

# Brent Morris

University of Waterloo Electrical Engineering  
2B Term - Class of 2027

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**Portfolio** BrentMorris.ca

## Skill summary

<b>Software Programs</b>	Altium Designer, SolidWorks, Ansys Fluent, AutoCAD, Excel, ETAP, Project Libre (MS Project), Intel Quartus Prime
<b>Programing Languages</b>	C++, C, HTML, CSS, Java Script, VHDL, Microsoft VBA, MATLAB
<b>Hardware Skills</b>	PCB soldering, Oscilloscope, Multimeter

## Work Experience

### Algal Engineering Electrical Co-op Student

MAY 2024 - AUGUST 2024

- Field collection of electrical equipment specifications and modeling in ETAP
- Drafted redlines of single-line drawings
- Circuited lighting and receptacles
- Prepared fire alarm equipment layouts

### Greenstone Gold Mine Electrical Engineer Intern

JANUARY 2023 - APRIL 2023 & SEPTEMBER 2023 - DECEMBER 2023

- Troubleshoot, redesigned and coordinated modifications of water pumping station involving addition of instrumentation & control devices and PLC reprogramming
- Designed, procured and coordinated installation of 60+ IP cameras and refinery access control system including adding network infrastructure
- Designed, procured and coordinated installation of a 11 kW UPS power system
- Programmed parameters for all soft starters on site
- Programmed dynamic user form in Excel VBA for managing fiber pairs in long-distance fiber runs

## Design Teams

### WatDig

MAY 2024 - PRESENT

- Designed jet pump to dilute and transport mined slurry from excavation chamber to surface containment unit. CFD analysis was performed with Ansys Fluent
- Designed 480V electrical distribution
- Prepared engineering, procurement and manufacturing requirements document and project schedule for whole team in Project Libre
- Contributed to thrusting force calculations for our pipe jacking station and designed alternative pipe jacking system based on rope, pulleys and planetary gear reduction
- Active involvement in hydraulics design and controls architecture

### Formula Electric

JANUARY 2024 - MAY 2024

- Designed active accumulator cell balancing board in Altium Designer based on LTC3300 chip
- Assembled CAN bus wire harness
- Assembled PCBs with 0.25mm pitch ICs