Numerical Modeler/ Applied Physicist

Job Description

Makai Ocean Engineering's submarine cable group is seeking a skilled Numerical Modeler/Applied Physicist with a strong background in physics, engineering, or physical oceanography. This role is multifaceted, encompassing technical expertise, hands-on experience, and effective communication. The candidate will assume a critical role in the development of our

This is a full-time position at Makai's headquarters on the Makai Research Pier in Waimanalo, Hawaii, USA. See an aerial video of our location here.

underlying numerical models and algorithms as well as interfacing them within various products. If you possess the requisite background and skills, this position promises an exciting and fulfilling career journey.

Makai's submarine cable group produces the world's leading software for planning and installing submarine cables, a critical infrastructure that provides the global connectivity essential for the ongoing digital revolution. The group comprises engineers and software developers, with some based in the Hawaii office and others working remotely across various locations in the US, India, and Japan.

Responsibilities:

Model Development, Maintenance, and Enhancements: Maintain and optimize our proprietary core cable model. Conceptualize and validate additional algorithms in the products in collaboration with the team as per customer's demands.

Real-time Sensor Data Integration: Develop data-logging, filtering, and cleaning methods as needed to utilize real-time sensor data in conjunction with the above models.

Interface Definition with UI: Collaborate on defining interfaces between the model and the user interface (UI) for a seamless user experience.

Quality and Documentation: Provide accurate documentation on new features being added, and participate in code reviews.

Advanced Technical Support: Provide effective technical support to customers, addressing their inquiries and troubleshooting issues promptly when requested by test engineers.

At-sea Software Testing: Provide at-sea support for testing and trialing new modules and features that you develop. It will usually be 1-3 weeks long offshore trips.

Qualifications:

Minimum requirements:

- Hold a graduate degree (M.S. or higher) within a STEM field (Physics, Mathematics, Statistics, Computer Science, Electrical Engineering, Physical Oceanography, etc.) combined with 2+ years of pertinent experience, or possess a Bachelor's degree (B.S.) in the aforementioned fields along with 5+ years of experience.
- Proficiency in FORTRAN or C/C++ for scientific computation, along with familiarity with related analytical libraries and packages. Additional competence in .NET is advantageous.
- Demonstrated capability in developing and implementing numerical models.
- Possess strong intellectual curiosity, adaptability to acquire new technical skills, and the willingness to engage in innovative projects beyond one's comfort zone.
- Methodical approach to formulating and executing software testing procedures.
- Exhibits both collaborative teamwork skills and the ability to work independently within a multidisciplinary environment.
- Good written and verbal communication skills, including the ability to craft reports and present them to internal and external stakeholders.

Additional preferred qualifications:

- Demonstrated expertise in signal processing techniques, encompassing time-series and frequency-domain analysis, as well as robust data filtering for real-time applications.
- Familiarity with Geographic Information Systems (GIS) applications.
- Previous engagement with Agile Software Development methodologies.
- Experience working within team projects using SVN or similar code repository systems.
- Flexibility in work schedule and willingness to travel.

- Willingness to provide software training and perform commissioning on Cable Laying Vessels.
- Ocean experience or background is a plus.

Additional Information:

- Permanent, full-time position.

- Remote work is possible, but preference for local candidates.

- Strong consideration is given to candidates local to Hawaii or with strong island connections.

- Competitive salary, company benefits, and a unique work atmosphere offered.

- Makai participates in the Department of Homeland Security "E-Verify" Employment Eligibility Verification system for new employees.

Application Process: To apply for the position, send the following documents to Adrian at Adrian.Jelffs@makai.com:

1. Comprehensive Resume including overall GPA in graduate and undergraduate studies, year(s) of graduation, current location, and U.S. citizenship/work eligibility status.

2. Cover Letter highlighting how your education, experience, and training align with the position's requirements and why you're interested in working for Makai Ocean Engineering, Inc.