Subject: Scientific Programmer (NOAA) Position
Posted by ekihn on Wed, 08 Nov 2000 08:00:00 GMT
View Forum Message <> Reply to Message

Sorry to eat up bandwidth but if anybody is looking to move to Boulder... Another benefit is that if someone who knows IDL applies I won't have to post so many questions ;).

See http://www.aesmry.com/esg for more details.

Scientific Programmer Position for NGDC

Generator Program which resides in the Solar-Terrestrial Physics Division
(STPD) of the National Geophysical Data Center (NGDC), 3100 Marine Street,
Boulder, CO. Contact Eric Kihn 303-497-6346, ekihn@ngdc.noaa.gov

Background: The Environmental Scenario Generator (ESG) is a distributed
software system designed to allow a modeling and simulation customer to
intelligently access distributed environmental data archives for inclusion
and integration with model runs. The ESG provides access to an intelligent

retrieved
and visualized but, in addition, user defined conditions can be searched for
and discovered. The ESG can retrieve data from across the network, reformat
it for ingest, regrid or resample it to fit the simulation parameters, and
then incorporate it in model runs.

The ESG is Java based with access to both data mining and database creation
capabilities on a network distributed parallel computer cluster with the
ability to perform fuzzy logic based searching on an global array of
environmental parameters. The system is designed to allow the user to
specify the desired spatial, temporal, and parameter conditions in fuzzy
linguistic and/or numeric terms and to receive a ranked list of events best
matching the desired conditions in the historical archive. Once

discovered
the client application can request temporal and spatial visualization products from the data, browse the climatology of the particular region and
parameters selected, and request delivery of the data formatted for inclusion model runs. By providing intelligent instantaneous access to real
data it ensures that the modeler is able to include realistic, reliable and
detailed environments in their simulation applications.

This position will support the development of data-mining, visualization,
and domain integration tools developed in a network distributed fashion and
applied to environmental modeling.

Duties and Responsibilities: The principle duties and responsibilities of
this position are to design, develop and extend ESG scientific software and
systems to meet ESG program goals. This includes investigation of environmental databases, advanced mathematically based data mining techniques, and current software methodologies and techniques. The position
will require supporting the ESG process from the loading of data to the
publication of scientific papers. Specifically independent work will need to
be done in the areas of data access, visualization, data analysis and environmental modeling.

computer science is required. A basic understanding of Fuzzy Set Theory is
appropriate.

Experience: At least 3 years experience with a modern programming language,
such as C, IDL, Java or PERL. At least 2 years experience using a Linux/Unix
operating system is required. The ideal candidate will have a strong background in both mathematics and Object Oriented programming languages.
Candidates not already skilled in Java should be willing to learn both through formal classes and self-study.

Eric A. Kihn
NOAA/NGDC
ekihn@ngdc.noaa.gov
Voice:(303) 497-6346
Fax: (303) 497-6513