Schmidt Ocean Institute is a 501(c)3 U.S. non-profit private operating foundation (www.schmidtocean.org) established in March 2009 to advance ocean research and conservation with innovative technologies and open sharing of information. We bring together advanced science and state-of-the-art technologies to make lasting environmental impact and catalyze open sharing of the resulting knowledge with the audiences around the world. We demonstrate how new intelligent, scalable, cost-efficient tools and workflows can effectively address major challenges in marine conservation and research and foster their adoption by others. We operate globally using our state-of-the art research vessel Falkor and a wide range of innovative robotic systems and platforms. We provide our collaborators with free access to these facilities in exchange for a commitment to openly share the resulting scientific data and communicate research findings. The Institute is devoted to the inspirational vision of our Founders that the advancement of technology and open sharing of information will remain crucial to understanding and conservation of the world's oceans.

Job Description

Title:	**Data Acquisition Engineer**
Reports to:	**Directors of Research and Marine Operations**
Location:	**Any US city, preference US Pacific time zone, San Francisco Bay Area, CA or Seattle, WA**
Application Deadline:	**March 30, 2018**

Job summary

The Data Acquisition Engineer develops, implements, and maintains scientific data acquisition systems and workflows to meet the requirements of Schmidt Ocean Institute's oceanographic research and technology development projects. This position requires experience and expertise in data acquisition systems hardware, software, and data management.

Responsibilities:

Routine maintenance, operation, and troubleshooting of Schmidt Ocean Institute's internal data acquisition systems and workflows:

- Maintain Schmidt Ocean Institute's data and scientific video acquisitions systems, software, and instrumentation in good working order to ensure secure recording, storage, and transfer of acquired scientific data and video to external repositories
- Understand, design, develop, and implement data and metadata quality validation systems and workflows
- Prototype and build data analysis pipelines iteratively to provide insights on data from various sensors, recommend ways to improve data reliability, efficiency, and quality
- Develop and implement preventative maintenance program and workflows to ensure reliable uninterrupted data acquisition
- Troubleshoot issues with data acquisition or exchange across multiple systems, implement solutions in timely manner
- Develop, implement and maintain means for automatic identification, and, where possible, remediation, of data acquisition issues
- Ensure reliable and efficient flow of diverse instrument data and scientific video among data acquisition systems and storage appliances, computing systems and monitoring software
- Liaise with SOI's external data management and software development contractors to ensure effective and efficient integration of all SOI's data acquisition and related management workflows
- Develop, implement, and maintain up to date disaster recovery procedures
- Develop and maintain up to date design documentation, operator's manuals, and maintenance guidelines for all software and hardware components of SOI's data acquisition systems

Periodic audit and reassessment of the institute's data acquisition systems and workflows, their improvement and expansion, as necessary:

- Plan and implement integration of new data management technologies and software engineering tools into existing infrastructure in coordination with all involved SOI parties and collaborators to ensure the needs of all stakeholders are well understood and met
- Regularly audit the Institute's data acquisition systems and workflows, identify faults, risks and vulnerabilities
- Develop, propose, and implement hardware and software solutions and workflow improvements
- Design and implement hardware and software systems and workflows to support reliable acquisition new of types and formats of data
- Develop software architecture, hardware assembly designs, and wiring diagrams to improve Schmidt Ocean Institute's existing scientific data acquisition systems and workflows
- Specify and select software and hardware components to improve the data acquisition systems and workflows as required
- Procure, integrate, deploy, and maintain, data acquisition system hardware components and perform software deployment, configuration, and remote operational monitoring
- Implement on-site and remote means of quality monitoring and control for acquired data

Project-specific data acquisition tasks:

- Liaise with Schmidt Ocean Institute's collaborators in preparation to field campaigns to ensure reliable exchange of data among SOI and non-SOI platforms as required to support planned projects
- Design and implement project-specific data acquisition and management solutions in preparation to planned collaborative projects with external research teams, including custom software and hardware components and analytics applications
- Provide SOI's collaborators with familiarization and training to introduce them to the data acquisition and management workflows in use at SOI
- Liaise with SOI's engineering, operational, and research program development teams to ensure that project-specific data acquisition needs are well defined, made known to pertinent parties, and addressed in preparation to planned projects
- Attend cruise planning meetings and post-cruise debriefs to ensure that data acquisition requirements for each planned project are well understood and user feedback is taken in account for future projects\
- Other duties as assigned.

Requirements:

Knowledge, Skills and Abilities

- Server integration services and data migration experience, 5+ years
- Data pipeline and warehouse design and build experience, 5+ years
- Competence with relational databases: querying, programming, stored procedures, job building, scripting, and ad hoc queries
- Strong work ethic and self-starter
- Ability to meet deadlines and complete tasks with a high degree of accuracy and dependability
- Ability to maintain positive working relationships with internal staff and external collaborators
- Ability to prioritize and manage multiple projects and competing priorities simultaneously
- Ability to effectively communicate complex technical concepts to various counterparts
- Ability to be flexible and course correct as necessary

Education and Experience

- Bachelor's degree in Computer Science, Engineering or another pertinent STEM field plus a minimum of 5 years of related experience
- Experience with user support and training
- Experience with web-based collaborative data and content management systems desirable
- Experience with business analytics reporting and presentation tools
- Experience with developing technical design and project documentation

This position may require the ability to travel, both domestically and internationally.

Interested applicants should submit their resume to jobs@schmidtocean.org