



Deutsches Klimarechenzentrum GmbH
Personalverwaltung Bundesstraße 45a 20146 Hamburg

The German Climate Computing Centre (DKRZ) is the central data processing facility for the German climate and Earth system modelling and is one of the leading facilities in this area worldwide. DKRZ operates supercomputers in the highest performance class, modern high-performance clusters and graphics systems as well as one of the largest domain specific data-and archive systems. To improve the infrastructure for climate modelling, DKRZ participates in many national and international projects. Through its research group on Scientific Computing, DKRZ is linked to the Department of Informatics at the University of Hamburg.

The Helmholtz Association (HGF) initiated the Helmholtz Artificial Intelligence Cooperation Unit (HAICU, <http://www.haicu.de>). This future-oriented network for applied Artificial Intelligence will develop, implement and disseminate methods of Artificial Intelligence for purposes including the analysis of complex systems in the fields of energy, transport, climate and health. The HAICU local unit AIM (Artificial Intelligence Innovation for Earth System Analytics and Modelling) provides application-oriented AI capabilities for the field of Earth System and Climate Science, with a specific focus on Machine Learning methods. AIM consists of scientific partners, including a research group at Helmholtz-Zentrum Geesthacht (HZG), the University of Hamburg, and a support team at DKRZ. The support team will facilitate frontier research by HGF earth system scientists. It will be multi-disciplinary and cover a wide range of capabilities to provide services in the context of AI. Specifically, it will maintain a comprehensive knowledge hub for the scientific users of AIM within the Helmholtz Association, assist them with research projects technically and methodologically, provide a practical service environment for data and computation, conduct trainings and application-oriented research.

For the AI support team we are hiring positions that will start at earliest in January 2020 (specific dates can be discussed individually).

Senior Researcher / PostDoc (all genders)

Your responsibilities

- You guide the research and service vision of the support team according to AIM goals and build an AI service and research profile.
- You engage with the research group at HZG and other research partners to facilitate the development and application of AI methods for Earth System Analytics and Modelling.
- You assist in defining the tools and services researchers will use to take advantage of AI for analytics and modelling.

Your profile

- PhD in computer science.
- Several years of experience in conducting application-oriented research on Machine Learning for scientific applications with proven track record.
- Strong experience in application of Machine Learning methods in science using established frameworks such as TensorFlow.

- Interest in arranging and shaping training courses in higher education contexts and supervising PhD students.
- Fluency in English (spoken and written).

Support scientists (all genders)

Your responsibilities

- You contribute to the success of AIM and its support unit by providing services and consultation as part of the multi-disciplinary team.
- You actively contribute to the development and adoption of next-generation methods for Earth System Science analysis and modelling.
- You join the collaborative DKRZ support team to help and educate Helmholtz users in the AIM thematic context.

Your profile

- MSc in computer sciences, geosciences or related fields.
- Proven experience in at least one of the following fields:
 - Application of advanced Machine Learning methods using established frameworks such as TensorFlow in geosciences or related scientific fields
 - High-Performance Computing (HPC) environments and applications, parallelization, and use of GPUs for HPC
 - Software engineering for scientific data analytics, preferably with Python, and Linux system administration including shell scripting
 - Strong skills in statistics, data science and geoscientific data handling and analysis
 - Preparation and execution of data-intensive hands-on trainings in the AI or data science context and direct communication and collaboration with scientific users
- Service orientation and motivation to help and collaborate with geoscientific users
- Fluency in English (spoken and written).

Opportunities exist to further qualify on this position through a PhD.

We offer you the opportunity to work in a flexible academic environment, follow your own initiative, build strong collaborations within DKRZ and scientific partners, and shape future services and research directions in a field of high relevance to society. We expect capacity for teamwork in an interdisciplinary environment and willingness to travel nationally and internationally. We offer opportunities for further qualification in the field of High-Performance Computing.

The positions will be available pending final confirmation of funding. The contracts are limited until December 31, 2024. Salary and social benefits will be in conformity with the provisions of the Collective Agreement for the Civil Service.

How to submit your application for these posts

Please submit your informative application containing a letter of interest, detailed curriculum vitae, and supporting material as one pdf file to bewerbungen@dkrz.de. Use the identifier DKRZ22 (Senior Researcher / PostDoc) or DKRZ23 (Support scientist).

Deadline for applying

These vacancies have been opened November 18, 2019. The call is open until the positions are filled. Review of applications will commence after December 09, 2019.

For further information, please contact Dr. Hendryk Bockelmann (bockelmann@dkrz.de).