

Work Experience

NerveX Neurotechnologies - Embedded Software Developer • November 2023-Present

- Led embedded C firmware development for low-power wearable.
- Implemented signal processing pipelines for biometrics on Cortex-M MCUs.
- Wrote python scripts for tools and test rigs.
- Integrated common peripherals such as BLE, I2C, SPI, UART, PDM etc.
- PCB layout, SMT assembly, hardware debugging, and board bringup.

Garmin Canada - Embedded Software Engineering Intern • September 2021-August 2022

- Developed embedded C/C++ firmware for low-power wireless devices.
- Worked as a member of the team responsible for low-level integration of wireless protocols into products.
- Gained experience with BLE, WiFi, BTC, and ANT.
- Debugged hardware issues with spectrum analyzers, oscilloscopes, and logic analyzers.
- Documented software issues and test procedures using Jira and Confluence.

CNH Industrial - Software Engineering Intern • May 2021-August 2021

- Developed embedded C firmware for agricultural equipment.
- Created graphical desktop applications with C# and WinForms.

Personal Projects • huntergw.com

Wireless LED Bracelet • github.com/HunterWhyte/WirelessLEDBracelet • December 2022 - March 2023

- Wirelessly controlled light-up bracelet for use at concerts and live events.
- Uses 2.4GHz RF and connects over BLE to smartphones.
- Designed circuit and PCB around nRF52 SoC.
- Developed embedded C firmware implementing UART, I2C, BLE and NFC.
- Assembled and debugged form factor prototype.

ARM Cortex-A8 Baremetal • github.com/HunterWhyte/bbb-baremetal • February 2023 - March 2023

- Baremetal application written from scratch in C and ARM assembly language.
- Runs on a TI AM335x (Cortex-A8) microprocessor without any external bootloader.
- Interpreted datasheets to figure out how to initialize PLLs, peripherals, and external memory.
- Tested and debugged on hardware using a Beaglebone Black development board.

Other Small Projects

- Audio visualization library written in C: github.com/HunterWhyte/jumaudio (December 2022)
- Game with 'from-scratch' OpenGL graphics: huntergw.com/puzzle-game (April 2022)

Education

Computer Engineering - Bachelor of Science in Engineering with Great Distinction

University of Saskatchewan • September 2018 - April 2023

Awards for academic achievement:

Douglas Durie Memorial Scholarship Fall 2020, Fall 2022 • *Agra Memorial Scholarship* Fall 2020 •
Slapkauskas Scholarship in Engineering Winter 2021 • *Dean's Honour Roll* 2019, 2020, 2021, 2023.

References available upon request