# Russel Shawn Dsouza


**Contact Information**

National Institute of Technology Karnataka (NITK)
NH66, Srinivasnagar, Surathkal, Mangalore
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**Research Interests**

Computer vision, Augmented reality, Medical imaging, Neuroscience

**Education**

**National Institute of Technology Karnataka (NIT Karnataka)**
Bachelor of Technology, Electronics and Communications Engineering *Jul 2017 – May 2021*

**Publications**

Lal, S., **Dsouza, R.**, Maneesh, M., Kanfade, A., Kumar, A., Perayil, G., Alabhya, K., Chanchal, A.K. and Kini, J.
*"A Robust Method for Nuclei Segmentation of H&E Stained Histopathology Images."*
2020, 7th International Conference on Signal Processing and Integrated Networks (SPIN) (pp. 453–458). IEEE.
DOI: 10.1109/SPIN48934.2020.9070874

**Research Experience**

***Winter Research Intern, Deep learning lab, NIT Karnataka***
***Segmentation of nuclei in histopathology images of kidney, liver, bladder tissues***
*Mentored by Dr. Shyam Lal* *Dec 2019 – Feb 2020*

- Worked on the segmentation and grading of Kidney and Liver cancer from histology images
- Worked on the detection of Urothelial Carcinoma from whole slide images with average dimensions of 80000×50000
- Built an open-source repository benchmarking segmentation models on histopathology datasets
- Presented a report on various semantic and instance segmentation methods.

***Summer Research Intern, Deep learning lab, NIT Karnataka***
***Segmentation of nuclei in histopathology images of kidney tissues***
*Mentored by Dr. Shyam Lal* *May 2019 – Jul 2019*

- Worked on the efficient implementation of image processing algorithms on large datasets
- Worked on reproducing the results of seminal papers in the field of automated histopathology.

**Work Experience**

***Frontend Developer***
***IRIS, NITK*** *Aug 2018 – Apr 2019*

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***Python Developer***
***Pinnacle Media, Manipal*** *May 2018 – Jun 2018*

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**Skills**

***Languages***: C++, Python, MATLAB, Javascript, Rust, C, Verilog, SPICE
***Frameworks and packages***: Pytorch, Keras, OpenCV, Scikit-learn
***Web Development***: ReactJS, ExpressJS, NodeJS, MongoDB, GraphQL
***Hardware***: Raspberry Pi, Arduino, Xilinx Artix 7 FPGA
***Natural languages***: English, Hindi, Kannada

**Notable**

***Melanoma Classification*** *Jun 2020 – Jul 2020*

## Projects

- Worked on the segmentation and grading of Kidney and Liver cancer from histology images
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***Nuclear segmentation of histopathology images*** *Jan 2020 – Mar 2020*

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***Brain Tumour Segmentation (BraTS)*** *Dec 2019*

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***Detecting Ponzi schemes in Ethereum smart contracts*** *Aug 2019 – Sep 2019*

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***Predicting truth level of news articles*** *Jul 2019 – Aug 2019*

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***Space Time Adaptive Processing Radar*** *Apr 2019*

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- Presented a report on various semantic and instance segmentation methods.

***Face detection on low power devices*** *May 2018 – Jun 2018*

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**Relevant Coursework**

Digital Signal Processing, Machine Learning for Neuroimaging
Digital System Design, Statistical Analysis, Numerical Analysis
Embedded System Design, Microprocessors, VLSI Design, Control Systems
Data Structures & Algorithms, Digital Electronics & Computer Architecture