Announcement of Postdoctoral Fellow Position in Machine Learning for Medical Image Analysis

Probabilistic Vision Group and Medical Imaging Lab, Center for Intelligent Machines & Department of Electrical and Computer Engineering, AND

Reasoning and Learning Lab, School of Computer Science

McGill University

We are seeking applicants for a Postdoctoral Fellow position in Machine Learning for Medical Image Analysis, under the joint supervision of Profs. Tal Arbel and Doina Precup. Prof. Arbel is Director of the Medical Imaging Lab and Probabilistic Vision Group – a vibrant research group that works on probabilistic methods for computer vision and medical image analysis. This lab is part of the Centre for Intelligent Machines, a world-renowned, interdisciplinary research centre focusing on intelligence systems. Prof. Precup is co-director of the Reasoning and Learning Lab, a group of 50+ researchers interested mainly in machine learning and AI. McGill University is located in the beautiful city of Montreal, an exciting, bilingual, multicultural metropolis in the province of Quebec, Canada.

The research project focuses on the development of new machine learning and computer vision algorithms to automatically learn Magnetic Resonance Imaging (MRI) biomarkers for predicting Multiple Sclerosis (MS) disability progression (a debilitating disease for which there is no known cure). The postdoctoral fellow will join a large collaborative team of researchers worldwide, as part of a recently awarded €4 million Collaborative Network Award grant funded by the International Progressive MS Alliance (IPMSA):


The team consists of an interdisciplinary set of researchers including, in addition to computer scientists, neurologists and experts in MS, biostatisticians, medical imaging specialists, and members of the pharmaceutical industry, joining groups from the Montreal Neurological Institute (Canada), Harvard Medical School (USA), University College London Hospital (UK), University of Genoa (Italy), John Hopkins (USA), The University of Texas Health Science Center (USA) and others. The postdoctoral fellow will have access to an enormous dataset of real, multicenter, multi-scanner, MS patient MRI acquired in hospitals and during clinical trials on which to train and test their frameworks.

The candidate must be have a PhD in one of computer vision/medical image analysis/machine learning and have a good track record of publishing in top conferences and journals (e.g. CVPR, MICCAI, IPMI, PAMI, TMI, MIA, NIPS, ICML). Candidates must have strong mathematical skills, good programming skills and knowledge and experience in the domain of machine learning (e.g. C/C++, OpenCV, Theano). In addition to conducting independent research, responsibilities will include collaboration with other members of the IPMSA team and co-supervision of junior graduate students. Candidates should submit a CV, 1-2 significant publications, and the names of 2 reference letter writers. Postdoctoral fellowships can commence right away, and the duration is negotiable. All interested candidates should contact:

Prof. Tal Arbel: arbel@cim.mcgill.ca or Prof. Doina Precup: dprecup@cs.mcgill.ca