Pro²Future – Products and Production Systems of the Future – is a COMET competence center that attempts for next generation products and manufacturing machinery with embedded cognitive capabilities. It is a joint effort of world leading Austrian industrial enterprises and the nation's top scientific institutions in ICT and Production Engineering: Johannes Kepler University Linz, Graz University of Technology and Profactor GmbH. Furthermore, it is endorsed by the Provinces of Upper Austria and Styria, Austria's strongest provinces in industrial leadership. Pro²Future operates three research sites in Linz, Graz and Steyr.

To broaden and support our research activities in the field of perception and aware systems we are offering the position of an

Junior Researcher 'GUIDE'

Full-time (38.5 hours/week), at Pro2Future GmbH in Linz (Campus of Johannes Kepler University Linz), starting by March 2018.

Project context:

The GUIDE project intends to create holistic assistance and guidance solutions for quality-sensitive industrial systems. The focus hereby lies in the support and enhancement of interactions between workers and machines. Since industrial production machines are still mostly unaware of the worker and in general need to be explicitly controlled, suboptimal outcomes (in product quality and manufacturing efficiency) are correlated to (i) the cognitive load and level of attention of the worker, (ii) the frequency and degree of disruptions to the manufacturing workflow, as well as (iii) misalignments between the worker's skill and the workflow complexity. GUIDE has as its goal the detection and quantification of such threats, the implementation of warning- and countermeasures, and thereby the avoidance of degraded product quality and reduced production efficiency.

Job profile:

The successful candidate will contribute to developing a systems prototype to monitor (i) human factors, (ii) workflow complexity, (iii) apparatus complexity, (iv) to support human decision making, and (v) to minimize workers' cognitive load. This prototype will consist of hardware- as well as a software framework comprised of (i) sensing modules, (ii) abstraction models for context and worker effort, and (iii) an adaptive, actuator-based assistance architecture to provide feedback and warnings in a timely manner. As such, the offered position will focus on topics related to Pervasive Computing, such as mobile eye-tracking, object- and context recognition, computer vision, human-computer-interaction and attention management.

The successful candidate will work within an interdisciplinary project team consisting of experts including the industrial partners and scientific partners. The candidate plays a major role in shaping and executing the projects' research agenda. Project work will also involve collaboration and knowledge exchange with the Pro²Future partners, several allied international research groups as well as participating in the international research community.

Your qualification:

- A university-level degree in computer science, information systems, mechatronics, telematics, or related studies.
- As the position involves the co-development of a multi-sensor-based prototype for holistic assistance and guidance solutions for quality-sensitive industrial systems, excellent qualifications in software engineering (conception, system design, …), software development (C++, C#, Java, Python), and working with sensors and actuators.
- Prior experiences in the fields computer vision, sensor systems, machine learning, behavior adaptation, self-* systems, and embedded/ubiquitous computing are desirable.

- Fluent English, written and spoken. German is appreciated or the willingness to learn German is expected.

We offer:

- The opportunity to align the research for your Ph.D. studies to a 3-years research project, starting in spring 2018.
- The opportunity to work in a young, dynamic, creative and collaborative team with strong ethos of mentorship and professional development as well as focused publication agenda.
- We will provide the successful candidate with a collegial and supportive environment to establish themselves and their careers, i.e. particularly the Ph.D. studies.
- Full-time gross salary for this position is 2,750 Euro per month (14 times a year).

Pro2Future GmbH is an equal opportunity and family-friendly employer. We particularly welcome applications from women and international candidates.

To apply for this position, please send your application (including CV, supporting documents, letter of motivation), topic: "Application GUIDE" via email to: jobs@pro2future.at

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