

SUMMARY

- **About:** I am an engineer, scientist, and student deeply engaged in advising various student-led projects and city initiatives. My expertise lies in leveraging physics concepts to engineer practical solutions. Specializing in plasma physics, materials science, and multi-physics modeling and experimental physics”.

EDUCATION

- **Simon Fraser University** Burnaby, BC
 - *Applied Physics Honours with a minor in Nuclear Science — 3.73 GPA*
 - **Relevant Coursework:** Nuclear Physics, Physics of Energy, Nucleosynthesis and Materials

EXPERIENCE

- **Energy Engineering Material Scientist** Simon Fraser University
Burnaby, BC *Jan 2022 - August 2022*
 - **Invented a Monolayer Coating:** Reduced hydrogen diffusion through steel by 1000% by inventing a monolayer coating. Patented said technology in collaboration with the National Research Council of Canada.
 - **Experimental Procedure Development:** Developed the experimental procedure for the research, involving material characterization debugging processes, and optimizing the experiment timescale using software.
 - **Presented Research:** Showcased results at AMPP Power NACW Conference and achieved 1st place in the national poster competition (recognized by the university). Currently working on a paper for publication in the International Conference on Hydrogen Energy and Storage in collaboration with National Research Council.
- **Propulsion Director** SFU Aerospace
Burnaby, BC *Mar 2022 - Present*
 - **Ablative Engine Creation:** Led a team in creating an ablative engine, designed engine mounts, developed safety protocols, and innovated tank-filling processes using pressure sensors and valve controllers.
 - **Test Stand Design:** Led team in construction of test-stand, consisting of tank carts, engine mounts and fluid system housing for future projects and hot-fire to be conducted by the team
 - **Fluid Systems Planning:** Collaborated in designing and building piping and fluid systems for rocketry projects, ensuring efficient and safe operation.
 - **Hotfire Planning:** Planned the hotfire, including safety checks, on-site testing, LOX filling, and data acquisition for the test.
- **Lab Assistant** SFU Optics Lab
Burnaby, BC *Sept 2020 - Dec 2020*
 - **Technical Contributions:** Translated MATLAB code to Python, conducted literature reviews, and worked with Ph.D. students and professors, contributing to tangible results in a laboratory environment.
 - **Literature Review:** Led literature review sessions within group introduce new research conducted within optical physics relevant to the research of the group work.
- **Student Tutoring** Independent Work
Vancouver, BC *Sept 2020 - Present*
 - **IB Program Students:** Taught IB program students on the advanced concepts of Math and Physics, with tangible improvements in the marks achieved by students.
 - **University Students:** Tutored 1st and 2nd year university students in specific courses in Math: Calculus, Differential Equations, Linear Algebra and Physics: Classical Mechanics, Thermal Physics, Electricity and Magnetism

TECHNICAL SKILLS SUMMARY

- **Physics Specializations:** Plasma Physics, Materials Science, Experimental Physics.
- **Engineering Specializations:** CAD Design (SolidWorks), Fluid Structures, Propulsion Engineering, Cryogenic Systems
- **Simulations & Modeling:** Ansys, Finite Element Methods, Numerical Treatment of PDEs.