Position Summary:
The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University (CSU) seeks to hire a full-time Cloud Architect 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. The individual in this position also will work on the NWS Chat 2.0 project which is an essential part of the communications between NWS Forecast Offices and Core partners during critical weather events.

Specifically, the individual in this position will report to the Virtual Laboratory (VLab) Technical Lead and help design, develop, test, and refine the Amazon Web Services (AWS) cloud architecture of IMS. IMS is an enterprise system with many facets and consists of browser-based graphical user interfaces as well as a web-based API. IMS is being adapted to run within the AWS cloud architecture and the individual in this position will direct, architect and implement that cloud migration. The individual in this position must possess experience in architecting AWS systems for high resilience and high availability with fast failover capabilities. The current architecture includes a container based system that the individual in this position will migrate to Kubernetes. They 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 assist development or provision of project-related presentations.

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. This position will be classified Research Associate II or III according to the credentials of the finalist selected for hire as follows:

- For position title Research Associate II: Bachelor’s Degree in computer science, software engineering, or a related technical field PLUS 3-4 years of relevant work experience –OR– Master’s Degree in computer science, software engineering, or a related technical field experience PLUS up to 2 years of relevant work experience.
- For position title Research Associate III: Bachelor’s Degree in computer science, software engineering, or a related technical field PLUS 5 or more years of relevant work experience –OR– Master’s Degree in computer science, software engineering, or a related technical field PLUS 2 or more years of relevant work experience –OR– Ph.D. in computer science, software engineering, or a related technical field.

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](http://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 depends on the analysis of the user requirements, software architecture constraints, or technical issues involved with each software build and update. The chosen implementation approach may need to be selected from many alternatives. The individual in this independent position will work and coordinate with IMS and MDL management once a week in a brief meeting to go over progress and possible enhancements to the overall cloud architecture development work to align with product releases. 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:

**Applications Development and Administration – 80%**
- Develop and provide cloud architecture and implementation for IMS.
- Assist with the management and administration of IMS systems in the cloud.

**Leadership – 10%**
- Provide knowledge, guidance, expertise, consultation, and training on AWS Cloud Services.
- Lead the team to help implement solutions in the cloud for the IMS project.
- Suggest software and overall architectural design changes to improve IMS implementation in the cloud.

**Documentation and Reporting – 10%**
- Complete annual reports documenting the status of the project.
- Summarize research results for sponsors and the broader weather community.
- Prepare software documentation in collaboration with other team members.

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.

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- Ability to pass a National Agency Check with Inquiries (NACI) federal background check because the job is located inside a federal building.
- Experience with Cloud, specifically Amazon Web Services.
- Experience architecting AWS systems for high resilience and high availability with fast failover capabilities.
- Experience working independently on development projects.
- High degree of initiative.
- Ability to handle multiple tasks and meet project deadlines, and communicate effectively both verbally and in writing.
- Ability to function well as an effective member of a project team where adherence to design, coding, and other project conventions are highly valued.
- Willingness to learn new skills for professional growth within the position.
- Must be reliable, self-motivated, and comfortable working in an agile and creative team environment.
- Must be legally authorized to work in the United States by the proposed start date because CIRA will not sponsor a visa for this position now nor 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 supporting and maintaining large, complex projects.
• Familiarity with object-oriented concepts and design principles.
• Experience with Infrastructure as Code (IaC) such as Terraform or AWS Cloud Formation.
• Experience in AWS with the following services (IAM, SQS, SNS, EC2, EKS, EBS, EFS, Lustre, S3, Lambda, RDS, AWS cli, and boto3/java AWS SDK).
• Experience with containerized systems such as Docker.
• Experience with Kubernetes or Elastic Kubernetes Service (EKS).
• Experience designing databases for high availability and fast failover.
• Experience with issue tracking and revision control (specifically Git).
• Experience with continuous integration (e.g., Jenkins).
• Experience with Gerrit code review.
• Experience with Python.
• Experience developing software in a Linux environment.
• Experience setting up your own development environment, and using an Integrated Development Environment (IDE) such as Eclipse or Visual Studio.
• Experience with System Administration with Centos/Redhat OS.
• Experience troubleshooting complicated issues.
• Experience supporting and maintaining an operational system.
• Experience coordinating projects or research between multiple groups or agencies.

Annual Salary Range: Commensurate with experience and qualifications as follows:
• Research Associate II: $90,000 - $110,000
• Research Associate III: $100,000 - $120,000

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 September 4, 2023. For full position announcement and to apply, please click “Apply to this Job” at the following website: https://jobs.colostate.edu/postings/132089. 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.