MICHAEL BASKHAIROUN

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HIGHLIGHTS OF QUALIFICATIONS

- Graduated McMaster University Electrical Engineering.
- Excellent communication, and leadership skills demonstrated through projects, work experience, and extracurricular involvements.
- Proficient in reading and designing electrical schematics and wiring diagrams.
- Excellent at troubleshooting and isolating problems using troubleshooting techniques like drawing analysis.
- Experience with Tele-protection equipment gained through engineering internship.
- Experience with circuitry and logic systems gained through academic course and lab work.
- Experience with various coding languages learned through academic course work, and individual learning.
- Experience in internet communications gained through academic work.
- Experience with controllers and multiple communication protocols (CAN Bus, UART, SSI, I2C) gained through academic and work assembly, in addition to solid understanding of machine language (assembly).

EXPERIENCE

Electrical Product Development & Control Engineer.   May 2020 – Present

Skyjack, Guelph, ON

- Worked on transitioning scissor lifts from hydraulic motors to electric motors.
- Prepared electrical drawings and schematics for internal wirings of various scissor lift models.
- Developed an application to aid in tuning the load sense system of the scissor lifts.
- Gathered sensor readings from multiple machines in a database and developed a tool to analyze all readings and predict machine behaviour using a machine learning model in python.
- Tuned and verified scissor lift CAN Bus controller by analyzing CAN Bus signals.

Tele-protection Engineering Intern   July 2020 – August 2021

Hydro one, Toronto, ON

- Prepared drawing markups and schematics for various tele protection equipment.
- Coordinated outages for stations to facilitate in servicing and out servicing equipment by ensuring redundancy and back up connections using power line schematics for area in scope (Eastern Ontario).
- Prepared equipment and station to station schematics and wiring diagrams for field workers to apply.
- Created settings for tele protection equipment, according to relevant drawings and requirements.
- Upgraded and repaired defective aspects of the company's software (cable ordering software, and circuit tracking database) using VBA.
- Worked with PLC (Power Line Carrier) systems, copper mediums (S4T4 circuits) and fiber optics to communicate protection protocols between stations.
- Conducted site visits to assess and test pre-existing and potential equipment.

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EDUCATION

Bachelor of Engineering, Electrical Engineering   September 2017- May 2022

McMaster university, Hamilton, ON

- Enrolled in the 5-year Engineering with Co-op program at McMaster University.
- Relevant courses: *Energy Conversion, Communication systems, Power systems, Image processing, Advanced Internet Communications and Machine Learning.*

SKILLS

Programming:

- Java, JavaScript, C, MATLAB, Python, VBA, Assembly, Bash

Software:

- Autodesk Inventor, AutoCAD, HMI 570, Meridian, Microsoft Visio, Arduino, Pspice, Solid Works

Laboratory:

- Soldering and wiring circuits using PCBs, breadboards, and jumpers.
- WHMIS trained

- Oscilloscopes, function generators, and multimeters

TECHNICAL PROJECTS

3D Printed Bionic Arm (capstone)   Fall 2021-Winter 2022

- Awarded first place out of 200 groups for a robotic design university wide.
- Awarded first place for best use of additive manufacturing out of 50 groups faculty wide.
- Worked in a team of five members to fully design and build a prosthetic arm using (type of) technology, for trans radial amputees (amputated from elbow down).
- Designed a hand model that mimics the geometry of a real hand to give the users a real hand-like experience.
- Isolated and solved multiple problems faced during the design process leveraging troubleshooting skills.
- Used microprocessors to program the circuitry driving the arm to enable movement in the prosthetic hand.

Covid Detection in CT Scans Software.   Winter 2022

- Used python to apply image processing and machine learning models on CT scans to predict if the CT scan is Covid positive or negative.
- Used feature extraction methods to extract CT features that could indicate Covid infection.
- Used the extracted data in machine learning models, polynomial regression, and neural network.
- Achieved test accuracy of 75% and 79% for each model respectively