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NTU Reg No. 200604393R

23rd Aug 2024:

To Selection Committee:

I hope this letter finds you in good spirits. I am writing to highly recommend Phyo Sandar Win for a position in your organization. I have collaborated closely with Phyo on a project centered on using advanced neural networks to detect emotions relevant for learning.

I am presently an Assistant Professor at the National Institute of Education, Nanyang Technological University in Singapore. I received my Bachelor's degree in Psychology from NUS (Summa cum laude equivalent, 2003-2007) and subsequently pursued my Ph.D. in Neuroscience at Harvard University (2008-2014). I then continued with post-doctoral research on learning and neuropsychiatric disorders at Yale University School of Medicine (2014 – 2020). More information about myself can be found at https://dr.ntu.edu.sg/cris/rp/rp01643

I have had the pleasure of knowing Phyo since Aug 2023. She is a computer science student at NTU who undertook a research project under my supervision. Our project focused on how to detect complex emotions such as curiosity, surprise and confusion. These are emotions that are highly relevant to learning and can drive desirable learning outcomes. However, they may be difficult to detect in live environments. We previously collected brain imaging data of students engaging in authentic learning tasks involving these emotions. Phyo's role was to analyze the brain imaging data to build classifiers to detect occurrences of these emotions.

I am very happy to say that Phyo has exceeded my expectations. She initially had a steep learning curve given the lack of background in brain data or deep neural networks. However, after numerous meetings and her own self-efforts, she managed to accomplish the following: write a Python pipeline to preprocess raw data, filter, build deep neural network architectures, train and evaluate the neural network classifiers. She did all these using both her own custom-code and modifications of existing libraries. Even more impressive was her efficient code to handle of large datasets. She had good problem-solving skills, persisted despite early setbacks in using some of the neural networks, and was highly self-motivated in the research that spanned almost 1 year. The final deep neural network that she trained had impressive performance. We believe the work is sufficient for a journal manuscript that I am writing up and for which she will be a co-author.

I am convinced that Phyo possesses the qualities and skills necessary to excel in a fast-paced data science/artificial intelligence work environment. Her outstanding academic performance, adept problem-solving abilities, and strong work ethic make her an ideal candidate for this opportunity.

Please feel free to contact me if you require further information or have any queries.

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Yours sincerely,

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