
Title: Postdoctoral Fellow - Predict Agitation in People Living with Dementia

Location: Downtown Toronto, ON, Canada

Start Date: Immediately

Closing Date: Until the position is filled

The Artificial Intelligent & Robotics in Rehab Team at Toronto Rehab Institute – UHN and the Intelligent Assistive Technology and Systems Lab, University of Toronto

Description:

The Intelligent Assistive Technology and Systems Lab (IATSL) invites applications to the position of Postdoctoral Fellow to work on a research project to predict agitation and aggression in people living with dementia using wearable and ambient sensors. This position will require involvement in activities ranging from sensors integration, data collection, big data analysis, and predictive modeling. This position will involve collaboration with our multi-disciplinary team comprising of computer scientist, biomedical engineer, clinician, nursing academician, research manager and caregivers.

The duties of the successful candidate include undertaking high quality independent and collaborative research, taking initiatives to apply for grants, supervise undergraduate and graduate students in the research group. The candidate will be highly encouraged to establish connections and collaborate with other research groups at TRI-UHN and our research partners across Canada and abroad.

The successful candidate will be co-supervised by Dr. Shehroz Khan, Scientist, TRI-UHN and Dr. Alex Mihailidis, Barbara G. Stymiest Research Chair in Rehabilitation Technology at the University of Toronto and Senior Scientist at TRI-UHN.

The successful candidate will join a unique multi-disciplinary, multi-centre research team led by Dr. Alex Mihailidis (University of Toronto/TRI) that includes several bioengineers, computer scientists, occupational therapists, speech and language pathologists, neuroscientists, clinicians, and mechanical/electronic technicians. IATSL is affiliated with many prestigious institutions including the University of Toronto, Toronto Rehabilitation Institute, and Sunnybrook Health Sciences Centre. Funding comes from a variety of corporate and institutional partners, such as American Alzheimer Association, Alzheimer Society of Canada, and Intel Corporation.

Our research program primarily aims at developing autonomous, intelligent computerised devices that can help people with disabilities live more independently. A major strength of the research program is the combination of basic science, computing principles, clinical research, as well as product design and development. Our research employs cutting edge technologies and computer techniques, such as stereo vision, partially observable Markov decision processes, and various other computer vision and decision making techniques.

The post-doctoral researcher position is fully funded for 2-year period. Salary will be based on the applicant's previous experience and education.

For more information about our research, visit our web site: www.iatsl.org

Requirements:

We are seeking candidate with the following qualifications:

- Must hold a PhD in Computer Science / Computer Engineering or related area. Applicants who have fulfilled all the requirements for PhD award may also apply.
- Advanced knowledge in machine learning, deep learning, big data and predictive analytics.
- Experience in signal processing and sensor data such as accelerometer, PPG, etc.
- Strong programming skills in MATLAB, Python, scikit-learn, Tensorflow, Keras. A link to Github will be good to have in the application.
- Excellent publication record in top quality journals/conferences will be given high priority.
- Expertise in working with older adults and assistive technology studies development is an asset.
- Possess excellent communication skills and demonstrate strong leadership skills.

TRI-UHN hires based on merit and is committed to employment equity. All qualified persons are encouraged to apply. However, Canadian citizens and permanent residents will be given priority.

Application:

Applications will be accepted until the position is filled. To apply, please send a one page covering letter highlighting the relevance of your skills, knowledge and experience to the above mentioned position, curriculum vitae, including full publication list, a statement of your research interests (1-2 pages), country of citizenship and date of availability, and a copy of your university transcripts and email to alex.mihailidis@utoronto.ca with the subject line "Postdoc at TRI"

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Submissions by e-mail are required. After an initial screening, selected applicants will be asked to forward three academic and/or professional letters of reference.