

JEFFREY SHWÉ

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EDUCATION

UNIVERSITY OF BRITISH COLUMBIA

Bachelor of Applied Science

Major in Integrated Engineering; Specialization in Mechanical and Materials Engineering

Vancouver, BC

Expected May 2027

WORK EXPERIENCE

TRANSPORTATION INVESTMENT CORPORATION

Surrey, BC

Transportation Engineering Co-op (*Surrey Langley SkyTrain Project*)

May 2026 – Present

- Lead stakeholder meetings on the \$6B Surrey Langley SkyTrain Project between three municipal governments (City of Surrey, City of Langley, Township of Langley), three project contractors, and major third parties including BC Hydro and TELUS.
- Represent TI Corp on the owner's side, managing site access, scopes of work, and scheduling; draft and execute prime designation letters transferring risk and on-site responsibility.
- Track and process submittals through document control review cycles; maintain a tracker of status, revisions, and comments.
- Engineer traffic management plans in Bluebeam to MOTI standards; produce route maps for ministry executive tours.

METRO VANCOUVER

Burnaby, BC

Project Research Assistant (*Liquid Waste Services*)

Jan 2025 – Aug 2025

- Built *Parcel2Main*, a custom Python toolbox on ArcGIS that automatically maps connections between properties and sewer mains; wrote the documentation and produced video tutorials for the Utility, Infrastructure, and Analysis team.
- Calibrated a full hydrological model of UBC's sewer network, analyzing diurnal patterns in weekday/weekend/holiday data, and reported peak-usage shifts driven by population growth and climate change.
- Wrote a 60-page technical report on the full calibration process and software workflows; designed an internal HTML resource page consolidating team files and documentation for quick reference.

OCEAN NETWORKS CANADA

Victoria, BC

Operations Support Co-op

May 2024 – Aug 2024

- Managed logistics for 40+ shipments of oceanographic research equipment (seismometers, \$1.2M CTDs, transducers) with zero errors, tracked through Jira and Confluence.
- Installed power, equipment, and storage systems for the *E/V Nautilus* expedition along the Juan de Fuca Strait.

PROJECTS

SEARCH AND RESCUE DRIFT BUOY

Sep 2025 – Apr 2026

- Built an AIS search-and-rescue drift buoy (6-person capstone) for the Canadian Coast Guard, approved for deployment by Transport Canada, with C and Python firmware, custom PCBs, CAD enclosures, and IP68 waterproofing.

MOON DUDE

Feb 2025 – Present

- Built *Moon Dude*, an interactive 3D portfolio in Three.js featuring an explorable lunar surface, low-gravity movement, a music player, and raycasting-based clickable navigation.
- Modeled custom 3D assets in Blender and exported them as glTF/GLB for real-time web rendering on Neocities.
- Developed the site into an ongoing creative medium with 10+ deployed experiences over 600+ hours, spanning explorable planets, generative art (*Game of Life*, *De Stijl*), simulations, and interactive experiments in p5.js and WebGL shaders.

SEA-TO-SKY DRONE

Sep 2023 – Apr 2024

- Designed and built an amphibious air-water drone prototype (4-person team) on a \$400 budget, integrating flight controller, ESC, and radio systems; tuned flight stability in Betaflight.

SUPER COOL SUPER STABLE ROCKET EXTREME

Sep 2022 – Apr 2023

- Built a thrust vector control (TVC) rocket (5-person team) that self-stabilizes in two axes using argon-gas actuation, tuning the PID control system in Python via the Ziegler-Nichols method.
- Awarded First Prize in Integrated Engineering's Design Projects (out of 12 teams).

ADDITIONAL

Technical Skills: Advanced in Python, C, JavaScript, HTML/CSS, Excel; Proficient in ArcGIS, Bluebeam, Blender, Jira, Figma

Languages: Fluent in English, Burmese; Proficient in Mandarin; Basic in French, Thai

Interests: Web Design, Children's Books, Painting, Running, Chess, Architecture, Kubrick, Premier League, Ping-Pong