Researcher in Machine Learning for Geoscientific Modelling (0.8 - 1.0 FTE)

Are you a researcher in AI or machine learning, with fundamental knowledge in the domain? And eager to apply these methods to solve problems in the geosciences and related fields? We welcome you to apply for a position at the Department of Physical Geography at Utrecht University, the Netherlands.

Job description

We are looking for a researcher (Postdoc or Junior Researcher) in data driven discovery of geoscientific models. The position is embedded in the Computational Geography group at the Department of Physical Geography. The Computational Geography group focuses on fundamental and application-driven research in spatio-temporal data analysis and simulation modelling with a focus on understanding behavior of physical geographical systems. The group consists of spatial data scientists, simulation modellers with a background in physical geography, and research software engineers. We have strong ties with other domains, leading to groundbreaking research in computational geography, computer science, remote sensing, spatial epidemiology, health geography, natural hazards, hydrology, ecology, and coastal and river processes. We aim to further strengthen our research at the interface of machine learning and forward process-based simulation modelling in the geosciences. This Postdoc position is a key element in that effort.

We are looking for a data scientist with expertise in spatio-temporal statistics, machine learning, applied mathematics, or a related domain, capable of innovating statistical and machine learning methods in computational geography. A background in geography or related field would be an asset but not a requirement as long as you are fascinated and qualified to apply your knowledge to this domain. You will be responsible for fundamental research in the project 'Data driven discovery of time transfer functions for hybrid simulation modelling'. This includes the design and implementation of advanced Machine Learning models applied to Big Data (remote sensing observations, hydrological models) to enhance non-machine learning models.

You will be uniquely positioned to execute this project in close cooperation with our spatial data scientists, research software engineers in our team working on the project, as well as domain specialist in hydrology, ecology, and related domains. You will have the opportunity to execute your own research, write peer reviewed articles, and attend conferences. Furthermore, following the FAIR principles (Findability, Accessibility, Interoperability, and Reusability) you will be encouraged to freely and broadly share your contribution (e.g., as part of a toolbox).

Qualifications

We are looking for a candidate with:

- A background in a relevant area, such as statistics, machine learning, or applied mathematics;

- A passion for machine learning, and an interest in cooperating with researchers from geosciences and related domains;

- Capability of translating machine learning methods to software in cooperation with research software engineers in the team;

- A clear research vision to complement ours;

- Good communication skills;

- Demonstrable English language proficiency. We require a qualification English at C1 level (CEFR or comparable to level 3 of the Lecturer Assessment Grid) or you are prepared to obtain this level by training.

Offer

We offer a temporary position (0.8 - 1.0 FTE) for 2.0 – 2.5 years in an international working environment.

Additional information

For more information about this position, please contact: Prof. dr. Derek Karssenberg, via d.karssenberg@uu.nl.