

Russel Shawn Dsouza

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EDUCATION	Master of Science, Artificial Intelligence & Machine Learning University of Birmingham, UK	2022 – 2023
	Bachelor of Technology, Electronics & Communications Engineering National Institute of Technology Karnataka, India	2017 – 2021
	K-12 Little Rock Indian School, India	2004 – 2017
SKILLS	Languages: Python, Java, C, C++, SQL, JavaScript, Go, MATLAB Frameworks: PyTorch, Keras, OpenCV, scikit-learn, Numerical & Scientific Python Hardware: Verilog, ngSPICE, Arduino, Xilinx Artix DevOps: git, Docker, bash, vim, Linux	
RESEARCH INTERESTS	Real-Time Computer Vision for Augmented Reality, Information Retrieval Adversarial Natural Language Processing, Neural Hashing	
EXPERIENCE	Research Intern CMInDS and CSRE, IIT Bombay	May 2021 – Sep 2021
	– Designed & developed novel model variants with vision transformers & CNNs for the multi-modal, pixel-wise classification of land-use from hyperspectral & LiDAR satellite imagery.	
	– Improved model peak-performance by over 10% through the use of state-of-the-art Bayesian hyper-parameter optimisation.	
	Winter Research Intern Deep Learning Lab, NIT Karnataka	Dec 2020 – Mar 2020
	– Implemented state-of-the-art models and set up data pipelines for the nuclear segmentation of cells in histopathology images of kidney and liver tissues.	
	– Collaborated on the detection of <i>Urothelial Carcinoma</i> from whole slide images of bladder tissues with an average size of 4 billion pixels.	
	Summer Research Intern Deep Learning Lab, NIT Karnataka	May 2019 – Jul 2019
	– Revamped and maintained data pipelines for image segmentation and classification models.	
	– Refined efficient implementations of classical image processing algorithms on large datasets.	
	Frontend Developer and UI Designer IRIS, NIT Karnataka	Aug 2018 – Apr 2019
NOTABLE PROJECTS	– Debugged and maintained parts of the frontend code at the official student portal for the university with over 10k daily active users including students, professors and administrators.	
	– Spearheaded the integration of frontend JavaScript with legacy Rails code.	
	Selected as a full-time research intern at the Robert Bosch Center for Cyber-Physical systems, Indian Institute of Science, Bangalore, India's top research university, to work on "Simultaneous Localization And Mapping SLAM".	July 2020
	Selected for a funded research internship at the Haute école du paysage, d'ingénierie et d'architecture de Genève, Haute Ecole Spécialisée de Suisse occidentale, Geneva to work on "NavTrack: A portable obstacle tracker for the rehabilitation of spatial neglect"	Mar 2020
	Low Light Image Enhancement on Low Power Devices Bachelor's Project	Aug 2020 – May 2021
	Adversarial Attacks on Large Language Models Master's Project	Jul 2023 – Sep 2023