

# Suren Sritharan

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## EDUCATION

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| <b>B.Sc. Engineering (Specializing in Computer Engineering)</b><br>University of Peradeniya<br>GPA of 4.0/4.0                | 2016 - 2020 |
| <b>G.C.E Advanced level (Physical Science)</b><br>Trinity College Kandy<br>Results - 3A, Z-score - 2.514 (99th country rank) | 2012 - 2014 |

## EXPERIENCE

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|--|------|
| <b>Research Assistant</b> at Sri Lanka Technological Campus, Colombo, Sri Lanka<br>Research on image enhancement under varying illumination conditions.                                | 2020 |
| <b>Volunteer Instructor</b> at the University of Peradeniya, Peradeniya, Sri Lanka<br>Instructor for various undergraduate courses in computer science/engineering.                    | 2020 |
| <b>Autonomous wireless network research intern</b> at Nokia Bell Labs, Antwerp, Belgium<br>Research on the limitations of machine learning models for wireless 5G networks and beyond. | 2019 |

## PUBLICATIONS

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### PEER-REVIEWED JOURNAL

[1] S. Sritharan, H. Weligampola, and H. Gacanin, "A Study on Deep Learning for Latency Constraint Applications in Beyond 5G Wireless Systems" in *IEEE Access*, 2020 (Early access).  
<https://ieeexplore.ieee.org/document/9268052>

[2] G.Jayatilaka, J.Hassan, U.Marikkar, R.Perera, **S.Sritharan**, H.Weligampola, M.Ekanayake, R.Godaliyadda, P.Ekanayake, V.Herath, D.Godaliyadda, A.Rathnayake, S.Dharmaratne, J.Ekanayake. "Use of Artificial Intelligence on spatio-temporal data to generate insights during COVID-19 pandemic: A Review", *PLOS ONE*, 2020. (Under review).  
preprint: <https://doi.org/10.1101/2020.11.22.20232959>

### INTERNATIONAL CONFERENCE

[3] G.C. Jayatilaka\*, H.S. Weligampola\*, **S. Sritharan\***, P. Pathmanathan, R. Ragel, and I. Nawinne. "Non-contact Infant Sleep Apnea Detection" 14th IEEE International Conference on Industrial and Information Systems (ICIIS), 2019.  
<https://ieeexplore.ieee.org/document/9063269>

[4] H.S. Weligampola, G.C. Jayatilaka, **S. Sritharan**, R. Godaliyadda, P. Ekanayaka, R. Ragel, and V. Herath, "A Retinex Based GAN Pipeline to Utilize Paired and Unpaired Datasets for Enhancing Low Light Images", Moratuwa Engineering Research Conference (MERCon), 2020.  
<https://ieeexplore.ieee.org/document/9185373>

[5] G.Jayatilaka\*, **S.Sritharan\***, H.Weligampola\*, D.Elkaduwe, R.Godaliyadda, P.Ekanayake, V.Herath, N.Harishchandra, "Generalizing Foreground Estimation Algorithms in Dynamic Background Conditions", Sri Lanka Technological Campus International Research Conference (SLTC irc), 2020. (Conference abstract).

## AWARDS AND RECOGNITION

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### INTERNATIONAL LEVEL

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| <b>Huawei - Seeds for the Future</b>   | 2019             |
| Represented Sri Lanka at the Huawei Seeds for the Future program for a two-week workshop held in Beijing and Shenzhen, China.                      |                  |
| <b>IEEE Xtreme 13.0 - 2nd Country Rank, 64th World Rank</b>  | 2019             |
| <b>IEEE Xtreme 12.0 - 2nd Country Rank, 79th World Rank</b>  | 2018             |
| <b>IEEE Xtreme 11.0 - 1st Country Rank, 113th World Rank</b>   | 2017             |
| 24-hour Worldwide competitive programming competition organized by IEEE  |                  |
| <b>Google Code Jam - Qualified to R1 (with top country ranks at qualifications)</b>  | 2017, 2018, 2019 |
| Worldwide competitive programming competition organized by Google.   |                  |
| <b>CIMA OCS exams - 1st Country rank, 5th World rank</b>   | 2015             |
| Case study exam is an exam conducted by CIMA in which the examinee must show his financial and management skill in a virtual business environment. |                  |

### NATIONAL LEVEL

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|--|------|
| <b>Migara Ratnatunga Trust Award for Industrial Training</b>   | 2020 |
| Awarded by Institution of Engineers, Sri Lanka for exceptional performance during internship.          |      |
| <b>StatHack 2.0 - 1st place</b>  | 2019 |
| Nationwide Inter-university statistical data analytics competition organized by University of Colombo. |      |
| <b>ACES Coders v7.0 - 1st place</b>  | 2018 |
| 12-hour nationwide Inter-university programming competition with over 300 groups.                      |      |
| <b>Humanitarian Product Competition: IEEE R10 - 1st place</b>  | 2018 |
| Product development competition organized by IEEE for Asia Pacific region (IEEE region 10).            |      |
| <b>Brainstorm - 2nd place</b>  | 2018 |
| Biomedical competition organized by IEEE EMBS section, University of Moratuwa                          |      |
| <b>Dialog NBIOT Hackathon - 2nd place</b>  | 2018 |
| 1st NBIOT based hackathon in Sri Lanka with 10 chosen teams organized by Dialog Axiata.                |      |
| <b>ACES Hackathon 2017 - Best Software</b>   | 2017 |
| An Inter-Faculty Hackathon organized by Faculty of Engineering, University of Peradeniya.              |      |
| <b>Mahapola Higher Education Merit Scholarship</b>   | 2016 |
| Merit based scholarship awarded by government of Sri Lanka for performance at GCE A/L examination.     |      |

### UNIVERSITY LEVEL

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|---|------|
| <b>C. A. Hewavitharana Prize for Best Performance in Engineering</b>                            | 2020 |
| Best academic performance in Engineering (Top of my class of 400+ students with a perfect GPA). |      |
| <b>IFS Gold Medal for Excellence in Computer Engineering</b>                                    | 2020 |
| Best performance in Computer Engineering specialization program.                                |      |
| <b>E. F. Bartholomeusz Prize for Engineering Mathematics</b>                                    | 2020 |
| Best performance in Engineering Mathematics courses.  |      |
| <b>Prof. T.D.M.A. Samuel Prize for Enthusiasm and Excellence in Engineering Mathematics</b>     | 2020 |
| Best performance in Engineering Mathematics elective courses.                                   |      |
| <b>Prof. E. F. Bartholomeusz Endowment awards for Projects</b>                                  | 2020 |
| Awarded for the best the Final Year Project.  |      |

## PROJECTS

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|---|------|
| <b>Crowd risk assessment through CCTV to combat COVID-19 spread in Sri Lanka</b><br>Assessing risk levels based on social distancing, contact detection, and mask identification. | 2020 |
| <b>Low light image enhancement and interpretation</b><br>Enhancing the illumination of low light images for robustness.   | 2019 |
| <b>Deep learning for resource allocation in wireless networks</b><br>Study of the limitation of supervised, unsupervised and reinforcement learning for wireless applications.    | 2019 |
| <b>Novel finite element based structural analysis</b><br>Optimizing novel structural analysis algorithm to improve efficiency and memory consumption.                             | 2018 |
| <b>Infant sleep apnea detection</b><br>Vision-based model for detection of sleep apnea in infants.  | 2018 |
| <b>Foreground estimation in dynamic background</b><br>Pipeline for detection of foreground in dynamic background containing aquatic scenes.                                       | 2017 |
| <b>CPU design on FPGA using VHDL</b><br>Implementation of CPU and Memory for specific ISA using Verilog.  | 2017 |
| <b>Identifying earth resources using hyperspectral imagery</b><br>Software that predicts the existence of a given mineral by analyzing HSI images.                                | 2017 |
| <b>Inventory management system</b><br>Decision support system for inventory management based deterministic models.  | 2017 |
| <b>Brain signal classification</b><br>Classifier to identify type of brain signals based on colour perceptions using OpenBCI board.   | 2016 |
| <b>Speaker recognition</b><br>Program that identifies people based on voice through classical signal processing techniques.   | 2016 |

## TECHNICAL SKILLS

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Tensorflow • PyTorch • Python • Java • C • C++ • R • MATLAB • JavaScript • HTML • CSS • Arduino •  
Verilog HDL • Assembly programming • MySQL • Android development

## REFERENCES

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Prof. Roshan Ragel  
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University of Peradeniya,  
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Dr. Roshan Godaliyadde  
Department of Electrical and Electronic Engineering,  
University of Peradeniya,  
Sri Lanka.  
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