



Research Scientist/Associate – MRMS AI/ML Precipitation Estimation

Position Description

The Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO) at The University of Oklahoma is currently seeking a Research Associate or Research Scientist to advance precipitation estimation science within the Multi-Radar Multi-Sensor (MRMS) system through the use of artificial intelligence (AI) and machine learning (ML). The MRMS system consists of 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. This collaborative work with NOAA's National Severe Storms Laboratory (NSSL) presents an exciting opportunity to shape the future of weather radar applications and contribute to cutting-edge research and development of quantitative precipitation estimations (QPEs) in areas and regimes that struggle with creating accurate QPEs. This position will help with the development and testing of AI/ML techniques within MRMS system to improve QPEs for core partners and end users.

Job Responsibilities

- Contribute to the design, implementation, and testing of AI/ML algorithms designed to help with improving the coverage and accuracy of QPEs across all MRMS domains
- Acquire the knowledge and skills necessary to support and update the MRMS system codes and techniques
- Work with an interdisciplinary team of scientists and engineers to design, develop, and implement QPE-based enhancements and improvements to the MRMS system
- Attend meetings and professional conferences to present research results and interact with collaborators
- Provide support for regular summaries of work accomplished through reports and/or peer-reviewed publications as needed
- (Research Scientist only) Lead efforts with advancing the science and integration of AI/ML precipitation estimations into the MRMS system

Qualifications

We are looking for candidates who possess:

- Ph.D. (Research Scientist) or M.S. (Research Associate) in a STEM field related to this position
- Strong knowledge of artificial intelligence and machine learning
- Proficiency in high-level programming languages
- Strong ability to research, troubleshoot, and independently resolve unfamiliar problems
- Excellent oral and written communication skills with an ability to work both independently and cooperatively with others

It is preferred that applicants demonstrate expertise within one or more of the following areas (an applicant need not demonstrate experience in all areas to be considered): precipitation estimation, atmospheric processes/variables, and/or radar data/variables. Preferred programming proficiency should include C++, Perl, and/or Python as well as a preferred experience with working in Linux-based environments. Proficiency in AWS or other Cloud computing platforms are desired but not required.

Based at the National Weather Center in Norman, OK (<https://www.ou.edu/nwc>), this position promises not only professional growth and promotion potential but also the chance to impact the broader scientific community. This position requires physical presence in Norman.

Benefits

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 rates at The University of Oklahoma's state-of-the-art fitness and aquatic center (<https://www.ou.edu/far>).

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: MRMS AI/ML." Applications will be accepted until the position is filled. The starting date for the position is negotiable.

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