MSc/BSc THESIS ON THE PROCESSING AND ANALYSIS OF MOBILE TRACKING DATA

We are currently seeking a highly motivated MSc or BSc student in the DZNE research group "Aging & Cognition", to carry out their thesis in a research project lead by Dr. Nadine Diersch. A combination with a lab rotation or an internship (minimum duration of 3 months) beforehand might also be possible.

The "Aging & Cognition" research group investigates age-related changes in spatial navigation, memory and their underlying neural basis. In the current project, a mobile application has been developed that tracks movements, while the user freely explores a spatial environment and solves a certain navigation task.

The focus of the thesis will be to develop an **analysis pipeline to process and to visualize the GPS and sensor data from the mobile application and to compute certain summary metrics**, such as way-finding distance and movement scope, for behavioral pattern identification in different age and patient groups. Ultimately, patterns in the data shall be determined that carry health-related information about the user.

Desired qualifications:

- Currently enrolled in Data and Knowledge Engineering, Computer Science, Medical Engineering, Integrative Neuroscience, or related programme
- Interest in working with tracking data
- Prior experience with programming languages such as R and/or Python
- Prior experience with the statistical analyses of such data (e.g., regression methods)
- Ability to work independently
- Willingness to familiarise yourself with new topics and methods

The desired starting date is **01.10.2020**, remote work possible.

If you are interested in the position, please send your application in German or English (including a letter of motivation, CV, and relevant certificates) to:

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