Research Software Developer
ACME Team

Position Description

Discover your potential as a career-track Research Software Developer with the Applied Computing for the Meteorological Enterprise Team (ACME) Team at The University of Oklahoma's Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO), in collaboration with NOAA's National Severe Storms Laboratory (NSSL). This role presents an exciting opportunity to be part of a highly collaborative team interested in transitioning cutting-edge research into operations. We are seeking an enthusiastic individual who thrives in collaborative environments and is passionate about providing scientific and technical support for real-time application software for the Multi-Radar/Multi-Sensor (MRMS) project (https://www.nssl.noaa.gov/projects/mrms/).

Overview

The ACME team is a group of software engineers who work closely with scientists at CIWRO, NSSL and other organizations to oversee the integration and transition to operations of updates to the Multi-Radar/Multi-Sensor (MRMS) system to the National Weather Service. The MRMS system was developed to produce severe weather, transportation and precipitation products for improved decision-making capability to improve hazardous weather forecasts and warnings, along with hydrology, aviation, and numerical weather prediction. MRMS is a system with fully-automated algorithms that quickly and intelligently integrate data streams from multiple radars, surface and upper air observations, lightning detection systems, satellite observations, and forecast models. Numerous two-dimensional multiple-sensor products offer assistance for hail, wind, tornado, quantitative precipitation estimations, convection icing, and turbulence diagnosis. Based at the National Weather Center in Norman, OK (bit.ly/oklanwc), this position promises not only professional growth and promotion potential but also the chance to impact the broader scientific community through participation in conference and technical meetings.

Some examples of projects you may work on include:

- Exploring new platforms and methods of processing life-saving weather data,
- Developing or modifying existing software with robust, real-time capabilities,
- Extending the capabilities of our distributed computing infrastructure, and
- Improving how software is built, tested and deployed.

Our codebase is mostly written in C, C++, and Java and designed to support a wide range of real-time distributed-computing applications. As a small team of software developers supporting engineering and meteorological research and development, we pride ourselves on fostering an environment where innovation thrives and individual contributions have a significant impact. Unlike private industry, where rigid hierarchies often stifle creativity, we embrace a culture of collaboration and open dialogue, allowing every team member to shape the direction of our projects. Additionally, our commitment to advancing scientific knowledge and our mission's societal impact offers a deeper sense of purpose and fulfillment in your work. Join us and experience the meaningful difference of working in a dynamic and purpose-driven environment.

Key Responsibilities

- Acquire the knowledge and skills necessary to maintain and support the existing MRMS software systems.
- Work with an interdisciplinary team of engineers and scientists to design, develop, and implement enhancements and improvements to the MRMS software systems.
- Assist in developing a new infrastructure that will be the basis for the next generation of the MRMS software systems for potential operational use by the NWS.
- Prepare documentation on all aspects of engineering activities (including system testing and evaluation) and, as appropriate, collaborate with scientists to participate in publishing scientific papers.
- Perform related duties as assigned.

Qualifications

- A bachelor's degree in Computer Science, Computer Engineering, or related field with at least two years of full-time relevant work experience.
- Strong computer programming skills with at least two years experience developing applications with C/C++, Object oriented programming and modern scripting languages.
- Strong ability to research, troubleshoot, and independently resolve unfamiliar problems.
- Ability to obtain all necessary security clearances for access to NCEP operational computer systems (Permanent Resident status or US citizenship is required)

This position requires physical presence in Norman but may permit a hybrid work schedule.

Desired Attributes

- Proficiency in Linux (Unix) environments, AWS or other cloud experience, docker/container exposure.
- Programming experience with engineering and/or scientific applications.
- This position does not require specialized knowledge of remote sensing, radar systems, or atmospheric science, but a curiosity about weather phenomena would be advantageous.

Benefits and Work-Life Balance

Joining our team comes with numerous benefits, including:

- Competitive salary based on experience and comprehensive university benefits (http://hr.ou.edu/).
- Generous paid leave, encompassing 15 paid holidays and 22 hours of paid time off per month.
- Reduced membership at The University of Oklahoma's state-of-the-art fitness and aquatic center (https://www.ou.edu/far).

We are dedicated to promoting a healthy work-life balance by:

- Implementing regular one-on-one meetings with science leads to ensure that project scope and priorities remain clear. This transparent communication channel minimizes ambiguity **a**nd empowers developers to focus on impactful tasks while aligning with the team's strategic goals.
- Championing a flexible work culture, offering adaptable work hours and a hybrid work arrangement. This empowering framework enables team members to seamlessly navigate personal commitments while effectively contributing to their professional responsibilities.

Application Process

To apply, please submit:

- A cover letter highlighting your interest in the position and describing how you meet the position qualifications,
- Your up-to-date resume/CV, and
- A list of three professional references.

Send your application materials to: ciwro-careers@ou.edu. Please use the subject line: "**ATTN: Research Software Developer - ACME Team**." Applications will be accepted until the position is filled. The starting date is negotiable.

The University of Oklahoma is an equal opportunity/Affirmative Action employer.