

The Institute of Medical Bioinformatics at the University Medical Center Göttingen (UMG) is filling a position for a

## **PhD candidate (m/f/d) in the field of Medical Bioinformatics**

- Duration: initially limited to three years with the option of extension,
- Part-time (65%)
- Remuneration according to TV-L

### **About us:**

Our institute is a leader in the bioinformatic analysis of genetic high-throughput data, particularly in the development of biomarker signatures and advanced approaches of machine learning for personalized and systems medicine.

The research focus of our department is on methods to evaluate biomedical data and applications in Systems Medicine. We develop methods to statistically or bioinformatically analyze and understand especially high-dimensional data sets coming from biomedical research (e.g. genome sequencing, transcriptomics and proteomics) and to apply these methods in biomedical research.

Especially, genomics, transcriptomics, proteomics and other omics as well as the integrative analysis and meaningful interpretation of such different data types pose major challenges for method development, where the methods have to be tailored towards the specific applications. We therefore apply methods from the area of machine learning or artificial learning as well as statistical computing.

### **PhD Topics:**

We are looking for an ambitious PhD candidate who want to be at the forefront of research in medical bioinformatics. Our new projects address themes focusing on the Long/Post-COVID (LC/PC) syndrome and the improvement of treatment outcomes, which involves the use of innovative artificial intelligence (AI) and multidisciplinary expertise to analyze molecular and clinical data from LC/PC patients. Another key area of focus is the prediction of treatment outcomes in pancreatic cancer, where we integrate multi-omics data and histopathology images into a multimodal learning approach.

We are seeking motivated PhD candidates eager to work at the forefront of medical bioinformatics research. Our new projects focus on topics such as Long/Post-COVID syndrome and improving treatment outcomes, combining artificial intelligence (AI) with interdisciplinary expertise to analyze molecular and clinical data from LC/PC patients.

Another key research area is the prediction of treatment outcomes in pancreatic cancer, where we use advanced federated AI methods to develop robust models for estimating treatment success. We aim to further enhance these models by incorporating multi-omics data and histopathological images into a multimodal learning approach.

**Your Tasks:**

- Application and further development of methods of artificial intelligence and machine learning
- Support in the analysis of genomic

**Your Profile:**

- Degree (Diploma/M.Sc.) in, Bioinformatics, Data Science, Computer Science, Physics, Biology, or a related field
- Basic understanding of biological and biomedical concepts
- Expertise in computer science, data science, and machine learning
- Proficient in programming languages such as Python, Java, R, or JavaScript
- Enthusiasm for working with complex data models
- Interest in interdisciplinary collaboration
- Excellent English language skills in both written and spoken; knowledge of German is advantageous
- High motivation, teamwork, and initiative

**Our Offer:**

- Structured and guided onboarding
- Diverse activities in a multidisciplinary, interdisciplinary team
- Support for internal and external training as well as scientific events
- Participation in structured PhD programs in Biology, Molecular Medicine, Computer Science, or Data Science

**Application:**

Please submit your application by **6th of January**.

We are looking forward to your application under following link: <https://umg.recruiting-portal.com/r/z123irpfaimvy3j/PhD+candidate+mfd+in+the+field+of+Medical+Bioinformatics/37077/G%C3%B6ttingen>