote-Sensing Student October 2024 - April 2025

- Developed AI driven methods to quantify shoreline erosion and accretion around Canada's extensive coastline
- Using AI, implemented both a marching squares and a neural-network based classifier, to identify shorelines in imagery from various optical satellites
- Implemented QGIS models and webmap examples to display the study findings in a useful and easy to understand way
- Gained experience with a number of optical satellites, including Landsat 5, 7, 8, 9, Sentinel-2, and Planetscope SuperDove
- Contributed to open source project *CoastSat* (https://github.com/kvos/CoastSat)
- Tech Stack: *QGIS, Python, Git*

SMART Technologies, Calgary AB
Developer Intern January 2023 - August 2023

- Automated test development using Python and Robot Framework to improve repeatability and reduce testing time for new releases on android based OS
- Found several severe bugs, preventing deployment of a 3000 unit release, honoured with internal "Star Tester" award
- Logged 87 bugs, including multiple release-blocking issues
- Developed a custom test suite to verify external device connections to SMART Boards saving the testing team 8-12 hours weekly of manual testing. Specific accomplishments include:
    - Used python and robotframework to implement tests verifying audio, video, USB passthrough, and touch to the selected input device.
    - Used RS-232 controlled solenoids and relays to verify real touch on the panel
    - Implemented a server-client architecture enabling integration with Robot Framework and nightly test suites for comprehensive testing of various input types and connected devices.
- Tech Stack: *Android, Git, Python, Java, Robot Framework, Debian Linux, Bash, Microsoft Azure, Teamcity, Selenium, Appium, Splunk, Confluence, MS Teams*

Projects

- **AUVic Software Team** - Github September 2023 - Present
    - Worked to develop a simulator for the 2026 sub in gazebo
    - Assisting in systems validation testing before RoboSub 2026
    - Working with computer vision software to direct the submarine through gates
    - Worked to develop a simulator system allowing for the software team to test without waiting on electrical/mechanical
    - Tech stack: ROS2, Python, Ubuntu Linux
- **Terminal Based Graphing Calculator** - Github February 2025
    - Developed a terminal based graphing calculator in C++ using ncurses
    - Implemented mathematical expression parsing, function evaluation, graph rendering, and interactive user input handling
    - Wrote unit tests using Catch2 to validate parser and calculator functionality
    - Tech stack: C++, ncurses, Catch2, CMake, Linux
- **Computational Fluid Dynamics Simulator** - Github June 2024 - Present
    - Developed a two-dimensional computational fluid dynamics simulator using the Lattice Boltzmann Method (D2Q9 BGK) to model fluid flow around obstacles and airfoil geometries.
    - Implemented numerical boundary conditions, velocity and pressure field visualization, vorticity analysis, and aerodynamic force calculations.
    - Expanded an original Python/NumPy prototype into a C++ application featuring interactive simulation controls, parallel processing, and automated physics validation tests.
    - Tech Stack: Python, C++, NumPy, SFML, OpenMP, CMake, Catch2

Leadership and Activities

- **Field Hockey:** UVic Vikes, and Team Alberta | **Scouting**: Chief Scout's Award, 2018