

Bryan Melanson

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EDUCATION

MEMORIAL UNIVERSITY

BS IN COMPUTER ENGINEERING
 May 2020 | St. John's, NL

LINKS

Github:// [bryan-melanson](#)
 LinkedIn:// [bryanmelanson](#)
 StackOverflow:// [bryan-melanson](#)
 LeetCode: // [bryan-melanson](#)

COURSEWORK

Undergraduate
 Real Time Operating Systems
 Embedded Systems
 Software Design
 Data Structures
 Image Processing
 Computer Security

SKILLS

Languages
 C/C++ • Python • JavaScript
 Rust • L^AT_EX • R
 Software
 CMake • FreeRTOS • ZephyrOS
 GDB • Linux • JIRA • Jenkins
 Hardware
 ESP32 • STM32 • I²C • SPI • CAN
 DMA • USB • UART • NFC • Bluetooth
 Oscilloscopes • Logic Analyzers • JTAG

INTERESTS

Weightlifting
 Sound Design
 Woodworking

EXPERIENCE

BOSTON SCIENTIFIC | EMBEDDED DEVELOPER

Nov 2023 - Present | Montreal, QC

- Designing, developing, and testing embedded software for Class IV medical devices including next-generation EP ablation systems, contributing to system architecture, requirements definition, and full lifecycle documentation in a regulated environment.
- Developing automated test scripts and tooling in Python to support verification, prototype evaluation, and continuous improvement of embedded software test coverage.
- Implementing firmware in C for microcontrollers, employing event-driven and state-machine architectures to ensure reliable real-time system performance.
- Developing verification plans and executing unit, integration, and system-level testing, creating and documenting well-structured test protocols and conducting prototype and verification testing to ensure compliance with design requirements.
- Applying relevant medical device development standards (IEC 62304, IEC 60601, ISO 13485) and contributing to risk-management and software design-control documentation throughout the product lifecycle.

MYSA | EMBEDDED DEVELOPER

Jan 2019 - July 2023 | St. John's, NL

- Designing, developing, coding, testing and debugging firmware for a series of Smart Home thermostat devices and systems from requirements to prototype, production and commercial deployment.
- Working with the software team to develop API and interface specifications for new products. Creating features to optimize home heating efficiency using Bluetooth Low Energy, Infrared signals, and NFC.
- Designing and developing mobile applications for both iOS and Android platforms using the React framework. Developing reusable components, implementing state management, and leveraging third-party libraries and APIs in designing responsive and adaptive user interfaces that work seamlessly across multiple screen sizes and resolutions. Collaborating with cross-functional teams, including product managers, designers, and engineers, and leveraging embedded system experience to deliver high-quality mobile applications that meet users' expectations.

WORK TERMS

NOKIA INC. | TIER 2 SUPPORT ENGINEER

Sept 2016 – Jan 2017 | Ottawa, ON

Worked with Nokia 5620 SAM clients debugging complex product installations on CentOS/Solaris/RHEL systems as well as resolving large-scale network management issues using Open Stack and VMWare.

NALCOR ENERGY | SOFTWARE DEVELOPER

Dec 2015 – May 2016 | St. John's, NL

Lead the development of interactive heat map Geographic Image System (GIS) application for analyzing and visualizing real time prices of the New York state energy market using MATLAB, and SQL. Expanded project scope to include scripted mapping of all major Canadian energy markets using R.