Position Offered: UNIVERSITY GRADUATE

Project: *Use of Artificial Intelligence for the Quantification of Impacts of Extreme Weather Events and its Implementation in Climate Services (IMPACT-IA)*

Technological and scientific fields: Artificial Intelligence, Massive Data and Information Processing Technologies, Data Analysis and Integration, Climate Services Platform, Digital Tool for Agriculture, Digital Humanities

Location: Zaragoza, Aragón, Instituto Pirenaico de Ecología (IPE) https://www.ipe.csic.es/

Research Group/PI: Environmental Hydrology and Climate-Human Interaction, Fernando Domínguez Castro, https://www.ipe.csic.es/hidrologia-ambiental-e-interacciones-clima-y-actividad-humana/

PROJECT SUMMARY

We aim to develop, for the first time in Spain, tools based on Artificial Intelligence that automatically select texts containing information about extreme weather events, classify their impacts by sector, and geolocate them. We will apply these tools to large digital newspaper archives to extract information from the past 325 years, creating an unprecedented database of extreme weather event and impacts. This database will be cross-referenced with meteorological station records to determine the impact thresholds of extreme events in various sectors. This knowledge will be used to develop a Climate Service aimed at monitoring the risk of impact from extreme weather events in the agricultural sector.

PROFESSIONAL PROFILE

Minimum requirements:

- Graduate in Computer Engineering, Computer Engineer

Merits to be considered:

- Knowledge of programming languages such as Python, JAVA, C++, R.
- Proficiency in Linux systems, Kubernetes (K8), Docker containers, GNU Bash.
- Experience as a programmer. Experience in handling and processing climate data.

WHAT IS OFFERED

Develop first-rate research activity in an interdisciplinary environment. A Training Plan of 250 ECTS will be developed, covering various topics related to Artificial Intelligence, extreme weather events, and the development of climate services. This will involve collaboration with staff from the Pyrenean Institute of Ecology, the Aula Dei Experimental Station, and the University of Zaragoza. The Training Plan includes completing a Master's degree in Artificial Intelligence, as well as 9 months of international stays to strengthen the skills necessary to achieve the project objectives.

Contract conditions:

Indefinite contract for a University Graduate associated with the Momentum Project of 4 years' duration according to Spanish science law. Gross annual salary (37.000 € - 41.000 €).

Start of contract: before 31 December 2024

PRINCIPAL INVESTIGATOR CONTACT

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