Research Group Leader on
Privacy-aware Artificial Intelligence

Position for a **research group leader incl. two researcher positions** to fill at TUM in Munich, Germany.

The digital revolution, in particular big data and artificial intelligence (AI), offer new opportunities to transform healthcare. However, it also harbors risks to the safety of sensitive clinical data stored in critical healthcare ICT infrastructure. In particular data exchange over the internet is perceived insurmountable, posing a roadblock hampering big data based medical innovations.

With FeatureCloud, we chair a pan-European transformative AI development project which implements a software toolkit for substantially reducing cyber risks to healthcare infrastructure by employing the world-wide first privacy-by-architecture approach, which has two key characteristics: (1) no sensitive data is sent through any communication channels, and (2) data is not stored in one central point of attack.

Federated machine learning (for privacy-preserving data mining) integrated with blockchain technology (for immutability and management of patient rights) will safely apply next-generation AI technology for medical purposes.

You will be given the chance to head a research team working on a ground-breaking, novel AI infrastructure that only exchanges learned model representations which are anonymous by default.

You will also be given direct insights into the design and execution of an interdisciplinary public-private partnership from IT to medicine that covers all aspects of the value chain: assessment of cyber risks, legal considerations and international policies, development of federated AI technology coupled to blockchaining, app store and user interface design, implementation as certifiable prognostic medical devices, evaluation and translation into clinical practice, commercial exploitation, as well as dissemination and patient trust maximization.

Starting **January 2019**, and initially funded for five year, we look for a **research group leader** who will developed federated machine learning strategies and establish a new kind of app store: an AI store. You will contribute to paving the way for a socially agreeable big data era of the Medicine 4.0 age. A startup package including **one PhD student and one postdoc** will be granted to fuel the project and allowing the group to prosper. The ideal candidates have a proven track record and interest in one or several of the following fields: systems medicine, computational biomedicine, bioinformatics, machine learning, data security, software architecture.

At the Chair of Experimental Bioinformatics you will find a young, dynamic team of more than 20 international researchers at different stages in their career and education. We will help you to get familiar with TUM, Munich, and Germany. Find us online at: https://www.baumbachlab.net.

Interested? Send your application including most relevant publications to jan.baumbach@wzw.tum.de

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