



FRIEDRICH-ALEXANDER
UNIVERSITÄT
ERLANGEN-NÜRNBERG
TECHNISCHE FAKULTÄT

PhD position in Computer Science / Biomedical Engineering

The Machine Learning and Data Analytics Lab at the Friedrich-Alexander-University Erlangen-Nürnberg (FAU) invites applications for a PhD position in Computer Science / Biomedical Engineering. We are about to start a three-year project on

Individualized, Sensor-based Diagnostics and Therapy Monitoring for Mobility Impairment Analysis

Background:

Analysis of mobility impairment from biomedical (motion) sensors is an emerging topic in computer science and biomedical engineering. This PhD position is funded through the interdisciplinary “Medical Valley Award” project co-supervised at the Faculty of Engineering and the Faculty of Medicine at the FAU. The focus is to develop state-of-the-art wearable computing, biomedical signal analysis and machine learning systems to assess diagnostic validity and therapy success in neurologic movement disorders with a focus on Parkinson’s disease. The sensor-based movement information will be complemented by further telemedical diagnostic approaches (video, activity, speech, ...) to combine continuous detection of mobility impairment with state-of-the-art diagnostic assessment. The project aims at developing sensor-based signal analysis to allow an individualized, quantitative, and qualitative assessment of mobility impairment symptoms, with a focus on fall risk assessment. An interdisciplinary team of scientists conducts the project, and the successful candidate is expected to be an avid team worker.

The FAU is one of the largest universities in Germany. With its five faculties, FAU offers a scope of subjects ranging from the Humanities to Law and Economics as well as Sciences, Medicine and Engineering. The FAU’s mission statement “Advance through Networks” reflects the close collaboration between the single disciplines.

The Machine Learning and Data Analytics Lab at the FAU develops signal processing algorithms and wearable computing systems for biomedical applications. We specifically work on motion and biosignal analysis. We focus on mobile data from telemedical systems that have a wide range of applications. Detailed information on ongoing projects is available on our website, via our publications and upon request.

Requirements:

Candidates for this position should have a master or comparable degree in Computer Science or a related discipline (Electrical Engineering, Biomedical Engineering, ...). The ideal candidate blends technical expertise in hardware and software of wearable computing systems with an interest in biomedicine as an application area. The candidate should also be enthusiastic about building a research program including project proposals and (limited) participation in teaching at the intersection of computer science and biomedical engineering.

Program details and contact for application/questions:

The project start date is September 1, 2017. Funding is available for at least 3 years, an extension is possible. Prospective applicants should apply with a cover letter and academic CV. Applications will be accepted until the position is filled.

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