

Tahseen Intesar (EIT)

Experience

NovAtel Inc. (Hexagon Autonomy & Positioning) – Platform Software Developer

May 2023 – Present

- Developed and maintained embedded firmware of Novatel's OEM7 receivers, which drive the core operations of all proprietary GNSS receiver products.
- Implemented application level features (commands and logging messages), that run on all NovAtel products.
- Created automated continuous delivery service (CDS) tests for firmware using Python and Jenkins frameworks, which are run daily on 10+ devices.
- Redesigned and updated the embedded web server on the OEM7 receivers that drive NovAtel's Setup and Monitor web application.

Attabotics – Embedded Software Intern

Jan. 2022 – Sept. 2022

- Developed Embedded C software for automation in Automated Storage and Retrieval Systems (AS/RS), delivering improvements in robot performance and system availability.
- Performed integration testing using in-house control software to verify improvements in robot performance.
- Analyzed comprehensive data on RSSI strength from operating site robots, utilizing over **1 million** data points to demonstrate variance in signal strength per location.
- Validated robot design parameters using statistical analysis of robot voltage and attitude. Implemented conditional checks targeting robot operational safety and reliability.
- Created control flow diagrams for robot commands and prepared technical documentation for release of robot software, presenting to site operations team.

Petro-Techna – Instrumentation & Controls Co-op

Aug. 2021 – Dec. 2021

- Verified Control System Architecture against Control Panel Drawings, I/O Lists and Junction Box Wiring Diagrams for vendor quotation.
- Updated Instrument Indexes, Hook-up Drawings, Instrument Datasheets with sizing calculations, and Cause and Effect Diagrams to align with P&ID changes across multiple projects.
- Assisted in preparing Tie-In Point Lists, Alarm Setpoint Lists and Line Designation Tables.
- Lead the development of a software interface to analyze CO₂ emissions from design data of over 10 crude desalting packages commissioned for global clients.

Projects

FlexiForm: A Semi-Automated Prosthetic Synthesis Tool (Final Year Capstone Project)

- Developed an application in Unity/C# that generated static prosthetic casings for amputees, with potential to save patients at least \$5000 over conventional practices.
- Reworked UI using native Unity library toolkits for implementation into a Web application.

Infrared Remote Controller

- Designed an IR communication system using an NEC protocol between two PIC microcontrollers.
- Capable of sending and receiving modulated signals using timers and interrupt subroutines.

Technical Competencies

- **Programming:** C, C++, Java, JavaScript, Python, VHDL, MATLAB, Lua
- **Embedded/RTOS:** Arduino, Raspberry Pi, PIC, STM32, ESP32, FreeRTOS, GreenHills INTEGRITY
- **Hardware Tools:** Oscilloscope, Logic Analyzer, Function Generator, Soldering

Education

University of Calgary - BSc. in Electrical Engineering, Minor in Computer Engineering

2018 - 2023

- **Cumulative GPA:** 3.57/4.0