

Murtadha Saeed Nisyif

Computer Engineering Graduate

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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, 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

Work Experience

Research Assistant - Software developer

Oct 2022 – Present

University of Guelph - Robotics Institute

Guelph, Ontario

- Architected and implemented data pipelines between ROS camera nodes and FANUC arm coordinate manipulation
- Assessed safety procedures incorporated in automation scripts of user-robot based interaction
- Created ROS2 communication packages in C++ and Python for data retrieval and processing
- Implemented packages to bridge between nodes from different architectures (ROS1 and ROS2) for data manipulation

Information Technology Analyst

Jul 2020 – Oct 2020

Kitchener Downtown Community Health Centre - SRHC

Kitchener, Ontario

- Managed equipment upgrades with tight budget of \$10,000 and short deadlines
- Devised a scheduling scheme to cut down calls waiting times by 30% using existing PBS phone system
- Enhanced information and hardware sharing resulting in 20% increase in working environment efficiency
- 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

- Managed a team of four in developing a novel text-to-braille real-time converter tool that was well-received by the faculty advisor
- Coordinated with a non-profit organization to ensure that the final product met the current standards and needs
- Designed the electronic schematic for the braille pins circuitry, and validated the software architecture functionality
- Utilized existing APIs to extract text from pictures, to be mapped to an array of braille pins that are driven by electromagnets

buildNbox | *React, Git, Node JS, Jira*

Aug 2022

- Implemented a REST api for computer parts data retrieval from Amazon.ca within 0.2 seconds
- Facilitated tools like Jira and Confluence to develop detailed documentations reflecting development progress
- Administered website traffic and maintained maximum performance during heavy incoming and outgoing traffic

StonkBot | *Python, Git, Matplotlib*

May 2022

- Forecasted project needs and wants to devise appropriate technologies achieving the teams goal of spending total of \$0
- Integrated Discord Python API to create a discord bot that can run a mockery investing game
- Incorporated financial APIs to retrieve stocks/cryptocurrency prices with real-time price updates
- Built a python API that stores current players information and holdings as a JSON object for easy integration with possible future features

Image Processor | *Python, NumPy, SciPy, Matplotlib*

Apr 2022

- Incorporated scientific libraries to perform pixel calculations for Bar-Volumetric chip 128x128 readout picture
- Designed a software model that provides 16x faster performance and is more reliable than the current gold standard
- Ranked first in Engineering & Design 3 in-school competition with a price of \$2,000 among 50+ other teams

Extracurricular

Gryphon AeroSpace

Software Engineering Executive

May 2021

University of Guelph

First Robotics Competition

Builder, Automation programmer

Sep 2017, Sep 2018

2702 Rebels

Skills Ontario Competition

Builder, Software Developer

May 2018

Eastwood Collegiate Institute