Machine Learning Post-Doctoral Position
Center for Western Weather and Water Extremes (CW3E)
Scripps Institution of Oceanography, University of California San Diego

Location: La Jolla, California.

To apply: Send a copy of your CV, cover letter, and contact information for three references to Luca Delle Monache (ldellemonache@ucsd.edu) and Agniv Sengupta (agsengupta@ucsd.edu).

Deadline: Position is available immediately. Applications received by 15 January will be given priority, but the position will remain open until filled.

The Center for Western Weather and Water Extremes, (CW3E; cw3e.ucsd.edu) is a research and applications center established in 2014 at the Scripps Institution of Oceanography by its Director, Dr. F. Martin Ralph. CW3E focuses on the physical understanding, observations, and predictions of extreme weather and water events to support effective policies and practices to improve resilience in the Western U.S. CW3E carries out its goals with a diverse network of research and operational partners at several other institutions across the U.S. and internationally. Individuals will be joining a group of existing Postdoctoral scholars and graduate students, and several experienced faculty, researchers, and staff at Scripps who are involved with CW3E.

CW3E seeks a Postdoctoral researcher with a background in machine learning and related applications in weather and climate. The postdoc will apply their knowledge to develop novel machine learning methods for the prediction of precipitation, temperature, and freezing level. The position will leverage the information provided by in-situ, radar, satellite data, as well as numerical weather predictions and extended-range climate model forecasts. The successful candidate will develop state-of-the-art machine learning approaches in combination with traditional techniques to improve the skill and reliability of hydroclimate forecasts across a range of timescales – weather (lead times on the order of days), subseasonal (lead times of a few weeks), and seasonal (extended lead times of months). The successful candidate will also support the development of related decision support tools for potential uptake by the applications community, and interpretable learning.

Applicants should have 0-2 years of Postdoctoral experience or be nearing completion of their Ph.D. (estimated within 3-6 months) and be self-motivated and hard-working. Good written and verbal communication skills, including the ability to produce scientific publications and presentations and meet project milestones, are required. Strong analytical background with a Ph.D. in computer science, atmospheric science, meteorology, climate science, hydrology, statistics, or environmental engineering is preferred. Programming experience working in a Unix environment with experience in scripting languages such as Python, R, or Matlab is highly desirable, along with experience using common machine learning software (Tensorflow, Keras, CNTK, PyTorch, Scikit-Learn, etc.) on cloud computing environments (AWS, Azure, etc.). Successful applicants should be comfortable working independently with large code libraries and data integration schemes, utilizing large meteorological data sets, and producing visualizations.
Per normal postdoctoral appointment policies, all positions are envisioned as being initially for 1-year, with extension possible contingent upon performance and availability of funding. The University of California San Diego is an Affirmative Action / Equal Opportunity Employer (AA/EOE).