David Lutzer

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RELEVANT EXPERIENCE

BRANDXTECHNOLOGY   **Saskatoon, SK**
Embedded Systems Developer   *May 2018 – August 2018*

I developed firmware and hardware for an IoT sensor hub, enabling it to protect client assets and send alerts.

- Programmed C++ firmware on a STM32 microcontroller,
- Interfaced microcontrollers with SPI, I2C and analog peripherals
- Prototyped the electrical circuitry utilizing typical lab equipment including oscilloscopes, digital multi-meters and breadboards
- Designed the printed circuit board, including schematic capture, board layout, and bill of materials
- Developed Python scripts to test firmware and hardware
- Authored hardware and firmware documentation
- Co-authored a products user manual
- Utilized Git VCS

SED SYSTEMS - UNIVERSITY OF SASKATCHEWAN   **Saskatoon, SK**
Transceiver Engineer - Electrical Engineering Student   *September 2018 – May 2019*

For my senior design project, I developed a transceiver capable of communicating through soils wirelessly.

- Developed microcontroller firmware in C++, utilizing JTAG in debugging
- Interfaced microcontrollers with UART peripherals
- Simulated digital signal processing systems in Python and MATLAB
- Outlined product requirements, technical specifications and use cases
- Authored and executed testing plans in accordance with technical specifications and product requirements
- Designed and tested signal processing hardware utilizing lab equipment including spectrum analyzers, oscilloscopes, and vector network analyzers.
- Designed the printed circuit board, including schematic capture, board layout, and bill of materials
- Designed the Enclosure in SolidWorks, and 3D printed it with Cura
- Utilized Git VCS

SASKPOWER   **Saskatoon, SK**
Transmission Operations & Support Engineering Student   *May 2017 – August 2017*

- Implemented automation of Microsoft Excel tasks through Visual Basic
- Implemented Microsoft SharePoint solutions through JavaScript, HTML & CSS
- Constructed technical documentation and procedures

EDUCATION

UNIVERSITY OF SASKATCHEWAN   **Saskatoon, SK**
Bachelor of Engineering, Electrical Engineering   *April 2019*

Focus areas of study include analog and digital electronics, signal processing, optoelectronics, electromagnetism, and electronic materials

ENGINEERING ACCOLADES

- 1st Place in the Saskatoon Engineering Competitions senior design category
- 1st Place at the Saskatoon hackathon Med.Hack()
- 2nd Place in the University of Saskatchewan programming competition