

Hussein Merza

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Education

University of Windsor | Windsor, ON

September 2018 – September 2022

Bachelor of Applied Science in Electrical Engineering (CO-OP), GPA 3.7

Skills

Programming: C, C++, C#, Bash, Java, JavaScript, Python, HTML, CSS, SQL, MATLAB, MIPS, VHDL, Verilog

Platforms: GNU/Linux (Arch, Debian, Ubuntu, Whonix), VirtualBox, VMware, Windows (7, 10, 11)

Frameworks/Libraries: Vulkan, OpenGL, libGDX, React, Node.js, Bootstrap, Angular, SQL

Hardware: Raspberry Pi, Arduino, FPGAs, Multimeter, Robotics, Power electronics, Circuit/PCB design, HVAC, HV/LV design

Software: AutoCAD, CATIA, SOLIDWORKS, CANalyzer, PLC Programming, Visio, Visual Studio, Emacs, Office 365, LTSpice, PSIM, Google Workspace, Quartus Prime, MATLAB/Simulink, Chatbots/Bots, Unity, HMI Electrical, RASA X, Git/GitHub

Other Skills: Manufacturing, EV, Automation systems, Engineering design, release, and review, Electrical and CAD review, Presentation and public speaking, Tutoring, Project management, IT support, DVP&R, DFMEA, DFSS

Experience

University of Windsor | Windsor, ON

January 2021 – September 2022

LMS Project Engineer

- Provided 1st/2nd level IT / related support to stakeholders using ITS software or through live sessions to document support
- Assisted in designing online communication strategies, assignments, tutorials, and technical support as needed
- Assisted in the development of a Chatbot using the Rasa X platform (Python) to provide support to faculty/staff outside work hours

University of Windsor | Windsor, ON

September 2020 – September 2022

Teaching Assistant

- Attended scheduled classes and assisted instructor with monitoring and collecting in-class activities
- Proctored and graded various assignments and exams according to rubric instructions set by instructor

Vistaprint | Windsor, ON

September 2016 – May 2020

Maintenance Technician

- Helped evaluate equipment failure and prepared reports detailing the issue(s) to maintenance
- Coordinated facility wide maintenance for the repair and tune up of various manufacturing equipment and machinery

Projects

Personal Portfolio Website | JavaScript, HTML, CSS, Ruby

August 2022 – September 2022

- Constructed the website with a focus on scroll-based animations implemented from scratch in JavaScript
- Created a Bash script to automatically deploy/re-deploy the website using the GitHub actions bot

Object Tracking Device | C, C++, CSS, HTML

January 2022 – July 2022

Electrical Engineering, Capstone Design Project

- Collaborated in a group of 3 to develop a real-time object tracking device using an Arduino UNO and LTE-M shield to track temperature, latitude, longitude, altitude, and speed of the device for accurate asset tracking
- Developed C++ code for the module to send HTTP POST requests with the recorded parameters to the cloud
- Designed a power delivery system to convert 5V 2A to 12V 2A to support the device hardware
- Organized the received data using an IoT dashboard designed using CSS and HTML

University of Windsor Chatbot | Python, CSS, HTML, JavaScript

September 2021 - September 2022

LMS Project Engineer

- Created a chatbot using Python to assist students and faculty with university learning management software
- Utilized HTML, CSS, and JavaScript to create the chatbot widget and to deploy it on university websites
- Developed the software on the FOSS RASA X platform and utilized GitHub for version control and collaboration

Lego Mindstorms EV3 Robot | Python, Scratch

January 2018 – April 2018

- Collaborated in a group of 7 engineers to develop a line following robot using Python
- Utilized a color sensor, DC motor, and gyro sensor for the construction of the design