Postdoctoral Research Fellow in Connectome Analysis using functional MRI and DTI scans

School of Computer Science and Engineering
Nanyang Technological University, Singapore

A postdoctoral research fellow position is available in brain image analysis in the Biomedical Computing Group headed by Professor Jagath Rajapakse, Nanyang Technological University, Singapore, for a period of three years.

The candidate will build upon recent research on encoding and decoding the functional and structural connectome by using deep neural networks. Encoding learns compact representations of the connectome, leading to disease classification, subtype identification, etc., and decoding is aimed at identifying key brain regions and connections implicated in brain diseases. The candidate will investigate recent Graph Neural Networks such as GCN, GraphSAGE, and GAT for connectome analysis from fMRI and DTI scans. A key challenge to deep learning approaches of modelling the connectome is the lack of large imaging datasets.

Reference:
S. Gupta, Y. H. Chen, and J. C. Rajapakse, "Obtaining leaner deep neural networks for decoding brain functional connectome in a single shot," *Neurocomputing*, January, 2021.
DOI: 10.1016/j.neucom.2020.04.152

The candidate would have expertise and skills in image analysis, machine learning, and Python/R programming, and a PhD in a related field. Salary is S$6000-7000, depending on experience. Interested candidates are to email their CV to asjagath@ntu.edu.sg:

Professor Jagath Rajapakse
https://personal.ntu.edu.sg/asjagath/