

Postdoctoral Position in Computer Science (Deep Learning, AI, Vision)

Ryerson University

Toronto, Ontario, Canada

Posted: June 25, 2018

Vacancy Type: Term Vacancy Notice

Start: August 1, 2018

End: 2 years with the possibility of extension

Department: FOS, Computer Science

Grade: Short-Term Temporary - ()

Hours of Work: 36.25 hours per week

Reporting to: Dr. Neil Bruce

Notes:

Salary range is \$42,500 - \$50,000 per year plus benefits. The position is for two years with the possibility of renewal.

Expected start date: **August 1, 2018 and no later than August 30, 2018**

The Ryerson Vision Lab (<https://ryersonvisionlab.github.io/>) welcomes applications for a 2-year full-time postdoctoral fellow. This position involves machine learning (Deep Learning), Computer Vision, and also working with brain imaging data. More specifically, the successful applicant will explore applications of deep learning to problems in computer vision and explore avenues for brain-computer interfaces. The successful candidate will be supervised by Dr. Neil Bruce in the Department of Computer Science.

Project work will include problems in computer vision, and examining relationships between representations of visual information in deep neural networks and associated brain imaging data (e.g. EEG, MEG, fMRI). This position will allow for opportunities to explore, to experiment with hardware, network building and to understand characteristics of neural networks and/or human cognition based on representations within these two different modalities. On a longer-term horizon, opportunities for technology transfer and entrepreneurship related to these research activities are possible.

Toronto is very active in the AI/ML landscape, and there are many opportunities to attend talks, meet other researchers and grow deeper expertise in this area. Ryerson University has strength in a unique cross-section of disciplines of study providing many opportunities for interdisciplinary collaboration.

Although the position involves deep learning and interdisciplinary elements, no explicit experience with either deep learning or brain imaging is a hard requirement. Exceptionally qualified individuals with a

strong quantitative and CS background that hope to gain expertise in these domains will be considered. Ideal candidates will have:

A Ph.D. in Computer Science (Computer/Systems/Electrical Engineering, or related field may be considered given suitable experience).

Experience with one or more of the following: Deep Learning (CNNs, RNNs, GANs), Deep Reinforcement Learning, Transfer Learning, Autoencoders; Classic Machine Learning Methods; Probabilistic Graphical Models, and related methods.

Strong programming skills including experience with at least 1 ML Python library: PyTorch, TensorFlow, Caffe, Keras.

A record of publication relating to Machine Learning and/or Computer Vision ideally including contributions in some of: CVPR, ICCV, ECCV, NIPS, ICML, ICLR, PAMI and other relevant competitive conferences / journals.

Assets include:

Experience with EEG, MEG or fMRI data

Experience with machine learning for sequences or time series

How to apply

Applications may be directed to Dr. Neil Bruce [bruce@ryerson.ca]. Please include [RVLPostdoc] in the subject line if you make contact by e-mail.

Applications will continue to be reviewed as they are received, and applications received before July 15 are sure to receive full consideration. The anticipated start date for this position is August 1, but should be no later than August 30, 2018.

Ryerson University is strongly committed to fostering diversity within our community. We welcome those who would contribute to the further diversification of our faculty, staff and its scholarship including, but not limited to, women, visible minorities, Aboriginal people, persons with disabilities, and persons of any sexual orientation or gender identity. All qualified candidates are encouraged to apply but applications from Canadians and permanent residents will be given priority.