

Felipe Andres Diaz

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PROFESSIONAL EXPERIENCE

Miru Smart Technologies, Vancouver, BC

September 2023 - April 2024

Development Engineer Co-op

- Executed mechanical engineering projects from consultation through to installation and commissioning
- Utilized **Solidworks** and **Solidworks PDM** to design and assemble laboratory equipment
- Managed BOM creation, hardware sourcing, and development of SOPs and maintenance plans
- Managed an 8-month, \$150,000 research grant, delivering monthly external reports and bi-weekly internal meetings.

Ledcor (KLTP), Trans Mountain Expansion Pipeline, Burnaby, BC

May 2023 - August 2023

Project Controls Engineer Co-op

- Facilitated change management, reporting and daily documentation at the 'Burnaby Terminal' site
- Adopted a safety-first mindset by undergoing rigorous safety training and always adhering to safety protocols.

UBC Faculty of Integrated Engineering, Vancouver, BC

March 2023 - December 2023

3D Printing Shop Manager

- Demonstrated expertise in operating, maintaining, and troubleshooting FDM and resin 3D printers
- Oversaw student rapid prototyping requests, engaging in customer consultation and ensuring timely part delivery

RELEVANT COURSES & TRAINING

Introduction to Fusion Energy and Plasma Physics Course

June 2024

Princeton Plasma Physics Laboratory

- Completed an intensive course on plasma physics and fusion energy sciences, covering magnetic confinement, plasma-material interactions, and computational modelling.
- Engaged with experts to gain comprehensive insights into fusion technology advancements and its commercialization.

EDUCATION

University of British Columbia - Vancouver, BC

Expected Graduation: December 2025

Bachelor of Applied Science in Integrated Engineering

Major in Mechanical Engineering, Minor in Electrical Engineering

Relevant courses - ELEC 211: Engineering Electromagnetics

University of Sydney - Sydney, Australia

July 2024 - December 2024

Coordinated International Exchange (CIE), Mechanical Engineering

Relevant courses - AMME 3060: Finite Element Analysis

TECHNICAL PROJECTS

Helmet Heads-up Display, 3rd Year Group Project, UBC

September 2022 - April 2023

- Constructed a custom helmet-mounted heads-up display for electric kart racing.
- Engineered the near-eye display (NED) module with exhaustive research into optical physics.
- Fabricated the **opto-mechanical** system, including the optical combiner, lensing system, and NED casing.
- Conducted rigorous tests with a custom-made rig to ensure a clear, readable display without eye strain.

Autonomous Water-Testing RC Boat, 2nd Year Group Project, UBC

December 2021 - April 2022

- Utilized **SolidWorks** to design an optimized catamaran hull, based on in-depth naval architecture research.
- Spearheaded **fibreglass hull manufacturing** (82x64x22cm) using a 3D-printed negative mould.
- Assembled electro-mechanical components, ensuring navigability through repeated watertightness tests.

TECHNICAL SKILLS

Prototyping

Composite Fabrication | 3D Printing | Power Tool Expertise | Microcontroller | Laser Cutting

Computer

SolidWorks & SolidWorks PDM | ANSYS | C/C++ | Computer Vision | MATLAB | Microsoft Office