\*\*\* HIRING: machine learning research scientist

The Machine Learning Team at the National Institute of Mental Health (NIMH) in Bethesda, MD, has an open position for a machine learning research scientist. The NIMH is the lead federal agency for research on mental disorders and neuroscience, and part of the National Institutes of Health (NIH).

\*\*\* About the NIMH Machine Learning Team

Our mission is to help NIMH scientists use machine learning methods to address a diverse set of research problems in clinical and cognitive psychology and neuroscience. These range from identifying biomarkers for aiding diagnoses to creating and testing models of mental processes in healthy subjects. We work with many different data types, including very large brain imaging datasets from various imaging modalities, behavioral data, and picture and text corpora. We have excellent computational resources, both of our own (tens of GPUs for deep learning) and shared within the NIH (a cluster with hundreds of thousands of CPUs, and hundreds of GPUs).

As a machine learning research group, we develop new methods and publish in the main machine learning conferences (e.g. NeurIPS and ICLR), as well as in psychology and neuroscience journals. Many of our problems require devising research approaches that combine imaging and non-imaging data, and leveraging structured knowledge resources (databases, scientific literature, etc) to generate explanations and hypotheses. You can find more about our work and publications at

https://cmn.nimh.nih.gov/mlt

\*\*\* About the position

We are seeking candidates who are capable of combining machine learning, statistical, and domain-specific computational tools to solve practical data analysis challenges (e.g. designing experiments, generating and testing statistical hypotheses, training and interpreting predictive models, and developing novel models and methods). Additionally, candidates should be capable of visualizing and communicating findings to a broad scientific audience, as well as explaining the details of relevant methods to researchers in a variety of domains.

Desirable experience that is not required, but will be considered very favorably:

- neuroimaging data processing and analysis (any MRI modality, as well as MEG and EEG)

- other types of neural data (e.g. neural recording, calcium imaging)

- modelling of human and animal learning and decision-making

- Bayesian statistical modelling

Finally, you should have demonstrable experience coding in languages currently used in data-intensive, scientific computing, such as Python, MATLAB or R. Experience with handling large datasets in high performance computing settings is also very valuable. Although this position requires a Ph.D. in a STEM discipline, we will consider applicants from a variety of backgrounds, as their research experience is the most important factor.

This is an ideal position for someone who wants to establish a research career in method development and applications driven by scientific and clinical needs. Given our access to a variety of collaborators and large or unique datasets, there is ample opportunity to match research interests with novel research problems. We also maintain collaborations outside of the NIH, driven by our own research interests.

If you would like to be considered for this position, please send francisco.pereira@nih.gov a CV, with your email serving as cover letter. If you already have a research statement, please feel free to send that as well. There is no need for reference letters at this stage. Other inquiries are also welcome. Thank you for your attention and interest!