Job Position Available: Software Engineer, Autonomous Vehicles

Chance Maritime Technologies provides technical solutions for autonomous vessels.
https://chancemaritime.com/

Chance Maritime Technologies is looking for qualified candidates for the position of Software Engineer in Lafayette, Louisiana. This role consists of designing and programming USV (Uncrewed Surface Vehicle) software. USVs consist of many mechanical and electrical systems functioning together with highly integrated software to create a reliable solution for a wide array of maritime applications.

As a Software Engineer, Autonomous Robotics at Chance Maritime Technologies, you will be responsible for the design and development of software used onboard a USV and any other task as required within your field of expertise.

This is an entry level position requiring a B.S. or more advanced degree in Computer Science, Computer Engineering, Mathematics, Physics, or other degree with a concentration in software engineering. Robotics, buoys, UAV/USV/UUV/AUV/UxV, or offshore experience is a plus.

The position requires occasional travel (average of 15%) and may require work offshore.

Reports to: CTO

Key Responsibilities:

- Collaborative can-do spirit, willing to work with others on challenging problems.
- Hands-on attitude: unafraid of hopping onboard a host vessel to ssh into a USV.
- Design software modules for USV systems.
- Document code.
- Develop robust software hardened for real world unattended operation.
- Test software on the bench and in the field.
- Debug & troubleshoot your code.
- Participate in peer reviews & enthusiasm to learn from your peers.
- Communicate and coordinate effectively with team members of all disciplines and management.
- You may also assist with mobilization, operation, training, and demobilization of USV projects particularly during prototype phases of new designs.

Essential Requirements:

- Enthusiasm to write software for robots that operate in the real world.
- Experience writing software in C++ strongly preferred; other strongly typed object oriented language proficiencies may be considered (e.g. Java).
- Experience with computer networking.
- Experience debugging with something other than print statements.
- To have strong oral & written communication, and interpersonal skills.
- To be self-directed, organized, systematic, punctual, and goal oriented.
- Ability to take high level direction from management.
- This position requires the ability to obtain a TWIC card.
- This position requires use of information which is subject to the International Traffic in Arms Regulations (ITAR). Applicants must be a U.S. Person as per 22 CFR 120.15 in order to satisfy export compliance requirements.

Desirable Skills:

- Enthusiasm for the oceans and everything that floats or sinks in them.
- Basic boat handling skills and competency.
- Experience working in the offshore environment.
- Experience with the Qt framework.
- Experience with Python and numpy.
- Experience in the field of unmanned vehicles and/or robotics, such as:
    - Experience with control systems such as PID controllers.
    - Experience with localization and tracking, e.g. particle filters, kalman filters, SLAM.
    - Experience with deep learning, convolutional neural networks, semantic segmentation.
    - Experience with classical computer vision techniques.
    - Experience with ROS, ROS2, MOOS, UMAA, and/or JAUS.
    - Experience with OpenCV, OpenCL, TensorFlow, or CUDA
    - Strong grasp of linear algebra and bayesian statistics
- Experience with microservice oriented architectures.
- Experience with industrial middleware such as DDS, MQTT, ZMQ, or OPC-UA.
- Experience with marine electrical systems and sensors, including experience with CANopen, J1939, NMEA2000, and NMEA0183 protocols.
- Experience interfacing with or using hydrographic survey equipment is strongly desired.
- Experience with controlling marine propulsion and mechanical systems and components.
- PLC programming knowledge in structured text and use of debugging tools.
- Current Basic Offshore Safety Induction & Emergency Training (BOSIET) would also be an advantage, but such training will be provided if necessary.

Chance Maritime Technologies does not discriminate in employment on the basis of race, color, religion, sex (including pregnancy and gender identity), national origin, political affiliation, sexual orientation, marital status, disability, genetic information, age, membership in an employee organization, retaliation, parental status, military service, or other non-merit factor. All employment is decided on the basis of qualifications, merit, and business need.

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