The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University seeks to fill a professional scientific position for its collaborative research as a Cooperative Institute with the National Oceanic and Atmospheric Administration (NOAA) Earth System Research Laboratories (ESRL) / Global Systems Laboratory (GSL) (formerly Global Systems Division) in Boulder, Colorado (office will be in Boulder). This position is located in a federal facility and requires the ability to pass a National Agency Check with Inquiries (NACI) or Tier One federal background check for building access.

**Description of Work Unit**

The Advanced Technology Division (ATD) of GSL is engaged in cutting-edge research and development that aligns with NOAA’s Mission of understanding and predicting changes to climate, weather, oceans, and coasts and the sharing of that information with others. The Advanced Quantitative Precipitation Information (AQPI) project is an effort to improve our understanding and prediction of rain events in the San Francisco bay area to better inform water agencies potential impacts to operations due to excess rain, flooding, and coastal inundation. This project will fund the installation of 5 radars, numerous surface observation gauges, improvements to High Resolution Rapid Refresh numerical weather prediction model developed by GSL, and standing up and improving the Coastal Storm Modeling System developed by the United States Geological Survey (USGS) agency. To support this project ATD is looking for a cooperative institute research team member.

**Decision Making Statement**

Decisions include assessment of unusual circumstances, variations in approach, and management of projects, staff, and budgets. The individual in this position makes many decisions concerning such things as project deliverables, technology transfer plans, and NOAA-CIRA/CSU collaboration. Specific decisions include use of broad knowledge of the appropriate research techniques and documentation/reporting procedures with little supervision to complete designated tasks; makes decisions or recommendations that significantly change, interpret, or develop important policies or programs.

**Position Summary**

The person in this position will develop new software and provide a broad range of research, development, and program support for the AQPI project. He/She will provide technical support for users of the AQPI system, including water agencies from nine San Francisco Bay Area counties. He/She will closely communicate with developers and users from a wide array of technical backgrounds and with varying levels of computer system expertise. He/She will assist in the development of a prototype system that will provide the complete coupling of water flowing from cloud to ground to river to ocean and providing the information tailored to meet water agency needs. He/She will report to the CIRA Associate Director.

**Essential Job Duties**

**Software Development 60%**
- Requirements gathering to meet the needs of water agencies in the San Francisco Bay Area.
- Design and development of the AQPI system.
- Developing requirements, system design, installation, and troubleshooting documentation for the system.
- Tool and application development for water agency users of the system.
- Develop code for ingesting, decoding, and disseminating AQPI data.
- Test software modules and end-to-end test the AQPI system.
Collaborative Research 30%
- Work with users to define and refine requirements.
- Work as part of a team on the design of AQPI system to meet SF-Bay Area water agency needs.
- Collaborative research with developers from other agencies in the development of the system.
- Help direct efforts of other programmers.
- Collaborate across agencies to add their code to the AQPI system.

Documentation and Reporting 10%
- Prepare software documentation in collaboration with team members.
- Prepare status reports as required by the project sponsor and CIRA.
- Prepare and deliver technical talks and presentations as requested.

Required Qualifications: (candidates MUST have the following to be hired)
- This position is located in a federal facility and requires the ability to pass a National Agency Check with Inquiries (NACI) federal background check for building access.
- Candidates must be legally authorized to work in the United States by the proposed start date, May 1, 2020. CIRA will not sponsor a visa for this position now nor in the future.
- This position requires a bachelor’s degree in computer science, or related scientific or engineering field, and
- A minimum of 10 years experience in meteorological real-time data system development,
- 5 years of experience developing software for the Advanced Weather Interactive Processing System (AWIPS).
- Experience developing software in the Linux operating system environment with programming languages used in scientific applications, including at least some of these languages: C, C++, Fortran, Python, and Perl.

Preferred: (candidates with the following qualifications will be given preference)
- Proven experience developing data services that support web-based delivery.
- Experience with the following protocols for delivering data:
  - Unidata’s Local Data Manager (LDM).
  - File Transfer Protocol (FTP)
  - HyperText Transfer Protocol Secure (HTTPS)
- Experience with the following meteorological data formats:
  - GRIdded Binary (GRIB)
  - Binary Universal Form for data Representation (BUFR)
  - Comma Separated Variable (CSV)
- Experience with the Network Common Data Form (netCDF) file format
- Experience using code management software, such as GIT or Subversion (SVN)
- Experience using issue trackers, such as Redmine
- Experience with using and configuring command line build tools
- Demonstrated ability to work independently as well as within a team-based environment, handle multiple tasks, and ensure projects meet deadlines
- Excellent problem-solving skills and logical thinking ability
- Strong interpersonal, oral, and written communication skills

Salary
Salary is commensurate with qualifications and experience.
Background Check
CSU is committed to providing a safe and productive learning and living community. To achieve that goal, CSU conducts background investigations for all final candidates being considered for employment. Background checks may include, but are not limited to, criminal history, national sex offender search, and motor vehicle history. **In addition, this position is located in a federal facility and requires the ability to pass a National Agency Check with Inquiries (NACI) federal background check for building access.**

Commitment to Diversity and Inclusion
Reflecting both CSU’s and CIRA’s values, candidates are expected to uphold CIRA’s commitment to diversity and inclusion.

Application Deadline
To ensure full consideration, applications should be submitted by 11:59 P.M. on **March 22 2020**. Apply electronically by clicking “Apply to this Job” at the following website: [http://jobs.colostate.edu/postings/75921](http://jobs.colostate.edu/postings/75921). References will not be contacted without prior notification of candidates. Please be sure to address both the required and the desired qualifications in the application materials.