

# Michael Burt, P.Eng., M.Eng.

Electrical Engineer

## • EDUCATION

B. Eng. (Electrical), Memorial University of Newfoundland (3.94/4.00 GPA)

Convocated 05/2017

M. Eng. (Electrical), University of Waterloo (90.11% average)

Convocated 06/2023

## • HIGHLIGHTS

- Over 8 years of experience in the engineering field, including first-hand experience with PLC and HMI development, electrical design, CAD work, simulation, programming, network/IT/OT, and more
- Engineered a broad range of systems from large distributed systems, such as conveyors, to complex dynamic systems such as robotics with many axes of motion, and water/process control systems
- Taught Industrial Electricity (ELN8299) at Algonquin College in Ottawa with use of D2L
- 2+ years training engineers/technicians in a formalized capacity within an engineering firm

## • EMPLOYMENT

**Brock Solutions** – Controls Systems Engineer and Technical Lead

09/2018 – Present

- Engaged in all aspects of control systems design: PLC programming, SCADA development, electrical, network design, simulation, testing, customer presentations and commissioning
- Developed test systems, training guides, documentation and videos for use by engineers to improve education and competency in control systems (particularly aimed at junior engineers)
- Designed hardware (I/O) and process simulations for highly complex systems to prove performance of control system designs to customer
- Managed technical teams, engaged in regular delegation of development tasks, training, and communication of engineering design. Regularly communicated with customers and stakeholders
- Gained work experienced in industries such as water treatment, automotive, windows and door manufacturing and baggage handling
- Successfully performed many factory acceptance and site acceptance tests
- Experience with and regular use of electrical standards CSA 22.1, CSA Z462, UL508A and NFPA 70E

**Iridian Spectral Technologies** – Industrial Automation EIT

11/2017 – 08/2018

- Engineered, implemented, and tested automation systems for thin film optics manufacture
- Maintained, upgraded, and provided ongoing support for existing control systems
- Programmed PLCs and HMIs using ladder logic and proprietary software (VBA, C#, Delphi)
- Developed machine vision algorithms (OpenCV) for robotic systems for purposes of quality control

**Algonquin College** – Part Time Engineering Instructor

03/2018 – 08/2018

- Taught ELN8299 Industrial Electricity to Mechanical Engineering Technology students
- Use of D2L to distribute course material, receive assignments, and provide grading feedback
- Designed course material on transformers, capacitors, inductors, three phase power, and more
- Conducted labs with a focus on safety, PPE, and student engagement
- Attended several professional development classes on professionalism, safety, and ethics

**ADGA** – Test Automation Specialist

06/2017 – 11/2017

**Engineering Work Terms** (5) – power, telecoms, and controls industries

2012-2016

## • TRAINING AND SKILLS

**Programmable Logic Controllers (PLCs):** Rockwell Automation ControlLogix, CompactLogix, GuardLogix, PLC5, SLC500, Omron Industrial PLCs, DirectLOGIC

**Human Machine Interfaces:** Ignition by Inductive Automation, Siemens TIAPortal, AVEVA Wonderware, Rockwell Automation FactoryTalk ME/SE, Trihedral VTScada

**Electrical Design:** VFD design and implementation, electrical schematics, network drawings, panel installation, electrical wiring, network architecture designs, and field installation packages

**Software:** Rockwell suite of programs, EasyPower and SKM PowerTools, Microsoft VisualStudio, AutoCAD, OrCAD/PSpice, PICS Simulation, AutoMod Simulation, Microsoft Office Suite

**Programming:** Ladder, structured text, FBDs, SFCs, Python, C#, VB.NET, C/C++, Delphi, Java, JavaScript

## • SCHOLARSHIPS AND AWARDS

General Motors Scholarship in Engineering (2015)

CBCL Limited Engineering Scholarship (2014)

Gene H. Kruger Memorial Scholarship (2015)

Chevron Engineering Scholarship (2013)

Engineering Faculty Dean's List (2014-15)

Business Faculty Dean's List (2012)

## • EXTRACURRICULARS

Volunteer at House of Friendship in Kitchener (June 2021 – present)

IEEE Member (2020 – Present)

PEO Ottawa chapter and Grand River chapter (June 2017 – present)

Green Drinks Ottawa (July 2017 – Aug 2018)

Carleton U Rec-league Basketball (September 2016 – Aug 2018)

Volunteer at Green Energy Doors Open (Sept 2017)

Memorial Baja Team, Electrical Design (Jan – Apr 2015)