

We are currently looking for a full-time

Bioinformatics workstream coordinator for the German Human Genome-Phenome Archive

Are you passionate about the intersection of human-related next-generation sequencing (NGS) data, data science, biomedical research, and scientific project management? The German Human Genome-Phenome Archive (GHGA) is seeking a talented and driven individual to join our dynamic team. As a scientific coordinator with a bioinformatics and data science background, you will play a pivotal role in shaping the future of NGS data analysis, biomedical research, and dissemination using state-of-the-art cloud technologies and workflows. We seek your help to bring biomedical research and genetic diagnostics to population scale by building e.g., a German-wide variant frequency database and harmonized NGS analysis workflows!

Who we are

The German Human Genome-Phenome Archive ([GHGA](#)) consortium is a national, secure, and trustworthy network of data centers for archiving, processing, and serving human genome sequencing and other omics data for biomedical research, which is the German node for the federated European Genome-Phenome Archive (fEGA). The Munich GHGA team is hosted by the chair of Computational Molecular Medicine ([CMM](#)), which is leading the harmonization of NGS workflows and the implementation of the Bavarian GHGA data hub. The chair is located in the informatics department of the Technical University of Munich, one of the top-ranked European universities. It has strong links to other local scientists and institutions in biology and medicine, such as the Institute of Human Genetics at the Klinikum rechts der Isar, but also close connections to the Leibniz Rechenzentrum (LRZ), one of the top 20 supercomputers in the world.

Job description

We are looking for an experienced bioinformatician to lead a team of developers and researchers to implement NGS workflows and omics data analysis in a high-throughput environment within GHGA. You will be responsible for deploying and running the NGS workflows on tens of thousands of WGS samples within a cloud computing architecture, enabling scalable, safe, and reproducible on-demand data processing and archiving. Furthermore, the candidate will have a fundamental role in overseeing creating and maintaining a German-wide variant frequency database and deploying a Beacon network infrastructure for global variant querying and discovery. Driving benchmarking efforts for all projects will also form a significant component of successful integration into the GHGA infrastructure. Finally, the successful candidate will lead the local bioinformatics research and work closely with the local coordinator of the GHGA cloud team, thereby establishing part of the nationwide GHGA consortium and participating in the Operations Committee meetings and decision-making processes.

Your responsibilities

- **Project Management:** Oversee the planning, execution, and delivery of bioinformatics projects, ensuring alignment with GHGA goals and the wider research community, timelines, and budget constraints.
- **Research and Development:** Lead establishing and deploying a German-wide variant frequency database and a Beacon instance and align these efforts with the "Modellvorhaben nach §64e SGB V".

- **Technical Leadership:** Stay abreast of emerging technologies, bioinformatics, and computational biology trends, providing technical expertise and guidance to advance scientific capabilities and innovation.
- **Quality Control and Benchmarking:** Establish and maintain robust quality control and benchmarking processes to ensure the accuracy, reproducibility, and integrity of NGS pipelines and other products (e.g. NCBench).
- **Communication:** Effectively communicate with GHGA central leadership, funding agencies, university/institutional leadership, and others. This includes technical reports, application writing, etc.
- **Regulatory Compliance:** Ensure compliance with relevant regulatory requirements (GDPR) and ethical standards (FAIR principles) governing the handling and analysis of patient genomic data.

Requirements

- PhD or postdoc experience in bioinformatics, computational biology, or computer science.
- Strong understanding of genomics and transcriptomics data analysis methodologies and techniques.
- Hands-on experience with Next-Generation Sequencing pipelines (Nextflow, snakemake, WDL, etc.)
- Knowledge about state-of-the-art genomics data analysis pipelines and software used in research.
- Proficiency in working in a UNIX-based ecosystem (partially in systems administration).
- Experience in cloud computing infrastructure and platforms (OpenStack, AWS, Google Cloud).
- Experience with containerized package and application deployment systems (Docker, Singularity, etc.)
- Proficiency in at least one programming language (Python, Java, R, Rust, ...).
- Excellent communication skills in English (communication with consortia members).
- Ability to work effectively in a fast-paced, dynamic environment with cross-functional teams.

Desirable but not required

- Experience in project management and leading multidisciplinary teams in bioinformatics or computational biology research.
- Experience in developing and deploying complex software systems.
- Knowledge of data standards and data security measurements.
- Communication skills in German to communicate with local clinicians and legal and data protection officers.

We offer

- Opportunity to be at the forefront of advancing biomedical research through innovative data science and bioinformatics approaches.
- International, diverse, LGBTQ-friendly, and interdisciplinary working environment.
- Working with world-leading IT partners, e.g. the Leibnitz Rechenzentrum (LRZ) and private cloud providers
- Salary according to TV-L, including social benefits.
- Flexible working hours and home-office policy.
- Focus on a healthy work-life balance.
- Possibilities for further scientific qualification and personal development.
- Disabled applicants with equal suitability and qualifications will be given particular consideration.

- The TUM strives to increase the proportion of women, so applications from women are therefore expressly welcomed.

Application

The full-time position is funded until the end of the first GHGA funding period (30.09.2025) with a salary according to the TV-L (German academic salary scale) up to level E14 with a probable extension of another 5 years. The position is available immediately.

Applications should include a cover letter, CV, and references and must be sent to jobs-gagneurlab@in.tum.de by 31st March, with "GHGA Workstream coordinator" in the subject.

Your personal data is submitted as part of your application for a job at the Technical University of Munich (TUM). Please note our data protection information in accordance with Art. 13 General Data Protection Regulation (GDPR) for the collection and processing of personal data in the context of your application <https://portal.mytum.de/kompass/datenschutz/Bewerbung/>. By submitting your application, you confirm that you have read TUM's data protection information.

More Information

<http://ghga.de/>
<https://www.cs.cit.tum.de/cmm/>
<https://tum.de>
<https://lrz.de>

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