



H2Ok Innovations Software Engineering Position

[H2Ok Innovations](#) is an IoT-enabled operating system for manufacturing and supply chain, focused on industrial liquid and fluid systems. Liquid systems are at the heart of industrial manufacturing, but current methods of managing these fluid systems are highly inefficient, relying on manual grab sampling as the most widely used technique. This results in a lack of data and visibility, causing excessive resource and operating costs, as well as inefficient operations. At H2Ok Innovations, we are rethinking this approach, with our comprehensive OS system consisting of a network of our commodity sensors, coupled with our secure dual-communication edge transmission gateway, and ML-based process optimization software. We are building an operating system to bridge OT (operational technology) and IT (information technology) in manufacturing and supply chain, enabling digital solutions to function reliably, viably, and securely in industrial environments. We believe in unlocking previously untapped data for our customers— who comprise society's most fundamental sectors— to enable them to gain a competitive advantage in the way they operate and bringing [Industry 4.0](#). At H2Ok Innovations, we are servicing major customers including multiple Fortune 500 enterprises and backed by Construct Capital, 2048 Ventures, Flybridge Capital, 1517 Fund, Techstars, and more. H2Ok Innovations is based out of Greentown Labs— one of the top cleantech technical communities in the world.

Job description:

A general technical understanding of all areas of the following areas with a specialized focus is highly preferred. This position will be working on the following aspects. The seniority of the role will be determined based on assessment. This position will be working on aspects including:

Software development:

- Full-stack software development with a focus on the back end
- Database management along with query and storage optimization
- Integrate data analysis and machine learning models for data processing
- Guide web development, converting customer challenges into forward-facing solutions
- Develop APIs for customers to integrate our data solutions into their workflow

Security:

- Ensure security of customer data during access, storage, and transmission.
- Securely deploy and integrate our IoT technologies within customer firewalls and networks
- Develop standards and security practices to meet regulatory and certification requirements of customers

IoT/Communications:

- Develop secure and reliable processes for retrieving data from sensors, processing it, and relaying it to cloud databases and industrial controllers through wireless and wired means
- Architect robust methods to integrate sensors into industrial controllers and software
- Design mechanism for updating and maintaining software as well as firmware of deployed devices on the field at scale

Machine learning + data science:

- Assist in building models to convert sensor data into information on product quality, process efficiency, material composition, etc.
- Exposure developing algorithms for time series analysis and predictive alerts for industrial process optimization
- Collaboratively work with the team and customers to ensure algorithms generate accurate and reliable results

Overall:

- Help build a team of driven software engineers
- Create strong processes and workflows for developing, deploying, and scaling the product
- Building and maintaining good documentation of workflow and codebase as well as developing processes for scalable software development and stable deployment
- Work on a rapidly changing set of cross-disciplinary projects around software development, as well as contribute to electrical component design, and hardware prototyping

Qualifications:

- Ability to work successfully in a fast-paced team environment/product iteration cycle
- Motivated, driven, startup founder mindset, desire to drive positive change in the world
- Embody a mindset of mentorship and give first
- Have experience or good understanding of developing, deploying, and scaling software solutions that are stable and secure
- Experience with React, Javascript, Python, D3, Google Cloud, AWS, and other cloud platforms
- Have experience storing and querying for large time-series data
- Experience or have the ability to quickly pick up working with C, C++, single-board computers/microcontrollers, and industrial communication protocols (ex. Modbus, EtherNet/IP, 4-20mA, OPC UA)
- Worked with or capable of quickly picking up IoT communication and wireless and wired data transmission protocols (ex. MQTT, cellular, LoRa, WiFi, ethernet, RS485, TCP/IP) with security in mind
- Understanding of or capable of picking up on network security and working with firewalls
- Knowledge of ML frameworks, unsupervised and supervised learning, data visualization, and data analysis tools

Location: Greater Boston Area, in-person highly preferred but open to the option of remote work

- Full time position with competitive compensation

Contact:

Please send an email with the role/position you are applying for in the subject line and include your resume, description about yourself, start date, and other relevant info/materials to careers@h2okinnoventions.com, and CC annie@h2okinnoventions.com, david@h2okinnoventions.com, and joseph@h2okinnoventions.com on it.