

Senior Engineers

Job ID #21091 in the Kansas City Metro Area

As a part of the engineering team, create custom electronics and Internet of things (IoT) devices that collect and send data to our cloud-based software ecosystem. Work on the engineering team to build and improve the products our customers use. Products range from custom sensor development to wireless communications to microprocessor design. Evaluate what technology is in the market, understand the state of the art, and design circuitry using best-practices. As the designs must be used in harsh environments, the Senior Engineer should understand both design and certification for such environments.

Specific duties include: Design, implement, and improve electrical instruments, equipment, and components of the Field Data Manager system that provides real-time data of field and water conditions. Operate computer-assisted engineering software such as Eagle CAD, Python, C, and MATLAB to perform engineering tasks. Implement WifNet protocol as a firmware in C programming language on ARM processors. Design and develop energy- efficient (average 3mW), long-range (6 miles point to point, up to 24 miles with repeaters) microwave wireless mesh network protocols (WifNet). Assist with designing the best printed circuit board solutions that take into account thermal and space constraints. Confer with production, software, mechanical, and industrial design engineers about existing projects and products. Plan and develop experimental test programs to verify compliance to all applicable regulations and quality guidelines. Inspect and observe installations of the wireless network protocols and Field Data Managers to ensure conformance to design and equipment specifications. Assist with prototype production to assure projects are completed on time and within budget. Design schematics and printed circuit boards (PCBs) for microwave communication, power management, data acquisition. Perform sensor collation including soil moisture and temperature probe, wind gauge, rain gauge, and solar radiation sensor. Combine geographic data with GPS, and 4G cellular network on cloud base user interface. Perform research and development of capacitance sensing soil moisture and temperature sensor. Perform research and implement characterization of newly developed sensors. Perform failure analysis for electric circuits. Perform oscillator design and work with low level firmware in C/C++, and FPGA design. Compile data and analyze reports to determine if the proposed design meets functional and performance specifications. Evaluate engineering test results for possible application to development of other systems. Master's Degree in Electrical Engineering, Computer Engineering or related degree. 1 year of experience with C, Python, Matlab, and VHDL programming languages; analog and digital circuit design; high frequency board layout; oscillator design; switching power supply design; microprocessor design; sensor interface design; low level firmware in C/C++; and FPGA design.

Reply to: careers@agisuretrack.com