

Reports to: Senior Innovation Engineer Department: Engineering

Classification: Exempt Last Updated: 7/20/2026

Job Summary:

The Firmware Engineer will be the bridge between our physical hardware and our digital ecosystem. You will develop low-latency code for sensors and IoT devices, ensure seamless communication with cloud platforms, and contribute to the mobile app and backend data layers that bring our products to life.

Essential Functions:

- **Firmware Development:** Design, code, and debug C/C++ firmware for microcontrollers (ARM Cortex-M, ESP32, or similar).
- **Sensor Integration:** Interface with various sensors (IMUs, optical, environmental) via I2C, SPI, and UART, including driver development and signal processing.
- **IoT Connectivity:** Implement and optimize wireless protocols (Wi-Fi, BLE, LoRa, or Cellular) and messaging protocols like MQTT or CoAP.
- **Cloud & Integration:** Collaborate on the integration of device data into cloud environments (AWS IoT Core, Azure IoT, or Google Cloud).
- **App & Interface Development:** Assist in developing or maintaining mobile/web applications (React Native, Flutter, or similar) that interact with our hardware.
- **Data Mining & Analytics:** Support back-office operations by writing scripts (Python/SQL) to extract, clean, and analyze telemetry data for performance optimization and business intelligence.
- Other duties as assigned

Key Competencies:

- Proficiency in C/C++ and familiarity with RTOS (FreeRTOS, Zephyr) or bare-metal development.
- Hands-on experience with hardware debugging tools (Oscilloscopes, Logic Analyzers, JTAG/SWD).
- Solid understanding of TCP/IP and IoT security best practices.
- **The "Plus" Skills (Highly Desired):**
 - Experience with Python for data automation and "back-office" data mining.
 - Mobile app development experience (iOS/Android) or cross-platform frameworks.
 - Knowledge of RESTful APIs and JSON data structures.

Job Qualifications:

- Degree: BS/MS in Electrical Engineering, Computer Science, or a related field.
 - Experience: 2–5 years of professional experience in embedded systems.
 - Embrace and foster company values of Integrity, Excellence, People Chemistry, Golden Rule, Courage and Servant-Leadership.
 - Full-Stack Mindset: You enjoy understanding how a bit of data travels from a sensor pin all the way to a cloud database.
 - Problem Solver: You thrive in the "gray area" between hardware and software.
 - Self-Starter: Comfortable working in a fast-paced environment with evolving requirements
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