

# Marco Volpini

## Electrical Engineering Student

Second year Honours Electrical Engineering student at the University of Waterloo. Currently a biomedical research assistant with two co-op terms of engineering related experience in PLCs, design and drafting in AutoCAD. Various projects and personal experience with knowledge of SolidWorks, C++, Python and more.

Waterloo, ON  
+1 437 992 5930  
m2volpin@uwaterloo.ca  
[www.linkedin.com/in/marco-volpini-445208291](http://www.linkedin.com/in/marco-volpini-445208291)

### EXPERIENCE

#### Wireless Sensors & Devices Lab, Waterloo, ON

##### *Non-Invasive Glucose Monitoring Research Assistant*

December 2024 - Present

- Assisting with development, clinical trials and commercialization of non-invasive glucose monitoring technology in the Wireless Sensors & Devices Lab at the University of Waterloo

#### G. L. Tiley & Associates LTD, Flamborough, ON

##### *Hoist Control and Automation Assistant*

September 2024 - January 2025

- Developed and reviewed electrical schematics, PLC programming, and HMIs for hoist systems to ensure optimal performance and compliance with SIL safety standards

#### RTG Systems Inc, Burlington, ON

##### *Engineering Design Assistant*

January 2024 - May 2024

- Planned and edited professional engineering drawings in AutoCAD involving EV charging stations, traffic signalization, hydro and street lighting, played key roles in group projects and meetings

#### Waterloop, Waterloo, ON

##### *Propulsion, Electrical and Firmware Team Member*

September 2023 - May 2024

- Used personal knowledge to implement temperature-sensing thermistors to the linear induction motors of the hyperloop pod using circuit design, PCBs and C to program the microcontrollers

### OTHER EXPERIENCE

#### City of Burlington, Instructor Guard

#### Chicopee, Ski Instructor

### SKILLS

C++ & Python  
AutoCAD & SolidWorks  
MATLAB  
Altium & FEMM 32  
Linux Command Line  
Studio 5000  
Oscilloscopes  
Circuit Design and VHDL  
Spice

### PROJECTS

- Building custom e-bike; includes building the battery, engineering the controller, etc.
- Building closed loop system between Dexcom G7 glucose sensor and insulin pump
- Designing a 4T SRAM bit cell & will tapeout onto a chip. Includes circuit design in Spice.
- Built a mobility aid for visually impaired using sonar technology
- Created a C++ program to extract, store and analyze real-world country-level time-series data, supporting statistical operations and interactive commands

### AWARDS

- President's Scholar Distinction award (University of Waterloo), Technology Award of Excellence, & more