

Company Description

BC3 is a Research Centre on the causes and consequences of climate change. Led by one of the most recognized scientists in the Climate Change field -Prof. Maria José Sanz, we produce multidisciplinary knowledge to support decision making towards sustainable development at the international level. With a multidisciplinary team, connected to the main scientific institutions, networks and socio-economic agents, for a decade, our contribution to research of climate change and to the science-policy interface puts us in a unique position to offer knowledge, tools, new methodologies and cross-cutting proposals, that we lead towards action in a collaborative framework with stakeholders, to design and help implement policies aimed at sustainable development.

Information

 **Deadline:** 2022-01-20
 **Category:** Academia
 **Province:** Bizkaia

 **Country:** Basque Country
 **City:** Leioa

Company

BC3 Basque Centre for Climate Change



Main functions, requisites & benefits

Main functions

The Basque Centre for Climate Change (BC3) offers a full-time DevOps Engineer position in order to support the research activities of Research Line (RL) 5 on Integrated Modelling of Coupled Human-Natural Systems. The RL generates multidisciplinary scientific knowledge from human-nature interdependence to address complex sustainability problems through artificial intelligence (AI). The goal of the RL is to provide environmental data, models and understanding by retrieving, evaluating and integrating the existing information in order to support an effective policy-making where nature counts. Besides Ecosystem Services, the RL also tackles Natural Capital Accounting, Conservation Finance, Food Security, Marine Spatial Planning, and Renewable Energy. During the past decade, the RL has envisioned and built the ARIES (ARTificial Intelligence for Environment and Sustainability (<https://aries.integratedmodelling.org/>) platform, a technology that integrates network-available data and model components through semantics and machine reasoning. Its underlying open-source software (k.LAB, <https://docs.integratedmodelling.org/technote/>) handles the full end-to-end process of integrating data and with multiple model integration types to predict complex change. It also supports selection of the most appropriate data and models using cloud technology and following an open data paradigm: the resulting insight remains open and available to society at large, and becomes a base for further computations, contributing to an ever-increasing knowledge base. For the first time, it is possible to consistently characterize and publish data and models for their integration in predictive models, building and field-testing technologies that have eluded researchers to date. We are looking for an individual who can support strategic activities related to integrated data science and collaborative, integrated modelling on the semantic web (semantic meta-modelling). The selected candidate will: Contribute to the design and implementation of the modeling engine, which assembles network-available model components and data and compiles the assembled graph into a runnable dataflow. The candidate should be conversant with simulation modeling principles, machine reasoning using OWL and its Java implementations (OWLAPI), open source GIS (e.g. Geotools), and be aware of, or open to quickly learn, corresponding technologies on the Java platform. Understanding of REST, Spring and Websockets (for communication with the front-end) will be necessary. Key responsibilities: Collaborate on developing, strengthening and debugging the back-end and/or the client components of the k.LAB software stack (and more specifically the modeling engine). Collaborate on the definition of unit tests and code review policies for both k.LAB and the associated data/model products. Participate in all aspects of the development life cycle including analysis, design, development, documentation, release and deployment. Communicate and coordinate with both technical and non-technical stakeholders.

Requisites

Experience/skills required: We are looking for an individual who can support strategic activities related to integrated data science and collaborative, integrated modelling on the semantic web, with a focus on Software Development Life Cycle. Desired qualifications include: A degree in Computer Science, or other fields of relevance to Esqinformatics (or a very good reason not to have one). Strong