

Research Assistant “Artificial intelligence in life science applications”

We are looking for a research assistant (m/f/d) with a Dipl.-Ing. (Univ.) or M.Sc. degree in Computer science, Mechanical engineering, Process Engineering, Mechatronics, Informatics or related field.

About us

As a globally renowned institute in the field of brewing, beverage, and grain technology, it is our aim to always be at the forefront of scientific research. The development, implementation, and provision of innovative, forward-looking technologies and concepts in these fields are essential core aspects of our work. We believe that excellent research and lateral thinking will create innovative ideas and solutions for tomorrow's industry.

What we offer

Creative freedom – knowledge development – industrial contacts – young and creative team

Research topic:

To implement an efficient control system within a chemical or biotechnological process, an adequate process model, which describes the relationship of the relevant in and outputs, represents a crucial presupposition. Often analytical approaches are not applicable in bioprocess engineering due to the lack of existing knowledge. Due to the capability of the artificial neural network (ANN) models in representing complex nonlinear processes, it became a popular tool for modeling, optimization, and control of different processes. However, the main challenges remain to interpret the network model and usage of the prior-knowledge to develop a reliable and generalized network model.

The aim of this research topic is to introduce a general design approach for the direct integration of prior knowledge into an ANN. On the other side, the black box of the ANN should be open to help to dig into the problems, which are not yet understood well. In the context of this research study, soft (ware) sensors for biotechnological processes are to be developed and tested in both industrial and academic environments.

Requirements

- You are enthusiastic about tasks of multivariate and statistically based process analysis
- Ability and interest in analytical, creative and interdisciplinary thinking
- High level of initiative and commitment
- Ability to work in a team and communication skills
- Good knowledge of python programming,
- Experience with deep learning methods and packages
- Completed university degree

This position is compensated in wages according to the German salary structure for public sector employees (TV-L). The option to earn a Ph.D. degree at the Chair of Brewing and Beverage Technology is provided. TUM is an equal opportunity employer. As such, we explicitly encourage applications from women. Applications from disabled persons with essentially the same qualifications will be given preference.

Application

Please submit your electronic application as a single PDF file and include the reference “Artificial intelligence” in the subject line. For full consideration, apply no later than **01.04.2020** to:

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Weihenstephaner Steig 20
85354 Freising
verwaltung@bgt.wzw.tum.de
www.lbgt.wzw.tum.de

Note on data protection

As part of your application for a position at the Technical University of Munich (TUM), you transmit personal data. Please note our data protection information according to Art. 13 General Data Protection Regulation (GDPR) on the collection and processing of personal data in context with your application (see <http://go.tum.de/554159>). By submitting your application, you confirm that you have taken note of the TUM's data protection information