Funded PhD Research Opportunity

The University of Ottawa in conjunction with Jubilant DraxImage Inc. dba Jubilant Radiopharma, Radiopharmaceuticals Division, is currently recruiting for a 4-year PhD position in Medical Imaging and Artificial Intelligence based in Ottawa, Canada. The PhD is fully funded by a MITACS Accelerate Fellowship Award (https://www.mitacs.ca/en/programs/accelerate/fellowship).

The University of Ottawa, located in the bilingual and multicultural capital of Canada, is among one of Canada's top 10 research universities. Research will take place at The Ottawa Hospital, a world-class health-care organization and leader in research and innovation.

Jubilant Radiopharma is a rapidly growing company with offices in Kirkland, QC and Yardley, PA. A global leader in the development of radiopharmaceuticals and state-of-the-art technologies, we are continuously seeking high caliber professionals to join our team. Jubilant Radiopharma is a proud member of the Jubilant Pharma family. For more information, visit www.jubilantradiopharma.com

Details

Ventilation-perfusion (V/Q) scintigraphy has a major role to play in the diagnosis of pulmonary embolism (PE). Objective criteria exist for diagnosing PE on V/Q scans, making this imaging modality a promising candidate for automated image interpretation with artificial intelligence (AI). Early studies from the 1990s and early 2000s with this aim report satisfactory results but now rely on outdated machine learning techniques. Since then, there has been little work in this domain with recent investigations shifting focus to computed tomography pulmonary angiography (CTPA). There is therefore a huge potential to resurrect and modernize this field with state-of-the-art deep learning approaches.

The goal of the PhD is to develop tools with artificial intelligence (AI) methods for ventilation-perfusion (V/Q) scans. In particular, the candidate will build, train, and evaluate various supervised and unsupervised deep learning models with convolutional neural networks, images, and clinical data for automating diagnosis and improving workflow for clinicians.

The PhD will be supervised by Ran Klein, PhD (http://www.ohri.ca/profile/RanKlein) from Ottawa University, and Eric Moulton, PhD, Director of Artificial Intelligence at Jubilant Radiopharma.

Eligibility Requirements

Applicants should have completed a MSc. Degree in medical imaging, data science, computer science, image processing, biomedical engineering, or related field. Applicants should ideally have experience in image processing methods, medical images, and at least one of the following machine learning libraries in Python: scikit-learn, Keras, Tensorflow, or PyTorch.

PhD Candidates can start as early as possible. Preference will be given to applicants currently residing in Canada under the principals of equality, diversity, and inclusion.

Application Instructions

Please submit your CV and a cover letter to eric.moulton@jubl.com. Applicants that fit the job requirements will be contacted individually for an interview.