

Dear Mitacs Globalink selection committee,

It is my pleasure to recommend Mr. **Russel Shawn Dsouza** for the Mitacs Globalink Internship 2020. Russel is currently in the third year of his undergraduate degree and is one of the most outstanding undergrads to intern at my lab. I encourage you to give him your most careful consideration.

I was Russel's research supervisor for his summer internship project from May to July of 2019 and the instructor for fourth semester course on Digital Signal Processing. During that time, I have watched him grow into an outstanding individual who excels in both his academic and personal pursuits.

As a research intern, Russel worked on using Deep Convolutional Neural Networks Segmentation of nuclei in H&E stained histopathology images of kidney tissues to improve automated diagnosis of cancer. He applied state of the art image processing techniques on the images in MATLAB to compare against deep learning. Using PyTorch and Python, he coded a deep learning pipeline and built multiple fully convolutional networks. He also setup a complex CUDA-conda environment in Linux and trained the models locally on GPUs.

He has also worked on using Natural Language Processing to classify fake news and using Deep Learning to identify Ponzi schemes in his free time using the GPUs in my lab. He is capable of working independently with minimum guidance and support.

He has fit in well within my research group which has 3 PhD, 4 research assistants, 10 graduates and 4 undergraduates.

Russel is a promising student who shows serious enthusiasm in academics and ... He was a member of IRIS, the official student-faculty-administration portal of NITK used by more than five thousand people every day.

He has an immense interest in the fields of Computer Vision, Computational Neuroscience, and Robotics. He is currently working on multiple projects related to each domain to further his understanding and expertise.

In closing, I strongly recommend Russel for the summer internship research program offered by your esteemed organisation.