

ARYAN ARYAL

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EDUCATION

University of Alberta

Class of April 2027

BSc. Electrical Engineering Co op

Courses: Digital Logic Design, Programming for Electrical Engineers, Intro to Microprocessors, Electrical Circuits

Availability starting January 2025: 8 months

TECHNICAL SKILLS

Languages: Python, C/C++, HTML, CSS, L^AT_EX

Tools: Altium, KiCAD, Arduino, Git, Linux

Hardware: Multimeter, Oscilloscopes, Waveform Generator, Soldering Iron, PCB Mill, 3D Printer, Laser Cutters

EXPERIENCE

Electrical & Automation Research Assistant

May 2024 – Sept 2024

Department of Civil & Environmental Engineering

University of Alberta

Electrical Team Member

Sept 2023 –

Autonomous Robotic Vehicle Project

University of Alberta

- ARVP is a student-led **engineering design team** at the University of Alberta; the goal is to design an autonomous underwater vehicle to compete at the international RoboSub Competition.
- Developing a Portable Test Board for fast and efficient pressure, temperature, and mechanical system testing.
- Redesigned a converter board **utilizing DC-DC buck converters** to step-down voltage for various subsystems.

Utilities Infrastructure Engineering Student

Jul 2023 – Aug 2023

City of St. Albert

St. Albert, AB

- Used **ArcGIS Field Maps** and **Survey123** to document and report inspection data efficiently and accurately.
- Prepared professional inspection reports for site Superintendents and Project managers, complete with detailed findings, photographs, and recommendations.
- Implemented digital reporting processes, replacing paper-based methods to enhance database management as well as efficiency by **50%**; Additionally created documentation for future students on the use of these processes.
- Completed **Field Level Risk/Hazard Assessments** to assure compliance with safety rules and regulations.

PROJECTS

Medication Tracking App | *Arduino, C, Python, Google Workspace API*

Jan. 2024

- Worked on a team across 24 hours through the engineering process, from ideation to prototyping.
- Built a medication tracking mobile app integrated with a physical pill box.
- Implemented reoccurring notifications synced with an OLED screen programmed with C on Arduino and ESP8266.

Personal Website | *Astro.js, HTML, CSS, Javascript*

Jan. 2024

- Developed a mobile-responsive website to house my personal projects and blogs.

Mechanical Keyboard | *Kicad*

Dec. 2023

- Designed a keyboard which implements mechanical switches, OLED screen and rotary encoder.
- Integrated a interchangeable Pro-Micro microcontroller which handles N-Key Rollover, screen, and encoder.

Discord Bot | *Python, Discord.py, CSV, Git*

Nov 2023

- Worked on a team to develop a Python game, focusing on user interaction using a competitive leaderboard.
- Used the Discord platform API as well as the discord.py and CSV libraries to track player statistics.
- Helped team members with the basics of git and version control.

EXTRACURRICULAR

Vice President, Communications | *Electrical Engineering Club*

Sept. 2023 – Present

- Created designs for various events and managed the club server for over 280 members

Additional Info | *Languages and Licenses*

- Class 5 Advanced Driver's Licence
- Drone Operations Licence
- Fluent in English and Nepali