Research Associate III or IV
Software Engineer
23-129

Position Summary:
The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University (CSU) seeks to hire a full-time Software Engineer to engage in collaborative research and development with the Weather Information and Applications Division (WIAD) of the National Weather Service (NWS) Meteorological Development Laboratory (MDL) in Silver Spring, MD. The individual in this position will work on WIAD’s Impact-based Decision Support Services (IDSS) Management System (IMS) project, which will create for the NWS a set of nationally consistent and operationally supported tools for IDSS.

This position is located in a federal facility in Silver Spring, MD and requires the ability to pass a National Agency Check with Inquiries (NACI) Tier 1 federal background check for building access. The office will be in Silver Spring; however, the option exists to work remotely from a home/office. Periodic, in-person coordination meetings in Silver Spring and other locations will be required, and travel to attend those meetings will be paid by the project. The individual in this position will report to the CIRA Senior Software Engineer / Project Manager who also works on the project.

The individual in this position will help design, develop, test, refine, and document IMS. IMS is an enterprise system with many facets and consists of browser-based graphical user interfaces as well as a web-based API, behind which will sit a PostgreSQL database. Slack bots will also form part of IMS. IMS will be built using Spring/Spring Boot and make extensive use of Hibernate and the Java Persistence API (JPA) in order to effect database persistence. Other technologies on which IMS will depend are Docker (for container-based deployment) and Vaadin (for web application development), and IMS will run within the Amazon Web Services platform. The individual in this position must possess experience in Java on Linux/Unix systems and preferably also possess experience in technologies such as Spring/Spring Boot, Hibernate, JPA, PostgreSQL, and cloud computing. The individual in this position will help guide Java software development that results in more optimal, higher performance applications and will test and benchmark system components. They also will guide junior members of the project team in technical matters and participate in twice-weekly development discussions, and semi-annual in-person meetings in Silver Spring. The individual in this position may also assist development or provision of project-related presentations.

This position will be classified Research Associate III or IV according to the credentials of the finalist selected for hire as follows:
- For position title Research Associate III: Bachelor’s Degree in computer science, software engineering, or a related technical field PLUS 5+ years’ relevant work experience –OR– Master’s Degree in computer science, software engineering, or a related technical field PLUS 2+ years’ relevant work experience –OR– Ph.D. in computer science, software engineering, or a related technical field.
- For position title Research Associate IV: Bachelor’s Degree in computer science, software engineering, or a related technical field PLUS 10+ years’ relevant work experience –OR– Master’s Degree in computer science, software engineering, or a related technical field PLUS 5+ years’ relevant work experience –OR– Ph.D. in computer science, software engineering, or a related technical field PLUS 2+ years’ relevant work experience.

CSU recognizes the importance of supporting its employees as they balance their career, personal and family life, and that employees must be able to recharge, feel protected in their employment, and take the time they need to improve their overall productivity and health. Faculty, Administrative Professional, and other Non-Classified Staff are provided with paid and unpaid leave benefits to support them and their family and enhance financial security. Paid time off accrual rates for full-time employees = 16 hours of annual leave per month and 10 hours of sick leave per month. Employees also receive paid time off for 11 legal holidays, jury duty, and bereavement leave. CSU’s Commitment to Campus offers employees a healthy work-life balance through a
wide variety of programs, discounts, and special benefits. This includes Employee Study Privilege (nine free credits per year available through CSU, CSU Global, CSU Online Plus, and University of Northern Colorado), Family Tuition Scholarship Program (50% reduction in tuition), Discounted Veterinary Care, Wellness Membership Discounts, Volunteers in Public Schools Leave Program, Athletic Ticket Discounts, and much more! Visit www.facultyandstaff.colostate.edu to learn more about working at CSU. This information is a summary of commonly used leaves and is not all inclusive of benefits offered at CSU.

Decision Making:
Decision making will depend on the scale of each assignment and issues involved. The chosen course of action may need to be selected from many solutions, dependent upon the end user and technological requirements, and may require coordination with other members of the project team to reach a final decision. Decisions will include assessment of unusual circumstances, variations in approach, and handling of incomplete or conflicting data. The individual in this position will make many decisions concerning such things as interpreting considerable amounts of data, planning the work, or refining methods and techniques. This independent position involves working in coordination with the IMS Project Manager to go over progress and next steps. The individual in this position will set priorities that correspond to importance and/or urgency of particular upgrades and other work activities.

Essential Job Duties:
Software Engineering—90%
- Work with the project team, design, develop, test, and refine IMS;
- As needed or required, learn other technologies on which the project depends, e.g., Docker and Vaadin;
- As needed or required, interface with project stakeholders and collaborating groups/institutions to coordinate and/or effect project goals/plans;
- As needed or required, serve as a technical lead to more junior members of the project team;
- Participate in project meetings.

Documentation and Reporting—10%
- In collaboration with the project team, document IMS;
- As needed or requested, give or assist with presentations related to IMS;
- As needed or requested, provide status reports to CIRA and/or the project sponsor.

Required Qualifications:
In your cover letter, please specifically address EACH required qualification as it relates to your experience. A cover letter that fails to address the required qualifications for this position may not be considered further after review by the search committee.
- For Research Associate III: Bachelor’s Degree in computer science, software engineering, or a related technical field PLUS 5+ years of relevant work experience
  OR
  Master’s Degree in computer science, software engineering, or a related technical field PLUS 2+ years of relevant work experience
  OR
  Ph.D. in computer science, software engineering, or a related technical field.
- For Research Associate IV: Bachelor’s Degree in computer science, software engineering, or a related technical field PLUS 10+ years of relevant work experience
  OR
  Master’s Degree in computer science, software engineering, or a related technical field PLUS 5+ years of relevant work experience
  OR
  Ph.D. in computer science, software engineering, or a related technical field PLUS 2+ years of relevant work experience.
Ability to pass a National Agency Check with Inquiries (NACI) Tier 1 federal background check because the position is located inside a federal facility.

Experience using Java on Linux/Unix systems.

Travel to attend periodic, in-person coordination meetings in Silver Spring and other locations (expenses will be paid by the project).

Must be legally authorized to work in the United States by the start date. CIRA will not sponsor a visa for this position now or in the future.

Preferred Qualifications:
In your cover letter, please specifically address the applicable preferred qualifications for this position. A cover letter that fails to address the preferred qualifications for this position may not be considered further after review by the search committee.

- Experience with the following methodologies, technologies, and tools:
  - Agile
  - APIs
  - Amazon Web Services (AWS) / Cloud computing
  - Bash
  - Docker
  - Flyway
  - Gerrit
  - GIS shapefiles
  - Git
  - Hibernate
  - Java Persistence API (JPA)
  - Java Topology Suite (JTS)
  - Jenkins
  - JSON
  - Maven
  - PostGIS
  - PostgreSQL
  - Redmine
  - Slack
  - Spring/Spring Boot
  - Vaadin
  - XML

- Experience working as a member of a 5 to 10-person team.
- Experience adhering to software development best practices.

Annual Salary Range:
Commensurate with experience and qualifications as follows:
- Research Associate III: $110,000-$125,000
- Research Associate IV: $125,000-$140,000

Background Check:
Colorado State University strives to provide a safe study, work, and living environment for its faculty, staff, volunteers and students. To support this environment and comply with applicable laws and regulations, CSU conducts background checks. The type of background check conducted varies by position and can include, but is not limited to, criminal history, sex offender registry, motor vehicle history, financial history, and/or education verification. Background checks will also be conducted when required by law or contract and when, in the discretion of the University, it is reasonable and prudent to do so.
Commitment to Diversity and Inclusion:
Reflecting departmental and institutional values, candidates are expected to have the ability to advance the Department's commitment to diversity and inclusion.

Application Deadline:
Applications will be accepted until the position is filled; however, to ensure full consideration applications should be submitted by 11:59 PM MT on July 23, 2023. For full position announcement and to apply, please click “Apply to this Job” at the following website: https://jobs.colostate.edu/postings/129190. NOTE: In your cover letter, please specifically address the required and preferred qualifications of this position. A cover letter that fails to address the qualifications of this position may not be further considered after review by the search committee.

Colorado State University is committed to providing an environment that is free from discrimination and harassment based on race, age, creed, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, gender identity/expression, or pregnancy in its employment, programs, services and activities, and admissions, and, in certain circumstances, marriage to a co-worker. The University will not discharge or in any other manner discriminate against employees or applicants because they have inquired about, discussed, or disclosed their own pay or the pay of another employee or applicant. Colorado State University is an equal opportunity and equal access institution and affirmative action employer fully committed to achieving a diverse workforce and complies with all Federal and Colorado State laws, regulations, and executive orders regarding non-discrimination and affirmative action. The Office of Equal Opportunity is located in 101 Student Services. The Title IX Coordinator is the Director of the Office of Title IX Programs and Gender Equity, 123 Student Services Building, Fort Collins, CO 80523-0160, (970) 491-1715, titleix@colostate.edu. The Section 504 and ADA Coordinator is the Director of the Office of Equal Opportunity, 101 Student Services Building, Fort Collins, CO 80523-0160, (970) 491-5836, oeo@colostate.edu. The Coordinator for any other forms of misconduct prohibited by the University’s Policy on Discrimination and Harassment is the Vice President for Equity, Equal Opportunity and Title IX, 101 Student Services Building, Fort Collins, Co. 80523-0160, (970) 491-5836, oeo@colostate.edu. Any person may report sex discrimination under Title IX to the Office of Civil Rights, Department of Education.