Luca Nosella (he/him)

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EDUCATION

University of British Columbia Expected Graduation: May 2030

Bachelor of Applied Science – Integrated Engineering (Mechanical & Electrical Focus)

- Co-op: Available for 4-8 months beginning May 2027
- Relevant Courses: Mechanics I: 92%; Introductory Physics Laboratory for Engineers: 89%; Introduction to Engineering II: 91%

TECHNICAL SKILLS

Programming & Microcontrollers: C, MATLAB, Arduino, ESP32
CAD & Fabrication: SolidWorks, 3D Printing, CNC, Mill, Lathe, Coordinate Measuring Machine (CMM)
Electrical & Instrumentation: Circuit Analysis, Soldering, Oscilloscope
Certifications: Certified SOLIDWORKS Associate (CSWA) (in progress)

TECHNICAL WORK EXPERIENCE

Mantech Enterprises | North Vancouver, BC May 2026 - Aug 2026
Machining and Assembly Intern

- Programmed the CMM to perform automated dimensional inspections, improving inspection efficiency and accuracy by more than 40% compared to manual joystick and caliper measurement methods
- Assembled large-scale paper threading machines, including conveyor systems, motors, and pneumatic assemblies, by interpreting engineering drawings and BOMs to source components and build to spec
- Operated 3-axis CNC machines to manufacture custom and production metal parts, and verified dimensional tolerances as tight as 0.28 µm using calipers and CMM against drawing specifications
- Collaborated with electrical, controls, and service technicians and engineers to troubleshoot in-progress assemblies (ex. devising a precision tapping method for required post-assembly bolt holes) and tested pneumatic systems on paper-threading jets before customer shipment

Aim High Tutoring | West Vancouver, BC Sept 2024 - Present
Co-Founder & Business Development Lead

- Founded a private tutoring business delivering instruction in STEM courses to Grades 7-12 students
- Recruited and managed a team of tutors under a commission-based structure
- Executed outreach campaigns across social media and parent groups to generate client leads
- Conducted consultations with prospective parents to assess needs - grew to over 20 active clients

ENGINEERING STUDENT DESIGN TEAM

UBC Rocket | University of British Columbia Sept 2026 - Present
Mechanical Design Engineering - TVR Mechanical Team

- Collaborating with team lead to design and develop the V1.85 TVR drone mechanical systems
- Designing a drop-test cage and conducting SolidWorks FEA to characterize landing impact forces and validate structural design decisions on the V1 TVR drone
- Designing and hand-soldering a custom PCB with load cell, IMU, and strain gauges to capture real-time drop-cage impact data

TECHNICAL PROJECTS

Rocker-Bogie Suspension System Rover | Personal Project Dec 2025 - Jan 2026

- Designed and built a rover to demonstrate and learn about a rocker-bogie suspension system
- Combined mechanical design, CAD, and 3D printing to construct full assembly
- Programmed an ESP32 microcontroller in Arduino IDE to control rover functions

Motor Dynamometer | Personal Project July 2026 - Sept 2026

- Designed and built a small-scale motor dynamometer to replicate car dynamometer testing principles using a small DC motor, coupled shaft, and a friction brake
- Created structural components from wood using several stationary woodworking tools
- Modeled, printed, and integrated custom mounting and structural parts
- Calculated motor power output using torque arm geometry and digital scale force readings
- Wired and programed ESP32 with a light intensity sensor and laser to track RPM of motor

Rainwater Harvester Design Project | University of British Columbia Mar 2026 - Apr 2026

- Lead designer on a team to design and cost an off-grid rainwater harvesting system
- Managed team and ensure everyones skill were utilized
- Developed performance forecast models using applied fluid dynamics and pump curve calculations
- Assessed key design variables to refine component selection

OTHER WORK EXPERIENCE

The Keg Steakhouse + Bar | West Vancouver, BC Nov 2023 - Dec 2024
Busser

- Maintained efficient table turnover; supported service team in a high-volume environment
- Trained and onboarded new staff on service and setting standards

VOLUNTEER EXPERIENCE

Ten Ton Robotics Academy | West Vancouver, BC Sept 2020 - Dec 2025
Scorekeeper, Referee & Judge

- Judged student robots against multiple technical and design criteria, design process, and documentation
- Officiated matches ensuring competition rules were followed and helped maintain fair gameplay

Eagle Harbour Yacht Club | West Vancouver, BC Jan 2025 - Sept 2025
Maintenance Support

- Performed facility maintenance tasks including zinc anode replacement on the breakwater and dock anchor chain adjustments in collaboration with the operations manager
- Maintained safe dock spacing and ensured structural integrity of marine infrastructure through routine inspections and repairs

AWARDS

Honours with Distinction | Rockridge Secondary School 2020 - 2025
Gold Service Award | Rockridge Secondary School 2025

- Awarded service award for accumulating over 100 hours of volunteer time during grade 12 year

INTERESTS & ACTIVITIES

- Hiking and camping across the North Shore and Sea-to-Sky corridor, exploring new areas each season

- Avid weightlifter and weightlifting and lifestyle content creator focused on healthy lifestyle and fitness