We, the hydrology group of the Institute of Water and River Basin Management, are looking for a

PhD Student / Doctoral Researcher (f/m/d)

for the project

"Demystifying recurrent neural networks in a hydrology context (DETOX)"

Job description:

We are currently in search of a dedicated PhD candidate to contribute to our DFG research project, DETOX. This project centers around exploring the use of deep learning techniques, specifically artificial neural networks, within the realm of hydrology. Your role in this project will be to study in depth the structure and learning methods of these networks, to enhance our understanding of how they operate in a hydrological context. One of your key responsibilities will be to examine the capacity of artificial neural networks to generalize to unseen hydrological events, an aspect that includes the assessment of uncertainties in network-based predictions. Through this, you will have the opportunity to gauge not only their potential but also their limitations, thus contributing to a more comprehensive understanding of the application of deep learning in hydrology. This role offers a unique chance to amplify your knowledge and abilities in the practical application of deep learning in hydrology. You will collaborate closely with experts in the field, both locally and globally, in a rich learning environment that promises to enhance your expertise and offer insights into this rapidly evolving field.

Qualification:

Applicants must hold a master's degree in Hydrology, Computer Science, Data Science, or a related field. Good programming skills and a strong interest in applying deep learning methods in hydrology are required. Furthermore, applicants should be team-oriented, demonstrating an ability to work effectively within a diverse and collaborative research environment. A strong commitment to ethical research practices is essential, along with genuine curiosity and dedication to advancing the boundaries of knowledge in the application of deep learning.

We offer:

We offer an attractive and modern workplace, exciting opportunities for interdisciplinary collaboration, networking, and training, as well as a research topic with high future potential. You will join an internationally highly respected group, work in an intellectually stimulating atmosphere, and have access to the excellent computing facilities of KIT. The position is initially limited to 3 years. Salary is competitive and includes all social benefits (75% TVL-E13). We offer flexible working time models and a job ticket allowance. Based on the project work, the successful candidate will have the opportunity to pursue a PhD.
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<th><strong>Contract duration:</strong></th>
<th>36 months</th>
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<td><strong>Starting date (tentative):</strong></td>
<td>15&lt;sup&gt;th&lt;/sup&gt; September 2023</td>
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<td><strong>Application up to:</strong></td>
<td>15&lt;sup&gt;th&lt;/sup&gt; August 2023</td>
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<td><strong>Contact person:</strong></td>
<td>Dr. Ralf Loritz</td>
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| **Application:** | Please send your application (max. 5 MB), which should include a cover letter, your CV, and all certificates/references, in electronic form to: Ralf.Loritz@kit.edu. A link to/or copy of your Master's thesis would be highly appreciated.  
We aim to balance the number of employees (f/m/d) and, as such, we encourage female applicants to apply for this position. Recognized severely disabled individuals will be given preference if they are equally qualified. |