

Norman Anderson

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SKILLS

Languages: C, C++

Developer Tools: Git, Yocto Project, Makefile

Communication Protocols: TCP/IP, PCIe, Ethernet, BGP, OSPF, UART, I2C

EXPERIENCE

Cisco

July 2024 - Present

Software Engineer

San Jose, CA

- UCS Virtual Interface Card Firmware team
- Implemented MQTT protocol in C within VIC for VIC-to-Intersight communication, enabling real-time data and metrics retrieval, improving data availability through a central MQTT broker.
- Added a feature to CLI probe command output to list the serial number of the UCS servers.

Ciena

Jan 2024 – July 2024

Embedded Software Engineer Intern

Ottawa, ON, Canada

- Developed and optimized embedded software in C, for O-NID, an OTN network edge demarcation device.
- Led the expansion and rework of the current diagnostic points model to address the requirements of a future release, handling increased Ethernet ports using a bitmap.
- Designed and implemented a low severity, non-service affecting alarm system, handling loss of signal events and addressing minor signal disruptions without service interruption.
- Debugged memory leaks in multi-threaded programs causing sudden hardware restarts using GDB.
- Developed a Python script to automate the weekly rebase of feature branches via the Linux terminal, reducing the process time from 45 minutes to just 15 minutes, resulting in approximately a 66% efficiency improvement.

Intellifi Corporation

June 2022 – Jan 2023

Application Developer

Markham, ON, Canada

- Back end development of native desktop application used by mortgage lender companies.
- Reduced data redundancy by 25% in implementation of a new procedure to pledge loans to financial institutions.
- Resolved technical issues in production code by debugging and establishing solutions.
- Wrote and optimized SQL queries for ad hoc and reoccurring client requests to extract data from MySQL servers.

PROJECTS

IoT Development of campus buildings traffic tracker device | C, STM32 microcontroller, Git

- Wrote drivers and prototyped a device to track campus building foot traffic using I2C time-of-flight sensors on an STM32 microcontroller, detecting people within 1 meter with 98% reliability.

Fitness Device | C, Zephyr RTOS, Logic Analyzer, UART

- Developed an embedded systems project using an ARM Cortex-M microcontroller with various I2C and analog sensors such as microphone and accelerometer to monitor physical activity.
- Designed a task scheduler to handle multithreading using semaphores.

EDUCATION

Queen's University

Bachelor of Computer Science

June 2022