



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,500 employees in one of Europe's biggest research centres and help us to shape change!

Data is the new resource of the 21st century, and its availability seems boundless. If you're passionate about contributing to the establishment of a crucial segment in the data relationship life cycle for plant science, we invite you to join the Omics-/Database-based Bioinformatics division (IBG-4) at the Institute of Bio- and Geosciences at Forschungszentrum Jülich.

We are looking to recruit a

Research Associate / Postdoctoral Researcher – Machine Learning and Genomics

Your Job:

We are looking for a researcher to develop and apply machine learning models for genomic data in our lab. We focus on sequence analysis, genomics, semantics, and cross-domain data integration.

Role:

- Apply ML to barley genomic data, emphasizing gene regulation and genetic variation
- Collaborate with geneticists, breeders, and industry partners to move research toward applications
- Explore side projects and build networks inside and outside the institute
- Analyze diverse data sets for multi-omics integration in plant genetics
- Expand expertise and collaborations beyond plant research

Our Lab:

- A small, international team with open communication and flat hierarchies
- Specializes in machine learning and data mining for plant genomics
- Committed to interdisciplinary work combining genetics, data science, and applied plant research

Example reading:

- Peleke, F. F., Zumkeller, S. M., Gültas, M., Schmitt, A., & Szymański, J. (2024).

We look forward to receiving your application until 11.05.2025 via our **Online-Recruitment-System!**

Questions about the vacancy?

Get in touch with us by using **our contact form.**

Please note that for technical reasons we cannot accept applications via email.
www.fz-juelich.de

Deep learning the cis-regulatory code for gene expression in selected model plants. Nature Communications, 15(1), 3488. <https://doi.org/10.1038/s41467-024-47744-0>

- Brixi, G., Durrant, M. G., Ku, J., Poli, M., Brockman, G., Chang, D., Gonzalez, G. A., King, S. H., Li, D. B., Merchant, A. T., Naghipourfar, M., Nguyen, E., Ricci-Tam, C., Romero, D. W., Sun, G., Taghibakshi, A., Vorontsov, A., Yang, B., Deng, M., ... Hie, B. L. (n.d.). Genome modeling and design across all domains of life with Evo 2.
- Jayakodi, M., Lu, Q., Pidon, H., Rabanus-Wallace, M. T., Bayer, M., Lux, T., Guo, Y., Jaegle, B., Badea, A., Bekele, W., Brar, G. S., Braune, K., Bunk, B., Chalmers, K. J., Chapman, B., Jørgensen, M. E., Feng, J.-W., Feser, M., Fiebig, A., ... Stein, N. (2024). Structural variation in the pangenome of wild and domesticated barley. Nature, 636(8043), 654–662. <https://doi.org/10.1038/s41586-024-08187-1>

Your Profile:

- Master and PhD in biology, genomics or bioinformatics
- Strong background in data science or machine learning (deep learning, statistical modeling, or large-scale data analysis a plus)
- Knowledge of genetics or genomics is advantageous
- Passion for research, publication, and grant writing
- Independence in shaping research direction
- Willingness to mentor students and contribute to lab growth
- Team-oriented with good communication skills

If you want to tackle the challenges of machine learning in plant genomics, we welcome your application.

Our Offer:

We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We support you in your work with:

- A large research campus with green spaces, offering the best possible means for networking with colleagues and pursuing sports alongside work
- Interdisciplinary data science and applied bioinformatics in a highly productive research project
- Extensive further training offer
- A wide range of offers for combining work and family
- Full-time position with the option of slightly reduced working hours and 30 days of annual leave
- Targeted services for international employees, e.g. through our International Advisory Service

In addition to exciting tasks and a collaborative working atmosphere at Jülich, we have a lot more to offer:

<https://go.fzj.de/benefits>

We offer you an exciting and varied role in an international and interdisciplinary working environment. The position is for a fixed term of 2 years, with possible long-term prospects. Salary and social benefits will conform to the provisions of the Collective Agreement for the Public Service (TVöD-Bund), pay group 13, depending on the applicant's qualifications and the precise nature of the tasks assigned to them. All information about the Collective Agreement for the Public Service (TVöD-Bund) can be found on the BMI website: <https://go.fzj.de/bmi.tvod> . The monthly salaries in euros can be found on page 66 of the PDF download.

We welcome applications from people with diverse backgrounds, e.g. in terms of age,

gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.

Further information on diversity and equal opportunities: <https://go.fzj.de/equality>