The Research Institute for Cognition and Robotics (CoR-Lab) offers a full-time Research position starting as soon as possible (E13 TV-L, non-permanent position)

Your Tasks
For the newly started project cluster CINEMENTAS - Cooperative Interaction based on Mental Models for Assistive Systems we solicit several research positions for the duration of the project. CINEMENTAS is focused on the research question how learning by a technical system in interaction with a human can be shaped to remain transparent for the human user. To achieve this goal CINEMENTAS connects machine learning approaches with concepts from cognitive science, such as mental models.

CINEMENTAS is located at the Institute for Cognition and Robotics (CoR-Lab) and embedded in the research environment of the Cluster of Excellence Cognitive Interaction Technology (CITEC), both at Bielefeld University, Germany. Project work will be in close cooperation with the Honda Research Institute Europe (Offenbach near Frankfurt/Main), which also provides the financial funding of the project. The project is consists of five subprojects affiliated with five research groups at the Faculty of Technology and at the Faculty of Linguistics and Literary Science at Bielefeld University. The present PostDoc position is dedicated to CINEMENTAS subproject Cognitive Corridor Learning (CoCoLea, Prof. Dr. Helge Ritter, AG Neuroinformatics).

Aim of CoCoLea is the development of innovative strategies and algorithms that allow to constrain interactive machine learning within a "corridor of readability" for the human user. Underlying idea is to exploit the redundancy of the solution space for a learning task and to benefit from cognitive science concepts, in particular mental models, to shape learning towards maximal understandability for the human.

Scope of functions:
Research activities (85 %):
- development and implementation of algorithms to realize interactive machine learning within a "corridor of readability" for the human user
- technical realization of a prototype system within the chosen demonstrator scenario and environment
- Design and conduct of empirical user studies for data acquisition and evaluation of the model/system

Other activities (15 %):
- reporting and collaboration with project partners, especially HRI
- preparation of scientific publications and presentations
- supervision of Bachelor/Master theses and student projects

Applicant’s profile
We expect
- a qualified PhD in a pertinent topic area within the fields of machine learning or human-machine interaction, and an excellent diploma or master degree in informatics/computer science or in a pertinent neighbor discipline, obtained at a research university
- solid practical and theoretical expertise in machine learning, particularly in the context of interactive settings
- a good publication record in pertinent international conferences and/or scientific journals
- excellent programming skills (C++,Python,Matlab),
- capability for interdisciplinary cooperation
- learn orientation and a strong motivation to integrate results in the form of implemented software components in a shared demonstrator system
- good command of English in writing and speaking

Preferable qualifications
- background in cognitive science concepts about learning and mental representations

Remuneration
Salary will be paid according to Remuneration level 13 of the Wage Agreement for Public Service in the Federal States (TV-L). As stipulated in § 2 (1) paragraph 2 of the WissZeitVG (fixed-term employment), the contract ends after a period of three years. In accordance with the provisions of the WissZeitVG and the Agreement on Satisfactory Conditions of Employment, the length of contract may differ in individual cases. The employment is designed to encourage further academic qualification. In individual cases, this percentage may be reduced on request, as long as this does not conflict with official requirements.

Bielefeld University is particularly committed to the career development of its employees. It offers attractive internal and external postgraduate training. Employees have the opportunity to use a variety of health, counselling, and prevention programs. Bielefeld University aims at a good work-family balance.

Application Procedure
For full consideration, your application should be received preferably via email (a single PDF document) sent to sstrunk@techfak.uni-bielefeld.de by 26th of October 2017. Please mark your application with the identification code wiss17256. Please do not use application portfolios and send only photocopies of original documents because all application materials will be destroyed at the end of the selection procedure. Further information about Bielefeld University can be found on our homepage at www.uni-bielefeld.de.

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