

## Job Vacancy

The University Hospital Essen offers first class medical services in the Ruhr metropolis. Every year, 225.000 patients are treated in 30 clinics, 27 institutes and specialized centers. The over 8.000 employees offer medical care with state-of-the art diagnostics and therapies, which meet highest international standards. Patient care is connected with basic and translational research at an internationally competitive level.

The newly founded **Institute for Artificial Intelligence in Medicine** is part of the SMART Hospital Initiative of the University Hospital Essen and set out to combine medicine, technology and artificial intelligence for the benefit of patient care, research and education.

The junior research group **Trustworthy Machine Learning** of the **Cancer Research Enter Cologne Essen (CCCE)**, located at **Ruhr University Bochum**, is currently seeking a

### **PhD Candidate (m/f/d)**

(pay grade: 13 TV-L / 100 % - temporary employment)

The pay grade classification depends on the personal and collective legal requirements. The employment is provided for the duration of a third-party funded project until 31.10.2024. An extension might be possible according to available funding and the maximum employment duration as given by law regarding scientific fixed-term contracts (Wissenschaftszeitvertragsgesetz).

#### **Your tasks**

- Development of novel and theoretically sound methods of federated learning on medical data
- Theoretical and empirical analysis of learning algorithms – with a focus on Deep Learning – in federated learning (generalization, transferability, privacy compliance)
- Publication of research results at leading conferences and journals in English
- Implementation and empirical analysis of developed methods in a federated learning platform on medical use cases

#### **Your profile**

- Excellent university degree (diploma or master) in computer science, mathematics, physics or comparable qualifications
- Excellent knowledge and practical experience in Machine Learning, especially in Deep Learning
- A high level of abstraction and mathematical creativity
- Excellent programming skills (Python preferred) and experience with common program libraries (PyTorch, TensorFlow, sklearn, etc.)

- High motivation and the ability to work independently on complex problems and error analyses

The University Hospital Essen is an equal opportunity employer. Female scientists are particularly encouraged to apply. The participation in secondary employment depends on the „Hochschulnebenberufungsverordnung“ of North-Rhine Westphalia. Disabled applicants will be preferentially considered in case of equivalent qualification. The position is also available as part-time employment.

Please send your complete application documents preferably as a single pdf file within 2 weeks after publication of this advertisement with reference to tender number **1139** to [bewerbung@uk-essen.de](mailto:bewerbung@uk-essen.de) or in writing to the University Hospital Essen, Personnel Department, Hufelandstraße 55, 45147 Essen.

We use your data exclusively for application purposes in accordance with the applicable data protection regulations. Further information can be found in the privacy statement on our homepage at: [www.uk-essen.de](http://www.uk-essen.de).