Web Developer and Designer

National Center for Ecological Analysis and Synthesis (NCEAS)
University of California, Santa Barbara

Are you passionate about designing and building web applications for open science? Do you want to promote reproducible and synthetic research on the earth and the environment? Do you love to collaborate at the intersection of science, engineering, and design?

We seek a talented web developer and designer to join our open science development team and contribute to web applications that advance ecological and environmental synthesis at global scales. Projects focus on building web sites for sharing and managing scientific information and data, analysis code, and other science products to help promote open, reproducible science and facilitate synthetic research.

Projects will include designing and building web sites and applications that present scientific results in ecology and environmental science and that enable scientists to describe, submit, and discover data, analysis results, and other project details important to researchers. Projects will initially build web applications for the Arctic Data Center, the Ocean Health Index, and the DataONE network of data repositories, among many others. Upcoming projects include, for example, ones that focus on redesigning project web sites, publishing scientific findings, displaying metadata quality results on the web, and building web sites to support and promote preservation, discovery, reuse, and citation of open scientific data.

Job description

As the successful applicant you would be an experienced and professional web developer and designer working at NCEAS to design, create, and deploy web applications that collect and communicate scientific information and materials, including scientific findings about ecological and environmental research. You understand modern web development, user experience and design, and be considerate of web usability standards. You communicate insights from interdisciplinary environmental science research to a broad audience ranging from expert scientific researchers, to managers, and the interested public. You recommend, design, and implement web applications that include moderate to complex scientific infographics and visualizations. Web applications are built and maintained using dynamic, interactive, user-oriented interfaces that are linked to underlying relational, semantic, and other database sources.

Responsibilities are primarily but not exclusively web-based, including potentially other forms of application development. Principal duties involve front-end development and deployment; web and graphics design; user experience (UX) design and evaluation; creation of user-oriented documentation; web content development; and participation in outreach and training activities. Duties also include configuration and development for static web sites like Hugo and common content management systems such as Drupal or Wordpress; programming with web-related technologies such as HTML, CSS, JavaScript (e.g. JQuery, D3), JSON, and XML; and use of graphics production software such as Photoshop, Illustrator, and InDesign. As the successful candidate you would build web interfaces using data from

various systems, including relational databases, semi-structured data sources, web service APIs, and semantic data sources such as RDF using programming languages including JavaScript, Python, and R.

The incumbent contributes generally to providing web delivery of content generated by projects affiliated with NCEAS that all broadly focus thematically on the areas of synthesis, collaboration, informatics, and skills training in the Environmental, Ecological, and Conservation Sciences. Ability and willingness to adapt to and learn new web and human-computer interaction technologies as these evolve, especially in the context of communicating scientific concepts, developing interactive scientific infographics, and fostering collaborative science.

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About NCEAS

Established in 1995, the National Center for Ecological Analysis and Synthesis (NCEAS) is a research center of the University of California, Santa Barbara and was the first national synthesis center of its kind. There is broad acknowledgement that NCEAS has significantly altered the way ecological science is conducted, towards being more collaborative, open, integrative, relevant, and technologically informed. Different from the scientific tradition of solitary lab or fieldwork, NCEAS fosters collaborative synthesis research – assembling interdisciplinary teams to distill existing data, ideas, theories, or methods drawn from many sources, across multiple fields of inquiry, to accelerate the generation of new scientific knowledge at a broad scale. NCEAS is located in downtown Santa Barbara in a beautiful city filled with activities -- downtown, on the beaches, and in the mountains. NCEAS is committed to improving diversity, equity, and inclusion (DEI) in science. We value diversity in expertise, backgrounds, needs and experiences, and aim to see diversity reflected among our residents and visitors. We are committed to providing a safe, productive, and welcoming environment for everyone in our community.

Minimum Requirements

We are looking for a creative and enthusiastic individual to join our development team and contribute to the open science community, including all aspects of open data, open software, and open access publishing in support of the earth and environmental sciences.

A fitting candidate will be proficient in design and development using modern programming languages for web applications (e.g., JavaScript, Python, HTML, JSON, XML, CSS, XSLT, Node.js, modern JavaScript libraries, static generators like Hugo); Understands and skilled at designing user experiences (UX) and user interfaces (UI) that balance aesthetics, usability, and accessibility; Has experience with releasing

and maintaining software using the software development life cycle, using testing frameworks (e.g. Mocha, Selenium), source code control systems (e.g., git, Github), and issue tracking systems.

We are looking for someone with thoughtful communication skills to work collaboratively in a team of software engineers and develop working relationships with scientists. This position involves writing in a manner that is understandable to ecological and environmental scientists.

A Bachelor's degree is required, preferably in software engineering, computer science, or an ecology/earth/environmental science field.

Desirable Requirements
Experience in or exposure to ecological and environmental science research is desirable, as is background and understanding of statistical analysis and modeling (e.g., in R, Matlab), and approaches to manipulating and displaying geospatial data.

Experience or interest in desktop application development, (e.g. Java, Python, Node.js) and network programming is desirable.

Salary hiring range
Salary will be commensurate with experience.

Special Conditions of Employment
Position is part of grant-funded research, and so continuation beyond 1.5 years depends on future funding availability.

How to Apply
Submit a cover letter explaining your interest in the position, your CV or résumé detailing your experience and qualifications, a link to and description of your online web design portfolio, and contact information for 3 non-peer references along with the UCSB job application via the UCSB Human Resources web site for job #12479 (click here to apply). Apply by November 19, 2020 for first consideration, thereafter open until filled.