Radiology and Imaging Sciences
National Institutes of Health Clinical Center
U.S. Department of Health and Human Services

Post-doctoral Fellowship
Medical Image Processing – Machine Learning & Computer-Aided Diagnosis

A post-doctoral fellowship is available for radiology image processing in Bethesda, Maryland, USA. Specific interest areas are deep learning, learning with limited amounts of data (few shot learning, meta-learning), image segmentation, anomaly detection and classification, modeling, visualization, pattern recognition, computer-aided diagnosis, and image registration. In particular, advanced skills in image processing (machine learning, computer vision, mathematical modeling, optimization) are sought.

Fellows will work closely with staff scientists and practicing clinicians. They have access to state-of-the-art whole body CT, MRI, MRI-PET, and PET-CT scanners, as well as advanced graphics workstations and high performance computing/GPU clusters. Example recent projects include automated assessment on CT or MRI of body composition, cirrhosis of the liver, associations between pancreas morphology and diabetes, and tumor burden in cancer patients.

Basic Qualifications: Ph.D. in Computer Science, Electrical Engineering, Biomedical Engineering, or related discipline with experience in Machine Learning, Computer Vision, or Image Processing, along with publications in top-tier conferences and journals.

Desirable Qualifications: Strong theoretical and practical background in machine learning, computer vision, image or video analysis such as object detection and recognition, statistical pattern recognition, sparse methods and applied optimization. Prior knowledge about medical imaging is a plus but not a must. Enthusiasm in solving real world clinical imaging problems using large datasets, and hands-on coding skills in Python and one or more deep learning frameworks (e.g., PyTorch, TensorFlow, Keras).

Typical fellowships are for 2-3 years but longer ones are possible (up to five years in total). Applications should include a CV, brief statement of research interests and three letters of reference. DHHS and NIH are Equal Opportunity Employers. Candidates are encouraged to apply irrespective of their nationality or citizenship status. Both U.S. and non-U.S. citizens will be considered.

Application Instructions:
Email application materials to Dr. Ronald Summers at rms@nih.gov.

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Website: https://www.cc.nih.gov/meet-our-doctors/rsummers.html