Russel Shawn Dsouza

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Education		
	National Institute of Technology Karnataka, India	2017-2021
	B.Tech in Electronics and Communications Engineering	
	Little Rock Indian School, Karnataka, India	2004-2017
	K-12	

Notable Projects

Computational Histopathology
Built a supervised learning based model in PyTorch to perform the segmentation of nuclei in H&E stained histopathology images of kidney tissues.

Detecting Ponzi schemes in Ethereum smart-contracts
Used a semi-supervised learning based model, built using PyTorch and torchtext, on raw bytecode of Ethereum smart contracts mined using Google BigQuery, to detect Ponzi schemes.

Detecting fake news using deep learning
Built a classifier using PyTorch and torchtext to identify the truth level of news articles from verified facts and statements.

Face detection and recognition
Implemented real-time face detection and recognition using OpenCV, scikit-learn and dlib on a Raspberry Pi.

Technical Skills

Languages: Python, MATLAB, Rust, C, Verilog, JavaScript
Frameworks/Libraries: PyTorch, torchvision, torchtext, scikit-learn, OpenCV
Web development: Django, ReactJS, GatsbyJS
Tools: git, Linux, Google BigQuery, Xilinx Vivado, LaTeX
Hardware: Xilinx Artix 7 FPGA, Arduino, Raspberry Pi

Experience

Research Assistant — Nov 2019 - Present
under Dr. Shyam Lal, NITK — Karnataka, India
Working on the design and development of an automated kidney cancer detection system from H&E stained histopathology images.

Research Intern — May 2019 - July 2019
under Dr. Shyam Lal, NITK — Karnataka, India
Worked on building a deep learning model in PyTorch for the segmentation of H&E stained histopathology images of kidney tissues to detect kidney cancer. Implemented advanced image processing techniques in Python and MATLAB.

Frontend Developer — August 2018 - April 2019
IRIS, NITK — Karnataka, India
Worked on frontend design and developement for 'IRIS', a digital portal for all administrative and academic activities in NITK with five thousand daily active users.

Python Developer — May 2018 - July 2018
Pinnacle Media, Manipal, India — Karnataka, India
Worked on implementing real-time face detection and recognition using OpenCV, dlib and scikit-learn on Raspberry Pi

Interests

Computer Vision, Neuroscience, Cybernetics, and Augmented Reality