

Vacancy Profile

Hazard-Aware project

About Us

Brief presentation of your company/Tecnio Centre, specifying your sector of activity, research infrastructure, research expertise in the field and in technology transfer activities and the conditions you offer (maximum 2,000 characters).

Mitiga Solutions S.L. is a spin-off of the Barcelona Supercomputing Center, specialized in the evaluation and mitigation of the impact of the natural and social hazards, in particular in the aviation, Insurance, and humanitarian industries. Mitiga develops and commercializes deep tech products using supercomputing and AI resources to quantify the risk and impact of extreme natural events providing early warning systems and other emergency response solutions.

Researcher's profile

Description of the researcher requirements. Do not include the Tecniospring eligibility criteria in this section, but rather describe the minimum education required, the preferred areas of expertise, the experience, the minimum language requirements, etc. (maximum 1,000 characters).

- PhD or Master's degree in a quantitative field such as natural sciences, applied mathematics, engineering or computer science.

Other desirable skills:

Several years of experience in catastrophe modelling research and developing NatCat models / Experience in a corporate or start-up research role for a number of years, insurance industry experience is a plus / Bring a sound background in data analytics and analytical problem-solving skills, including applied knowledge of data science and AI / Code in various languages (e.g. Python, R, MATLAB, FORTRAN, C++) and feel at ease with large and sometimes unstructured data sets / Creativity, showing a high degree of own initiative, high-energy and a commercial attitude / Experience in using open-source Geographical Information Systems (GIS) as QGIS, gvSIG, GRASS; knowledge of GDAL, PostgreSQL/PostGIS s a plus.

Brief description of the project objectives and expected results. Remember to define the tasks that will be developed by the researcher (maximum 2,000 characters).

The successful candidate will be involved in a project building an interactive Risk Management Support System with a focus on advanced analysis of multiple hazards and cascading effects, helping decision makers and risk-managers prioritize, mitigate and build resilience. The project incorporates factors such as mobility and climate change and translates outputs into actionable information based on a strong understanding of the social science of decision making. From a technical standpoint, the project leverages high-performance computing (HPC), data science, advanced analytics, and a novel hybrid AI approach to detect, quantify, and forecast risks. The role as a Cat Modeler will include:

- You will develop deterministic and probabilistic natural catastrophe (NatCat) models for your peril of expertise, enhanced with new climate modelling and observational capabilities, as well as other emerging new technologies.
- You support the development of new climate insurance products and service offerings as well as leveraging these forward-looking risk assessment tools for integration of physical climate risk.
- You actively contribute to new solutions, for example, by providing analytics and prototypes proofing the concept of our ideas, or by bringing in new insights based on emerging features in the world of NatCat prevention.
- You work actively with the software development and science teams during the implementation of proposed methods.
- You collaborate with team members and external partners to implement new solutions from the prototype stage all the way to commercial production.
- By contributing to international research proposals and projects you can expect to be at the forefront of innovation and technology.

Incoming Outgoing+Return

Sector:

Food Industries Industrial Systems Chemistry, Energy and Resources Design Industries
Sustainable Mobility Health and Life Sciences Culture and Experience-based Industries

Technology:

Photonics Biotech ICT
Nanotechnology Advanced Materials Advanced Manufacturing

Contact information

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