JOB OFFER

Please refer to the appendices for an explanation of the fields to be completed and for an example of a job offer

Job title :	**Addressing socio-economic and environmental challenges related to groundwater temperature in the face of global changes.**
Reason for the request :	Job creation
Source of funding :	Mines – from grant
Recruitment type :	Mobility within the company and external hire
The job : Important : 2500 characters maximum ; some job boards do not consider content beyond this limit during publication. Important : retain the sections « your environment » et *« your challenges and responsabilities »* (do not delete). They will be displayed during dissemination.	**Your environment :** This position is part of the AquaThermie project, funded by the Interregional State-Regions Plan Contract for the Seine Valley, and supported by the French Agency for Ecological Transition (ADEME), the Seine Normandy Water Agency, the Normandy and Île-de-France regions, and the prefectures of Normandy and Île-de-France. AquaThermie is a project at the interface between water and energy stakeholders, aiming to enable them to sustain and develop their activities without competing for resources. Mines Paris-PSL, BRGM, and Sorbonne University focus their activities at the crossroads of energy, water resources, environment, and Earth observation under anthropogenic and climatic constraints, developing statistical approaches, machine learning, and mathematical tools. **Your challenges and responsibilities :** The goal of AquaThermie is to improve our understanding of the past and current spatio-temporal evolution of groundwater temperatures above 200 m depth to provide decision-making support to stakeholders involved in water production, geothermal energy utilization, and environmental protection, considering global changes. It aims to unify all relevant data in a dedicated database. Based on this database, a quantitative assessment of the territory, illustrated by maps and indicators, will define key metrics to support the current activities of water and energy stakeholders. Furthermore, it will characterize the impact of climate change on the evolution of their activities in the medium and long term. The postdoc will be responsible for various tasks. 1. **Collect the data** of the actors and **create a base.** 2. **Utilize machine learning methods to** develop data processing methodologies, interpolation, analysis, and clustering based on environmental factors. 3. **Calculate and map all statistical metrics and aquifer temperatures** to determine the thermal sensitivity of the Seine Valley territory. 4. **Develop tools for data valorization, monitoring, and visualization (Dashboard and Dataviz) and transfer knowledge to stakeholders** through the creation of a website for the dissemination of developed tools and results**.** 5. **Writing technical guides and scientific articles.**

The profile :	
	Let's talk about you !... Are you passionate about leveraging the power of data to address critical environmental challenges? Are you skilled in machine learning and eager to apply your expertise to improve the territory acknowledgement ? If so, we have an exciting opportunity for you! You will play a pivotal role in developing innovative solutions for monitoring and analyzing groundwater temperature. Your work will contribute to the development of intelligent systems and tools that facilitate data-driven decision-making and promote sustainable water and energy management practices. This work is being done in collaboration with various stakeholders across the Seine vallée.

The main skills required for this post are :
Knowledge and skills :

- PhD in Computer Science, Applied Mathematics, , Statistics, Geosciences, or a related field with a specialization in machine learning and data processing.
- Previous experience with geographical data time series.
- Strong programming skills in Python and experience using relevant libraries and frameworks (e.g., TensorFlow, PyTorch, scikit-learn, or similar platforms).
- Solid understanding of statistical analysis, data visualization, and exploratory data analysis techniques.
- Experience with database systems and query languages for data extraction and manipulation.
- Familiarity with hydrology and climate datasets
- Proficiency in both French and English is essential.

Soft skills :

- Strong communication and teamwork abilities.
- Effective written and oral communication skills.
- Effective organizational skills and the ability to coordinate across a broad spectrum of activities.

...And about us ! Working at Mines Paris also means :

- Joining a prestigious institution with a rich history
- Playing a part in the digital transition and the transition to carbon neutrality to tackle the climate emergency
- Belonging to PSL University, ranked 41st in the Academic Ranking of World Universities
- Up to 47 days of annual leave
- Meal vouchers valued at €11.52, with 60% covered by the employer

Management :	*(Specify whether the position involves hierarchical management)* ☒ No ☐ Yes If yes, how many direct reports will be managed ? : X
Job location :	**Centre de Géosciences / Mines Paris - PSL** 35 rue Saint Honoré 77305 Fontainebleau France
Contract type :	Post-doctoral If fixed-term, duration : 24 months
Starting date :	18/11/2024
Working time :	Full-time day rate
Specific working conditions :	*regular travel between Fontainebleau, Orleans and Paris*
Teleworking :	Partial teleworking

Reporting line :	*Agnès Rivière (Mines Paris -PSL) et Laurence Gourcy (BRGM)*
Operational recruiter :	*Vincent Lagneau*
Optional HR service :	*(Indicate the level of HR service required as an option)* ☒ Initial screening of applications ☒ Conducting HR interviews for the shortlisted candidates after interviews conducted by operational staff (only for Category A positions) ☒ Conducting an HR interview if a situation of Occupational Psychosocial Risks (RPS) is currently being addressed within the entity where the position is available
Systematically included HR services:	- Posting the job opening on general job boards - Posting the job opening on the school and PSL website - Posting the job opening on the "Choisir le service public" website - Posting the job opening on the school's LinkedIn "company page" - Defining the salary range - Mandatory HR interview stage for directors, service manager, department, and platform manager positions. - Drawing up the salary proposal and the contractualisation stages
Job board suggestions :	***LinkedIn**, **ResearchGate**, **EURAXESS**, **ABG**, CNRS, ADUM*

Note : This offer is intended for publication on job boards via ATS (software dedicated to the multi-posting of job offers and the management of the recruitment process).

In addition, if you wish, you can distribute the offer through your networks.