

HYDROLOGIC RESEARCH CENTER

A Nonprofit Research Corporation

PROGRAMMER-ANALYST I (2 Positions)

- The Hydrologic Research Center, located in San Diego, California, is seeking two candidates to fill entry-level software development positions.
- HRC is a non-profit, public-benefit research, technology-transfer and training corporation with global impact. HRC's mission focus is on solving the world's water problems in various forms. Primary initiatives include: real-time rainfall estimation and forecasting using remotely sensed and on-site data (weather satellite and radar data included); climatological analysis, modeling and forecasting using global climate model output and global observations; design, development and implementation of regional real-time flash flood modeling and warning systems worldwide; and others. World needs are often presented through national agencies and international organizations with multi-year research and development projects funded to meet those needs, often with the specific goal of supporting agency decision making in the effort to save lives and property through disaster mitigation. At present, HRC has developed and deployed real-time flash flood warning systems running operationally in multiple regions throughout the world, supporting the national meteorological, hydrological and disaster management agencies of more than 64 countries, serving 3 billion people.
- Selected candidates will join a team of engineers and scientists to contribute their skills toward multi-disciplinary development and deployment projects at municipal, state, national and international scales. Team member contributions are enhanced by a continuous expectation and effort to pursue expanding professional skills that evolve with the dynamic requirements of HRC's unique solutions.
- Please note that under Covid-19 restrictions, HRC currently employs a distributed work force with all Staff working remotely and who have not been engaged in professional travel since March 2020; however, the ability for team members to potentially travel internationally is required. The successful candidates will work remotely.
- Development work will predominantly draw from the following resources:
 - **Operating Systems:** Red Hat / CentOS and Ubuntu Linux, Microsoft Windows
 - **Languages/Scripting:** C, HTML, PHP, JavaScript, CSS, Bash, PL/pgSQL, Python
 - **Frameworks/Applications:** PostgreSQL, Mapserver, OpenLayers, Mapcache, GRASS/QGIS
 - **Code Editors:** vi/vim

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Job Activities:

- New team members will gradually participate in all phases of HRC software development, including enhancements of existing applications and design/development of new initiatives. These efforts will involve training from and design collaboration with other IT team members and with other scientific teams, coding and testing of both frontend (web applications in html, php, CSS and JavaScript) and backend (C-language, Bash script, PostgreSQL) programs will be pursued as project needs require.
- Other development efforts will involve assisting with adaptation and migration of selected applications to cloud platforms.
- Assisting with management of data resources, backups and archives along with monitoring established operations of data acquisitions and processing are also part of the team responsibilities.
- Occasional user support involving Windows PC and software troubleshooting will also be required.
- Ongoing documentation of development efforts, formulation of software/system user guides and periodic presentations to and training for HRC staff and clients are also among the team's staple activities.

Qualifications:

- B.S. or M.S. in Software Engineering or Computer Science
- **Required:** At least 1 year of classwork/practicum or professional experience developing with C Language in Linux shell environment using "vi" editor while applying engineering methodologies for problem solving, development and testing. Key skills include:
 - Proficiency with information/problem analysis and designing/implementing data structures and algorithms according to application.
 - Proficiency with vi editor and working in Bash shell. General scripting and basic GCC compilation as well.
- **Desired:** basic experience with web application development using HTML, PHP, JavaScript, CSS and related resources using vi shell editor in Linux environment.
- **Desired:** basic experience with PostgreSQL relational database (table design, data ingest, formulating queries, stored procedures).
- **Desired:** general familiarity with concepts of virtualization and/or cloud computing.
- Organizational and self-management skills. Team members are expected to:
 - Plan development strategies and schedules for timely completion of multiple/simultaneous tasks.

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- Proactively document progress of design and development efforts through written notes and informal presentations.
- Collaborate closely with project team members.
- Proceed with development responsibilities through guided effort and training as well as independent initiative and self-education.
- Strong transactional/technical writing skills are required and essential for task logging, project reporting and for end-user software documentation (user guides), and end-user training material and presentations.
- Familiarity with basic Microsoft Windows (v10) PC management, user support and troubleshooting required.

Administrative Information:

In compliance with federal law, all persons hired will be required to verify identity and eligibility to work in the United States and to complete the required employment eligibility verification document Form I-9 upon hire.

Candidates should email a cover letter highlighting the reasons for their interest in the position, their current CV, and the names of two references that are familiar with the candidates past work to: Chair, HRC Information Technology Group Search, at the email address: it-search@hrcwater.org . The application period ends at 5:00 PM PDT on the 30th of April 2021. Selected candidates will be provided an application form which must be completed prior to final selection.

Salary commensurate with qualifications and experience.

HRC provides a competitive benefits program including retirement, medical, dental and vision plans and paid vacations, holidays and sick leave.

The Hydrologic Research Center is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability, age, protected veteran status, gender identity or sexual orientation.