Deev Shah (he/him) Bachelor of Applied Science (BASc.) in Manufacturing Engineering

Vancouver, British Columbia deevshah23022004@gmail.com | +1(604) 830 2023 | LinkedIn | GitHub

TECHNICAL SKILLS

- **Mechanical:** Machining (CNC, Mill, Lathe), 3D Printing, Composite Fabrication (Layups, Infusions, Prepreg), Welding, Casting, Thermoforming, Injection Molding, GD&T, DFM, Mechanical Assembly & Structural Testing, ASTM Standards Testing
- **Electrical:** Soldering, Spot-Welding, Battery Pack Design & Integration, HV/LV Harness Design, Cell Testing, Circuit Design, Arduino, STM32
- **Software:** SolidWorks CAD, Ansys (FEA, CFD), Altair (CFD), Altium PCB Design, MATLAB & Simulink, Jupyter Notebook, Programming (Python, C++, C#, C, Java, Unity), Excel, 3DExperience (PLM)
- **Certifications:** WHMIS, Respirator Fit Test, CAD Essentials, Introduction to Programming (Harvard CS50X), Amateur Radio (Basic & Advanced)

EDUCATION

University of British Columbia **May 2028**
Bachelor of Applied Science – Manufacturing Engineering (Co-op)
CGPA: 86.5%

TECHNICAL WORK EXPERIENCE

Bhavna Kia Automobiles, Mumbai, India **May 2022 – July 2022**
Mechanical Engineering Intern

- Performed vehicle servicing and maintenance procedures, gaining exposure to automotive mechanical systems and diagnostics
- Conducted basic workshop tasks, including tool handling, inspection checks, and customer vehicle support

TECHNICAL PROJECTS

DIY Custom Bluetooth Speaker, Personal Project **May 2025 – Present**

- Manufacturing a portable speaker utilizing a 2S 18650 Li-ion pack with BMS, USB-C charging, and DC-DC regulation
- Developed audio path with TPA3116D2 Class D amp and CSR8635 Bluetooth module implementing I²S digital audio protocol
- Modelled a 3D-printed enclosure optimized for internal volume and component layout

Battery Pack Design for Solar EV, UBC Solar **January 2025 – March 2025**

- Designed a 32S13P Li-ion pack with non-welded cells, achieving ~7–8 mΩ contact resistance, comparable to spot-welded setups (~6 mΩ)
- Refined CAD layout to fit within a 25×20×8-inch enclosure while meeting packaging and assembly constraints
- Prototyped physical models to test and verify fit, contact stability, and mechanical durability

ENGINEERING STUDENT TEAMS

UBC Solar, The University of British Columbia **September 2024 – Present**
Battery Mechanical Team Lead

- Leading a team of 7 passionate engineering students to design and manufacture a 5.25 kWh, 120V Li-ion battery pack for a solar car competing in FSGP and ASC
- Automated OCV testing for 700+ cells in Python and developed a database to log impedance, capacity, and voltage for sorting and balancing, reducing test times by 50%
- Designed custom PCB layouts in Altium Designer and CAD models for cell holders and enclosures, focusing on manufacturability and thermal safety
- Conducted composite mechanical tests (ASTM 3-point bend, lap shear, tensile) and validated the results on Ansys FEA
- Validated cell spacing on Ansys and Altair CFD and improved pack thermals by 15%
- Devised and executed a comprehensive cell characterization and sorting plan based on OC Voltage, Capacity, and AC Impedance, improving pack longevity by 2 years

UBC Thunderbikes, The University of British Columbia **September 2023 – September 2024**
Aerodynamics Engineer

- Modelled tail and side fairings in SolidWorks for an electric race motorcycle, optimized for aerodynamic efficiency and mold-ready geometry
- Conducted CFD and FEA in Ansys to evaluate drag, surface pressures, and high-speed flow behavior across body panels
- Fabricated gas tank and fairings using vacuum-assisted wet layups on CNC-machined foam molds for dimensional precision
- Fabricated the Battery Enclosure using Vacuum Infusion techniques
- Applied photogrammetry to validate post-curing deformation and surface accuracy of composite components including the gas tank and tail fairing

VOLUNTEER EXPERIENCE

UBC JSA, Vancouver, BC **March 2024 – Present**
VP Finance

- Organized cultural and community events. Managed budgets, reimbursements, and resources to ensure smooth operations for members
- Fostered connections across diverse student communities by expanding sponsorship support, helping fund initiatives that brought students from different backgrounds together

UBC Mechanical Engineering, Vancouver, BC **October 2025 – Present**
Undergraduate Research Assistant

- Researched and compared industrial SCADA software platforms including VTSCADA and Ignition SCADA to evaluate their capabilities in real-time monitoring, control, and data acquisition
- Analyzed communication protocols (Modbus, OPC UA, MQTT) and system integration methods for manufacturing automation applications

AWARDS

UBC Premier Undergraduate Scholarship Nominee **Fall 2025**
UBC Dean's List and Dean's Scholar **Fall 2023 and Fall 2024**
UBC Outstanding International Scholar ($13,000 Scholarship) **2023**