To Whom It May Concern:

It is my great pleasure to recommend Mr. **Russel Shawn Dsouza**. Russel is currently in the third year of his undergraduate degree and is one of the most outstanding undergraduates to intern in 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 his instructor for the 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 for segmentation of nuclei in H&E stained histopathology images of kidney tissues to improve automated diagnosis of cancer. Using PyTorch and Python, he built a deep learning pipeline and multiple fully convolutional networks. He also setup a complex CUDA-conda environment in Linux and trained each model locally on GPUs. He also applied state of the art image processing techniques on the images in MATLAB and compared the results of classical techniques with that of deep learning methods.

He has worked on using natural language processing to detect fake news and using deep learning to identify Ponzi schemes in his spare time using the GPUs in my lab. He has fit in well within my research group which has 5 PhDs, 8 graduates and 4 undergraduates. He is capable of working independently with minimum guidance and support.

As a member of IRIS, the official student-faculty-administration portal of NITK used by more than five thousand people every day, he has worked in a team of 30 students across disciplines for more than 9 months. He has shown an immense interest in the fields of computational biology, computer vision and robotics and is working on multiple projects related to each domain to further his understanding and expertise.

In closing, I am confident that as a hard working student and great team player Russel will be a valuable addition to your organisation. He has my strongest recommendation.