



Job Title: Oceanographic Software Developer

Employer: Gulf of Maine Lobster Foundation

Location: Falmouth, MA 02540

Work Hours: 9:00 AM – 5:00 PM

### **Company Overview:**

Gulf of Maine Lobster Foundation (GOMLF) is a 501(c)(3) non-profit organization which collaborates with lobstermen, members of the community and other researchers and scientists from higher education institutes or non-profit organizations to conduct vessel-based field work, protects and sustains the Ocean resource and Maine marine ecosystems, encourages good stewardship of the marine environment, and provides outreach and education opportunities.

### **Job Description:**

A full-time Oceanographic Software Developer position is available immediately in the foundation's office in Falmouth, Massachusetts and reporting to the Director of the Gulf of Maine Lobster Foundation.

### **Job Responsibilities:**

- Analyze specific lobster research project needs and then design programming codes using the best fitted language, test programmed codes to evaluate effectiveness and identify issues, develop software to meet those needs and to assist the most efficient data collection and optimal analysis; develop, implement and test new software algorithms to improve software or modeling performance.
- Design each piece of an application or a system and plan how the pieces will work together in order to validate oceanographic models and observations, design software and write programming codes to equip into devices that could be later on attached to lobster traps performed on both research and fisherman vessels in order to collect real time data of temperature, salinity, depth, location and be able to transmit such data immediately back to research lab, keep track of various oceanographic drifters and other related devices to ensure accurate data recording.
- Design and write user-friendly codes in Java or Python languages to access a variety of ocean data from different lobster observation programs, publicly available ocean model data, utilize proper programming codes to efficiently conduct data analysis.



- Ensure that a program continues to function normally for specific research purposes through software maintenance and test different scenarios, perform routine modification of existing software and programming codes to correct errors, allow them to adapt to new hardware, or to improve performance.
- Design and build new websites to store, map and share oceanographic data, use standard data access protocol (OPeNDAP, ERDDAP) to integrate local data with remotely-served data to enrich the database on the website.
- Document every aspect of an application or a system as a reference for future maintenance and upgrades, maintain and periodically backup such database, establish and store computer programming codes library for future use; write, edit and review technical reports.
- Communicate and collaborate with researchers and fishermen, understand their specific needs in order to create optimum software targeting different research goals.

**Required Travel:** Incidental domestic travel, 1-4 day-trips a month to visit regional harbors in New England, New York, and New Jersey.

**Required Education:** Bachelor of Science in in Computer Science, Software Engineering or related field (foreign equivalent is acceptable) plus 2 years of professional employment or internship experience in software development.

**Required Experience:**

- A minimum of 2 years of demonstrated experience in oceanographic instrument development and data analysis.
- A minimum of 2 years of demonstrated experience in computer programming, including object oriented programming design.
- A minimum of 2 years of demonstrated experience in website design and development, integrating remotely served data using standard data access protocol (OPeNDAP, ERDDAP).
- A minimum of 2 years of demonstrated experience in software development.
- A minimum of 2 years of demonstrated experience converting programs into different programming languages to optimize specific project requirements.
- A minimum of 2 years of demonstrated experience in Python, C, C++, Java, SQL, HTML, XML, and JavaScript.
- A minimum of 2 years of demonstrated experience in Leaflets, Github and Google Maps.
- A minimum of 2 years of demonstrated experience in Linux.
- Advanced knowledge of systems design and database applications development.
- Advanced knowledge of spatial data analysis from a technical perspective with different transmitters and satellite systems.

GULF OF MAINE  
LOBSTER FOUNDATION



In order to be considered for this position, please send your resume to [erin@gomlf.org](mailto:erin@gomlf.org)