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Research Position
with perspective of a PhD degree

Dialogue Systems Group

Institute of Communications Engineering
Faculty of Engineering and Computer Sciences
Albert-Einstein-Allee 43
D-89081 Ulm

Spoken Language Dialogue Systems Development In Multicultural Environments

The Dialogue Systems Group (www.dialogue-systems.org) in the Faculty of Engineering and Computer Sciences, University of Ulm is seeking a researcher at MSc level to work on a human-like socially competent and communicative agent for health care applications. More specifically, the research focus is placed on flexible and adaptive Multimodal Spoken Dialogue Management.

With the main goal of providing better access to the host country's health and care system for migrants, a human-like socially competent and communicative agent may function as mediator that serves for migrants with language and cultural barriers. While in Europe, migration is tradition, especially in the case of care, migrants, often face a double challenge: (i) not to speak the language and not to be acquainted with the culture of the resident country, and (ii) to be unfamiliar with the care and health administrations of the country. As a consequence, e.g., elderly migrants in care homes suffer from social exclusion, with their relatives also struggling with getting the right information and interacting with the administration, migrants at home are often reluctant to go to see the doctor in case of health issues, a tendency that is often further aggravated by cultural matters. Migrant temporary care workers, who in addition often do not have an adequate professional training, face the problem of isolation, lack of professional background information and deficient communication with both the cared and the supervision personnel. For both audiences, the communicative agent then may serve as a trusted information provision party and mediator in questions related to basic care and healthcare.

Within this communicative agent approach for helping migrants with health and care issues, the research activity proposed for this thesis aims at developing an adaptive Dialogue Management (DM) component which provides all necessary properties for carrying out a natural, robust and flexible human-agent dialogue. Emphasis is placed on affective learning-oriented DM, taking into account the user's emotional state and their cultural background. Statistical approaches for probabilistic dialogue management may also be used. Finally, the developed mechanisms will be adjusted for multimodality as well as for aspects of multilingualism and multiculturalism.

The work will be integrated into the project "KRISTINA" funded by the European Union within the "Horizon 2020 Framework Programme for Research and Innovation".

Perspective: PhD Thesis

Requirements: Good programming skills (with an emphasis on Java), good Machine Learning skills, background in Computer Science, experience in Unix/Linux desirable; expertise in speech and dialogue technologies would also be appreciated.

The appointment of initially 0.5 TVL-13 will be progressively upgraded to 1.0 TVL-13 and has a fixed duration of 36 months.

The University of Ulm is committed to increase the share of women in research and teaching positions and therefore explicitly encourages female candidates to apply.

Candidates should send their application electronically to wolfgang.minker@uni-ulm.de. Please indicate the index number 103 in the subject line of your e-mail. The application in English or German should include a short resume, the names of two referees and a transcript of records with the results of exams relevant to the MSc Degree. A pdf-version of the MSc Thesis may also be included.

Physically disabled applicants receive favorable consideration when equally qualified.
The appointment is made by the central university administration.