David Perez

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Located in Austin, TX

RELEVANT WORK EXPERIENCE

Enaex | Austin, TX   Sept 2025 to Dec 2025

Electronics Engineer Contractor

- Power electronics fault detection hardware testing, and corresponding PCB layout on two layer board.
- Hardware enclosure layout design and spec matching for communication system and power electronics boards.
- Embedded code reviews, emphasis on hardware and application boot sequencing and app logic.

Enaex | Austin, TX   Aug 2024 to May 2025

Electronics Engineer

- Designed multi-layer wireless data communication stack for a mesh-like communication system.
- Implemented custom low-level handshaking and large data transfer communication protocol using wireless radio communications.
- Designed and implemented system diagnostics for error handling and system activity monitoring.
- Designed and implemented network diagnostics system for monitoring wireless data communication and data exchange characteristics.
- Designed and created motherboard PCB consisting of several serial communications protocols, interchangeable sensor, radio, and display interface modules. Additionally handled parts sourcing and PCB manufacture outsourcing.
- Aided in designs and reviewed power board PCB's, database software, software continuous integration systems, and software build and deployment systems.

Communication System Solutions | Lincoln, NE   May 2022 to Aug 2024

Software Design Engineer Intern

- Collaborated with the engineering and manufacturing teams for programming of final stage PCB manufacturing provisioning process using a Raspberry Pi C++ QT application used by 3 manufacturing plants. Additionally provided programming development for embedded firmware for serial, FSK and LoRa radio communications between STM32 and Raspberry Pi microcontrollers.
- Replicated and abstracted the provisioning process for additional independent PCB manufacturing and firmware design contracts.
- Programming development on Yocto Linux embedded system for maintaining backup configuration files.
- Implementing subsystem hardware abstraction layers and unit tests using C/C++ for peripherals such as battery ADC on stm32 microcontroller for several hundred thousand unit runs.
- Created Python scripts for command line interfaces for the hardware manufacturing team to test and program several thousand embedded devices.
- Electrical engineering signal analysis and configuration for testing hardware peripherals such as radio, temperature sensors, accelerometers, ADCs, and USART using oscilloscopes, joule scopes, and multimeters.

EDUCATION

University of Nebraska–Lincoln | Lincoln, NE   Graduation: May 2024
Bachelor of Science in Electrical Engineering
Bachelor of Science in Computer Engineering