As a member of the Helmholtz Association, Forschungszentrum Jülich makes an effective contribution to solving major challenges facing society in the fields of information, energy, and bioeconomy. It focuses on varied tasks in the area of research management and utilizes large, often unique, scientific infrastructure. Come and work with around 6,100 colleagues across a range of topics and disciplines at one of Europe's largest research centres.

The Jülich Supercomputing Centre (JSC) at Forschungszentrum Jülich operates one of the most powerful supercomputer infrastructures for scientific and engineering applications in Europe and grants scientists in Germany and Europe access to the supercomputing resources for their research.
JSC sets up a High Level Support Team (HLST) as part of the recently launched Helmholtz Artificial Intelligence Cooperation Unit (HAICU). HAICU is a Helmholtz-wide platform that aims to reach an international leadership position in basic and applied AI by combining advanced methods from Machine Learning (ML) and Deep Learning (DL) with Helmholtz' unique research questions and data sets - bringing together scientists from all Helmholtz centers, other partner institutions and fostering open, transdisciplinary research. Specific HAICU topics at JSC carried out together with Cross-Sectional Team Deep Learning will be continual learning, scalable and distributed ML and DL in extreme-scale computing, physics-informed Deep Learning and transfer learning for cross-domain applications.

We are looking to recruit a

HPC Software and Community Developer for Deep / Machine Learning

Your Job:
- conduct software development and research community support activities on Machine Learning / Deep Learning (ML/DL) methods with focus on large-scale HPC applications
- engage in international ML/DL communities together with the HAICU user communities in order to be aware of community trends, best practices, and needs
- cooperate with the HAICU Central and other HAICU partners to achieve improved support for HAICU researchers over the Helmholtz Association in Germany and its cooperating national and international partners
- work close together with Cross-Sectional Team Deep Learning (CST-DL) based at JSC to maintain and document research projects and long-term open software platforms with high usability and impact across domains and ML/DL community
- stay abreast of current trends and best practices in ML/DL tools widely used in ML/DL communities and their needs of using HPC systems and new software environments
- document and exchange solutions of ML and DL approaches within various communities and present best-practices and workflows at leading international conferences and in dedicated workshops
- support the HAICU HLST and CST-DL team members in particular and the HAICU users in general to document ML and DL methods and workflows derived from their research questions and provide research community with training based on such well-documented workflows
- assist in the HLST coordination and acquisition of new research projects subject to your abilities and interests
- optionally publish findings and research outcomes of your own research and/or together with members of research communities that take advantage of the HLST activities

Your Profile:
- Master or Doctorate degree from a university with internationally accepted quality standards in computer science, software engineering, data science, machine learning, mathematics, physics or a related subject
- communication skills in order to understand diverse scientific community-specific requirements and translate them into achievable support structures in the HLST
- experience in hosting/chairing community-specific events in order to engage in communities and to establish long-term relationships and enable reproducible science
- having community outreach skills with modern communication channels such as social media
- very good knowledge of English in written and spoken form in order to document code and workflows from the HLST members and make them publicly understandable
- experience in software development (best software practices, git workflows, etc), programming languages such as Python, C++ and software deployment for open source community
- beneficial would be experience with modern ML/DL tools (e.g., TensorFlow, pyTorch, mxNet, Chainer, Keras, Horovod, etc.), and knowledge on distribution via container-based environments (Docker, Singularity)
- beneficial would be experience in data archiving and sharing in order to make data available according to the 'Findable Accessible Interoperable Reusable (FAIR)' guidelines
- beneficial would be also experience in the field of machine / deep learning
- beneficial would be experience with HPC (also GPU-based)
- ability to present your work at workshops and international conferences

Our Offer:
- opportunity to work on interesting challenges as team leader
- opportunity to work on interesting challenges and research questions with access to cutting-edge and unique HPC systems
- possibility to develop your academic career and engage in the supervision of master and doctoral students in the fields of software engineering, machine learning and computer science. If desired, option towards obtaining a PhD degree can be provided
- freedom to work on your own research questions for a predefined fraction of your working time
- excellent research and computing infrastructures in one of Europe's largest research Facilities
- exciting working environment on an attractive research campus with excellent infrastructure, located between the cities of Cologne, Düsseldorf, and Aachen
- international and interdisciplinary working atmosphere
- a comprehensive further training programme
- flexible working hours and various opportunities to reconcile work and private life
- limited for 2 years with possible longer-term prospects (already funding-wise confirmed)
- full-time position with the option of **slightly reduced** working hours
- salary and social benefits in conformity with the provisions of the Collective Agreement for the Civil Service (TVöD)

Forschungszentrum Jülich aims to employ more women in this area and therefore particularly welcomes applications from women.

We also welcome applications from disabled persons.

We look forward to receiving your application, preferably via our **online recruitment system** on our career site until 01.09.2019, quoting the **reference number 2019-257**.

Questions about the vacancy?
Contact us by mentioning the reference number 2019-257: **career@fz-juelich.de**
Please note that for technical reasons we cannot accept applications via email.

www.fz-juelich.de