Brent Morris

University of Waterloo Electrical Engineering
Class of 2027

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Skill summary

Software Programs	Altium Designer, SolidWorks, Ansys Fluent, AutoCAD, Excel, ETAP, Office Libre (MS Project), Intel Quartus Prime
Programing Languages	C++, C, HTML, CSS, Java Script, VHDL, Microsoft VBA, MATLAB
Hardware Skills	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

- Troubleshooted, redesigned and coordinated modifications of water pumping station involving addition of instrumentation & control devices and PLC reprograming
- Designed, procured and coordinated installation of 60+ IP cameras and refinery access control system including adding network infrastructure
- Designed, procured and coordinated the installation of an 11 kW UPS power system
- Programed parameters for all soft starters on site
- Programed 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 with project schedule for whole team in ProjectLibre
- 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 – June 2024

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