Research Scientist – AI/Deep Learning Integration in Warn-on-Forecast

Overview

The Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO) seeks to fill a Research Scientist position for its collaborative research as a Cooperative Institute with the National Oceanic and Atmospheric Administration (NOAA) Office, specifically with the National Severe Storms Laboratory (NSSL) in Norman Oklahoma. This Research Scientist position will contribute to the integration of Deep Learning within the Warn-on-Forecast (WoF) System (https://wof.nssl.noaa.gov/), housed at the National Weather Center in Norman, Oklahoma (https://www.ou.edu/nwc).

A major activity for the WoF program is the development of a data-driven Deep Learning Artificial Intelligence (AI) based WoF system (WoFS) for next generation hazardous weather prediction. A successful candidate for this position will advance the data-driven WoFS, potentially revolutionizing how hazardous weather predictions are made.

Job Responsibilities

As a CIWRO Research Scientist supporting WoF program, you will:

- Lead the development of AI-based numerical weather prediction (NWP) emulation for WoFS, including open-source scientific Python packages for AI model training and forecast verification.
- Collaborate with research scientists to design and implement tools for WoFS data analysis, visualization, verification, and AI-driven advancements.
- Support the generation and archival of large-scale WoFS datasets to enable retrospective analysis and deep learning model training for future research.
- Serve as a lead or contributing author on scientific manuscripts for peer-reviewed publications and present research findings at conferences, workshops, and symposia.
- Creatively and efficiently solve scientific problems, both independently and as an integral member of the WoF research team.

Required Qualifications:

- Ph.D. in Meteorology, Computer Science, Software Engineering or a related field.
- Solid understanding of convective weather phenomena, atmospheric models (both NWP and AI-based), and large meteorological datasets is crucial.
- Deep knowledge and experience in relevant sciences and technologies, including AI/deep learning, meteorology, programming, computing, and data science.
- Proficiency in languages like Python and experience with HPC environments.
- Excellent oral and written communication skills with an ability to work both independently and cooperatively with others.

Benefits and Work-Life Balance

Joining our team comes with numerous benefits, including:

- Competitive salary based on experience; comprehensive university benefits (http://hr.ou.edu/).
- Generous paid leave, encompassing 14 paid holidays and 22 hours of accrued 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).

More details about working at the University of Oklahoma, benefits packages, as well as living in Norman, Oklahoma are provided on our website: https://jobs.ou.edu/Discover-OU.

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

How to apply

Applications should be mailed to ciwro-careers@ou.edu Attn: WoF AI/ML and include a cover letter, the names and contact information for 3 references, and your resume/cv. The cover letter must highlight your relevant qualifications and how they can contribute to the WoFS 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.