

# Suren Sritharan

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## EDUCATION

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- B.Sc. Engineering (Specializing in Computer Engineering)** 2016 - 2020  
University of Peradeniya  
GPA of 4.0/4.0 (Top of my class of 400+ students)
- G.C.E Advanced level (Physical Science)** 2012 - 2014  
Trinity College Kandy  
Results - 3A, Z-score - 2.514 (99th country rank)

## EXPERIENCE

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

## 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*, vol. 8, pp. 218037-218061, 2020.  
<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", *Journal of Medical Systems (JOMS)*, 2021. (Under review).  
preprint: <https://doi.org/10.1101/2020.11.22.20232959>

### INTERNATIONAL CONFERENCE

- [3] H.S. Weligampola, G.C. Jayatilaka, **S. Sritharan**, P. Ekanayaka, R. Ragel, and V. Herath, R. Godaliyadda, "An Optical physics inspired CNN approach for intrinsic image decomposition", *IEEE International Conference on Image Processing (ICIP)*, 2021.  
<https://tesla.ce.pdn.ac.lk/students/gihan/publications/iid-2021.pdf>
- [4] 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>
- [5] 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>

## AWARDS AND RECOGNITION

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### INTERNATIONAL LEVEL

<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

<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

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

## TEACHING EXPERIENCE

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Volunteer Instructor (UOP) Logic Networks (CO221), 2020. Volunteer Instructor, Computer architecture (CO224), 2020.
Teaching assistant (SLTC) Programming fundamentals (ECS100), 2020. Internet Technologies (CCS112), 2020. Communication Protocols and Models (CCS201/EEE428), 2021. Programming Fundamentals with Python (ICCO2301), 2021.

## TECHNICAL SKILLS

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