

Murtadha Saeed Nisyif

Computer Engineering Undergraduate

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Education

University of Guelph

Bachelor of Engineering: Major in Computer Engineering, Minor in Computer Science

Sep 2019 – May 2023

Guelph, Ontario

Skills

Languages: C/C++/C#, Python, JavaScript, Java, HTML, MATLAB, VHDL, CSS
Frameworks: Node.js, React.js, Express.js, NumPy, ROS(1 & 2), Pandas, Tensorflow, Django, FreeRTOS
Tools: Git, Docker, GCC, CMake, Xilinx, Quartus IV, Cadence Virtuoso
Databases: MongoDB, MySQL, SQLite

Relevant Work Experience

Research Assistant - Software developer

Oct 2022 – Present

University of Guelph - Robotics Institute

Guelph, Ontario

- Implemented multi-level data pipeline between depth cameras and FANUC arm achieving a modular operational system
- Assessed safety procedures incorporated in automation scripts of user-robot based interaction
- Authored ROS2 packages in C++ and Python for robotic arm manipulation improving operation accuracy to 20%
- Bridged between ROS1 and ROS2 nodes to support backwards compatibility of existing systems

Information Technology Analyst

Jul 2020 – Oct 2020

Kitchener Downtown Community Health Centre - SRHC

Kitchener, Ontario

- Used datasheet software to manage and log equipment upgrades with tight budget of \$10,000 and short deadlines
- Devised a scheduling scheme to cut down call waiting times by 30% using existing PBS phone system
- Increased working flow efficiency by 20% through network infrastructure improvements, but bringing about suitable computers network topology and equipment
- Saved \$5,000 by implementing cost-saving initiatives that addressed long-standing problems

Relevant Projects

Text-to-Braille Real-Time Converter | [Python](#), [Git](#), [Eagle](#), [Jira](#)

Apr 2023

- Lead a group of 4 and coordinated with a NPO to design a novel solution that converts text-to-braille in real time while maintaining a challenging building cost of \$250 CAD

Real-Time Security System | [STM32](#), [FreeRTOS](#), [µC-OS III](#)

Nov 2022

- Built a real-time security system using a STM32f429 development board, a FHD camera and a PIR motion sensor by utilizing real-time systems concepts such as semaphores and interrupts to deliver a system with response times of 50 ms

buildNbox 🌐 | [React](#), [Git](#), [Node JS](#), [SQLite](#), [Jira](#)

Aug 2022

- Developed a REST api backend using Node JS for data retrieval from Amazon.ca using their rainforests api, resulting in instant and seamless browsing

StonkBot 🌐 | [Python](#), [Git](#), [Matplotlib](#)

May 2022

- Built an intuitive python API that stores players information and holdings of a cryptocurrency and stocks mockery investing game, achieving a scalable and integrable with external noSQL databases with ease

ZAMAZ UTI Diagnosis - Image Processor | [Python](#), [NumPy](#), [SciPy](#), [Matplotlib](#)

Apr 2022

- Developed and integrated a software system to automate Bar Volumetric readouts of urine sample test, by analyzing a captured image of the readout and perform pixel calculations to calculate the concentrations of bacteria 16x faster than the current gold standard and winning a prize of \$2,000 in a design competition among 50+ groups

Indoor CO₂ Level Monitor | [Microsoft Teams](#), [ARM Assembly](#), [Keil vision](#)

Oct 2021

- Utilized K60 microcontroller and SIHM CO₂ carbon monitor sensor, formed a hardware and software interface design and designed a system to monitor CO₂ levels with user-friendly feedback to avoid potential COVID-19 and Influenza spreading

Extracurriculars

Gryphon AeroSpace

May 2021

Software Engineering Executive

First Robotics Competition

Sep 2017, Sep 2018

Builder, Automation programmer

Skills Ontario Competition

May 2018

Builder, Software Developer