

The Flora Incognita research group at the Max Planck Institute for Biogeochemistry in Jena and the Technical University of Ilmenau, Department “Data Intensive Systems and Visualisation” is looking forward to hire (as soon as possible) a

Researcher (m/f/d)

(full-time position, 3 years)

Background and position description:

The Flora Incognita research group at the Max Planck Institute for Biogeochemistry in Jena and at the Technical University in Ilmenau develops methods and technologies that enable efficient, rapid and automated monitoring of biodiversity in different habitats and landscapes to track the development of ecosystems, species communities and populations and to analyze causes of change. Machine learning methods, in particular deep learning, are used. The processed data types come from different modalities, such as image data, time series, text and knowledge graphs.

Your tasks:

- Conception, implementation and testing of machine learning methods, primarily in the area of deep learning
- Possible topics according to skills and agreement with the applicant: explainability and uncertainty assessment in deep learning networks, further development of graph neural networks, federated learning with adaptive gradient correction and increased data security, efficient deep learning, spatio-temporal prediction models with limited training data
- Publications in international peer-reviewed journals
- Interaction with project partners and preparation of project reports
- Supervision of students

Your profile:

- Master's degree (or equivalent) in computer science or comparable knowledge
- Very good knowledge in one or more of the topics: image recognition, image processing, pattern recognition, machine learning, deep learning, adaptive systems
- Knowledge of relevant frameworks, such as TensorFlow, PyTorch is advantageous
- Very good programming skills and, if applicable, practical experience
- Ability to cooperate and work in a team, willingness to communicate and organizational skills
- Very good oral and written communication skills in English and good knowledge of German
- Willingness to take over coordination tasks, write scientific publications and participate in national and international conferences

Our offer:

- Work in a dynamic, international and interdisciplinary environment in university town of Ilmenau, the gateway to the Thuringian Forest
- Close cooperation with computer scientists of the Department “Data Intensive Systems and Visualisation” at the TU Ilmenau
- Flexible working hours and a family-friendly working environment

Part-time work is generally possible. The position will be evaluated and graded following the collective agreement according to TVöD Bund; in addition, we will provide a pension plan based on the public service (VBL). The place of work is Ilmenau.

The Max Planck Society (MPS) strives for gender equality and diversity. The MPS aims to increase the proportion of women in areas where they are underrepresented. Women are therefore explicitly encouraged to apply. We welcome applications from all fields. The Max Planck Society has set itself the goal of employing more severely disabled people. Applications from severely disabled persons are expressly encouraged.

Your application:

For more information about this position, please contact Dr. Jana Wäldchen (jwald@bgc-jena.mpg.de). Are you interested? Please send us your application with cover letter (describing the motivation for a PhD position, specific research interests and relevant experience), curriculum vitae as well as names and contact information of two references summarised in a PDF file (max. 10 MB) by **January 15, 2022**, quoting the reference number **36/2021** by e-mail to bewerbung@bgc-jena.mpg.de or to the

Max-Planck-Institut für Biogeochemie
Personalbüro: Kennwort "Wissenschaftlicher Mitarbeiter"
Hans-Knöll-Straße 10
07745 Jena

We kindly ask you to submit copies of your application documents only, as your documents will be destroyed in accordance with data protection regulations after completion of the application procedure.

We look forward to receiving your application!