Josh Lawrence

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EDUCATION

Bachelor of Technology – Automation Engineering Smart Systems, Co-op   Completed December 2021
McMaster University, Hamilton, ON
- Attained highest academic honors, the Provost Award multiple times with a cumulative GPA of 3.94/4
- Awarded the President's Award for Student Leadership for significant contributions to the student community
- Completed a 4.5-year engineering-management degree-diploma program through McMaster University and Mohawk College graduating with Bachelor of Technology Degree, Chemical Engineering Advanced Diploma, Business Management Certificate, and a Co-op Designation with 16 months of co-op experience

CAREER RELATED SKILLS
- Proficient in Python, SQL, PHP, HTML/CSS, C/C++, JavaScript, React, LabView, and Allen Bradley Ladder Logic
- Driven self starter with a track record of reliably troubleshooting and resolving issues in production systems
- Skilled in and passionate about providing thoughtful peer and industry mentorship
- Proficient in Microsoft Office products including Word, PowerPoint, and Excel

WORK EXPERIENCE

Software Developer   September 2021 – Present
SmartCone Technologies Inc
- Led the design and development of core IoT product firmware resulting in the collection and aggregation of data from 50 devices for 10 clients with significant growth projected
- Monitored and maintained deployed network including 50 Linux endpoint IoT devices and 5 internal servers
- Led the implementation of Git version control and code review within the development lifecycle
- Hired and managed a junior software developer resulting in the expansion of the development team along with expanded learning and mentorship opportunities for new employees
- Consulted subject matter experts to implement cutting edge research within an operational heat stress application resulting in an informed workforce reducing heat related illness
- Interfaced with multiple clients to determine project requirements and communicated expectations with development team to produce product in line with requirements

Teaching Assistant   January 2019 – April 2022
Courses: Electricity & Electronics, Mathematics II, and Mathematics IV
McMaster University - W Booth School of Engineering Practice & Technology, Hamilton, ON
- Assessed and provided meaningful feedback for assignments and exams for up to 400 students per course with both punctuality and consistency
- Provided individualized support and 1:1 consultation with students to answer questions and reinforce key concepts creating an enriching student experience
- Led tutorial sessions to over 90 students weekly providing both group and individualized teaching support

Smart Mobility Network Associate   May – September 2021
Centre for Integrated Transportation & Mobility
- Documented standard operating procedures and educated clients on the functionality of a private 4G & 5G cellular R&D network and how they can leverage it for their research and development activities
- Developed statements of work (SOW) for proposed network expansion activities
- Generated methods of procedures (MOP) for operational activities to support client services
- Deployed over 20 test devices on a private 4/5G cellular network for research and development purposes

Peer Tutor   February 2019 – December 2021
Undergrad Peer Tutor Network, McMaster University
- Provide 1-on-1 sessions to over 200 students in a plethora of subjects including computer science

Project Supervisor, Former Research Assistant   April 2019 – September 2020
McMaster School for Engineering Practice and Technology Learning Factory
- Integrated technical projects which included Allen Bradely PLC's, FactoryTalk HMIs, and robot integration
- Implemented an RFID inventory tracking system connecting readers to a centralize OPC UA server
- Self-taught Robot Operating System (Ros) concepts in Python to develop lab manuals for coursework

VOLUNTEER AND COMMUNITY ACTIVITIES
President and Former Vice President Internal   January 2020 – December 2021
McMaster Bachelor of Technology Association
- Lead a team of 15 to work to represent all Bachelor of Technology students
- Facilitated a variety of events including academic support sessions, mentorship, social and professional development events among others
- Negotiated with department representatives to secure over $20,000 in MacLab funding to improve the quality and delivery of 8 undergraduate courses

Lead Co-op Ambassador and Former Co-op Ambassador   August 2019 – May 2021
McMaster Engineering Co-op and Career Services, Hamilton, ON
- Lead a team of 20 ambassadors while facilitating a fully online program to promote the services provided by ECCS while promoting work integrated learning opportunities
- Shared personal experience and knowledge of the co-op work terms to improve the employability and positive experiences of other students
- Professionally represented ECCS and McMaster University to key stakeholders, including current and incoming students, student families, university staff, and employers

Welcome Week Planning Committee Member   January – September 2020
McMaster Engineering Redsuits
- Collaborated with a committee of 15 engineering students in the selection of 200 engineering student representatives to help welcome incoming university students fully online
- Facilitated and organized events aimed to help foster a welcoming community for students
- Organized detailed training opportunities to ensure all volunteers were prepared to create an inclusive space

Relevant Projects

Capstone Project: Forest Fire Prevention Network   January – December 2021
- Created a platform for IoT development for students to implement in their own IoT projects which was leveraged in the implementation of a forest fire prevention network

IDEEA International Design Project   January – July 2019
- Developed a smart drone food delivery application earning first place in the international design competition
- Lead an international, interdisciplinary team and presented our design project to 250 people

ACTIVITIES AND INTERESTS

- Dedicated pianist, completed grade 8 RCM examination and enjoy Playing & listening to classical piano