Reginald Marr

Embedded Software Designer

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"Everything is mutable"

Experience

Embedded Software Designer - New Product Integration

L3Harris-Wescam

Jan 2020 – Oct 2022 | Hamilton, Ontario

- Designed a common driver framework which provided modular device orchestration for multiple projects.
- Designed a python/rust framework to support automated testing and analysis of embedded systems.
- Developed capabilities to streamline conversion of text-based documentation into PDF, Powerpoint and static website formats.
- Collaborated across engineering disciplines to develop and refine lens and laser sub-assemblies.
- Provided collection and analysis support during in-field flight tests.

Embedded Software Designer - Sustaining

L3Harris-Wescam

May 2018 – Dec 2019 | Hamilton, Ontario

- Provided support triaging bugs found during pre-shipment verification.
- Acted as inter-department liaison to solve logistical issues for customer deliveries.
- Developed automation tooling using python and web-based technologies to optimized various workflows.
- Generated documentation and improvement proposals for legacy software components.
- Utilized TDD best practices to develop bugfixes and improvements to legacy software.

Tech Assistant (Co-Op)

McMaster University - The Learning Factory

May 2017 – Aug 2017 | Hamilton, Ontario

- Summarized best-in-industry practices for improvement proposals.
- Provided estimation support for various full-scale systems.
- Responsible for process design, DCS system integration, hardware installation, and HMI development.
- Designed part/tool tracking system using custom RFID hardware and software developed for coordination between desktop and embedded targets via C, C#, and MySQL.

Project Coordinator (Co-Op)

Airtron Canada

Feb 2016 – Aug 2016 | Missisauga, Ontario

- Designed and developed linux based relay to provide logging of environmental variables using python and custom REST API.
- Assisted in creating a proposal for a biogas cogen to convert food and animal waste into low grade electricity and high grade heat.
- Provided estimation support on energy services contracts involving the offset of GHG's via load balancing, HVAC system improvements, and more.

About Me

I am first and foremost most proud of my ability to collaborate with peers across a variety of disciplines (and a variety of physical locations) to produce something better than the sum of our individual contributions.

Additionally, I pride myself on my ability to grind away at complex problems, break them down, and define their atomic components.

By doing this I am able to develop robust solutions which solve not just the specific task at hand but provide adaptability to solve the problem in a general sense.

Education

B.Tech - Automation Engineering Technology

McMaster University

Sep 2013 – Jun 2018 | Hamilton, Ontario

- Capstone
  Developed G-Code Generator Cross platform application (Qt & C++) from 3D CAD models for novel metal 3D printing process.
- Level 600 Project
  Developed a neural network and network industrial system for modeling and controlling the distillation of ethanol.
- Completed 16 Months of Co-Op

Adv.Dip - Chemical Engineering Technology

Mohawk College

Sep 2013 – Jun 2018 | Hamilton, Ontario

Certificate - Business Management

Mohawk College

Sep 2013 – Jun 2018 | Hamilton, Ontario

Skills

- Languages
  C/C++, Rust, Python, SQL, MATLAB, Elisp
- Developer Tools
  Git, Docker, Jenkins, Jira, Ansible, Kubernetes
- Frameworks
  threadX, freeRTOS, POSIX, Emacs, Linux