This Postdoctoral Fellowship is a 12-month position with a flexible start date that will commence between October 2019 and December 2019. A 1-year renewal may be possible contingent upon performance and funding. The Cooperative Institute for Research in the Atmosphere (CIRA) with Colorado State University seeks to fill a professional scientific research position designed to conduct collaborative research with the National Oceanic and Atmospheric Administration (NOAA) located at the Earth System Research Lab (ESRL), Global Systems Division (GSD), Advanced Technology Branch in Boulder, CO.

The office for this position will be in Boulder, CO at a federal facility and requires the ability to pass a Tier One Background Check (federal background check) for building access.

This position is situated within the Applied Technology and Outreach (ATO) Branch of GSD. ATO identifies, investigates, and develops high-performance computing methods, products, systems, and tools to support the NOAA Mission and NOAA research and operations. ATO transforms these new technologies and capabilities into innovative and valuable forecast and analysis systems that ingest, manage, analyze, and display environmental data in ways that help the NOAA National Weather Service, other professional users, educators, and the public understand our complex Earth.

The individual in this fellowship will collaborate with the GSD machine learning science group and sponsors, along with the CIRA machine learning science team located in Fort Collins, Colorado. The individual in this fellowship will report to the Principal Investigator and help with both understanding and improving applications of machine learning (ML) towards improvement of environmental modeling. This is an exciting high-impact position that would provide a great opportunity for a motivated researcher to push the boundaries of ML research in several weather/climate applications, and includes a stimulating blend of activities. He/She will work with machine learning applications to develop, test, and improve them for different aspects of environmental modeling. Applicants will be expected to establish strong partnerships with both CIRA research staff and sponsors.

Decision Making:
The individual in this fellowship will execute a plan of research that resonates with the underpinning science objectives of the supporting project. The decisions he/she makes and the approaches taken will be determined by the individual’s own scientific acumen and in consultation with the Principal Investigator. Successful execution of the proposed research, i.e. supporting the deliverables mentioned in the project’s statement of work, will hinge on the definition of a scientifically-sound plan and its execution. This decision-making process will lay a foundation that will be critical for success in future proposals and will build an independent and self-sufficient research program. Similarly, the individual in this fellowship will conduct their research with an eye toward establishing strong partnerships with both CIRA research staff and sponsors.

Essential Job Duties:

Applied Research 60%  
- conduct research and develop machine learning techniques towards weather and climate modeling with primary focus towards improving model parameterizations and/or data assimilation;  
- coordinate and collaborate with other team members towards other machine learning applications in weather and climate modeling.

Independent Research 25%  
- contribute to and lead scientific studies that serve the CIRA mission;  
- develop future proposals that may lead to an independent research program.

Collaborative Research 15%  
- travel to scientific conferences to present results;  
- collaborate with operational partners and product end users;  
- collaborate with other GSD and CIRA scientists working on similar research projects.

Required Qualifications: [Detail each of these items in Cover Letter]
- The office for this position will be in Boulder, CO at a federal facility and requires the ability to pass a Tier One Background Check (federal background check) for building access.
- Must be legally eligible for employment in the US by start date
- Ph.D. in meteorology, atmospheric sciences, computer science or other relevant STEM field;
● experience reading, writing, and manipulating scientific datasets, preferably using Python;
● communicates well, in particular across disciplinary boundaries;
● experience working on Linux or Unix operating systems;
● Ability to work in a team environment.

Desired Qualifications: [Highlight any applicable items in Cover Letter]
● solid background in atmospheric and climate modeling including data assimilation;
● familiarity with model parameterization;
● familiarity with NWS models (GFS/FV3, WRF, RAP/HRRR);
● experience with high-performance computing to produce large datasets with a global weather forecasting model;
● experience applying machine learning in atmospheric sciences or a closely related field;

Background Check:
Colorado State University (CSU) 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 (felony and misdemeanor) history, sex offender registry, motor vehicle history, financial history, and/or education verification. Background checks will be conducted when required by law or contract and when, in the discretion of the university, it is reasonable and prudent to do so. **The office for this position will be in Boulder, CO at a federal facility and requires the ability to pass a Tier One Background Check (federal background check) for building access.**

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 all positions are filled; however, to ensure full consideration applications should be submitted by 11:59PM on September 15, 2019. Apply electronically by clicking “Apply to this Job” at the following website: [https://jobs.colostate.edu/postings/70711](https://jobs.colostate.edu/postings/70711). References will not be contacted without prior notification of candidates. Please be sure to address the required qualifications in the application materials.