



# Dulan S. Dias

RESEARCHER IN COMPUTER SCIENCE

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*"Be the change that you want to see in the world."*

## Research Objective

Ever since I started going to my father's office room after school and started playing around in his spare computer, I became quite fascinated about the endless possibilities in computer science as I mastered myself in self-learning with the assistance of the internet. Growing up having seeing common issues and problems faced by the society, made me ever so curious to utilize my knowledge in trying to provide solutions through technology. Thus, I have always been vigilant to problems that I can solve and have taken measures to do so immediately whenever possible as well. Over that course of experience, what I have seen is that machine learning and artificial intelligence have become such powerful tools to solve most challenging and yet most demanding problems in the world. This has made me ever so passionate and curious to explore and widen my knowledge in these domains through groundbreaking research leading to a Ph.D. in Computer Science.

## Education

### University of Sri Jayewardenepura

[Sri Lanka](#)

B.SC. (HONOURS) IN COMPUTER SCIENCE (FIRST CLASS DIVISION)

2014 - 2018

- Followed Mathematics, Physics and Computer Science course modules in the first two years, and specialized in Computer Science over the next two years. A research project and an industrial placement internship was included in the final year.
- Overall Grade Point Average (GPA out of 4.0): 3.72
- Grade Point Average (GPA) for Computer Science (out of 4.0): 3.86
- Research Project Thesis Title: "Komposer - Automated Generation of Musical Notes based on Lyrics with Recurrent Neural Networks"
- Research Project Supervisor: Dr. T. G. I. Fernando

### University of Colombo School of Computing

[Sri Lanka](#)

BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

2014 - 2017

- Completed Information Technology related course modules along with a software development project in the final year, during the 3 years.
- Developed a "Virtual Team Collaboration Platform" using PHP which enables small teams to work collaboratively in a virtual office-like environment.

## Professional Appointments

### University of Sri Jayewardenepura

[Sri Lanka](#)

TEMPORARY INSTRUCTOR AT DEPARTMENT OF COMPUTER SCIENCE

Mar. 2019 - PRESENT

- Conducted and demonstrated practical classes in Computer Programming with C, Object-Oriented Programming with Java, Computer Graphics with OpenGL, Embedded Systems & Internet of Things, Mobile Application Development with Android Studio and Xcode and Net-Centric Computing.
- Conducted tutorial classes on Computer Programming with C, Object-Oriented Programming with Java and Computer System Organization.

### CodeGen International (Private) Limited

[Sri Lanka](#)

TRAINEE SOFTWARE ENGINEER

Aug. 2018 - Feb. 2019

- Worked on the development of a web-based travel solution which is used by the largest airlines and entertainment parks in the world, using Angular as a front-end framework, strictly adhering to the Agile software development methodology.

### EchonLabs (Private) Limited

[Sri Lanka](#)

CO-FOUNDER

Apr. 2017 - PRESENT

- Acted as the Lead Business Analyst by handling clients and documenting the requirements.
- Worked as the Lead UI/ UX Engineer by designing solutions for clients based on their requirements for both mobile and web projects using Adobe XD and Figma. Web-based designs were also developed using HTML and SCSS.
- Engaged in the development of several product-based enterprise software solutions for local and international clients, using Angular and Node.js.
- Managed multiple projects and teams at the same time, by following Agile practices to meet the expectations of the clients.
- Often engaged in informal quality assurance to ensure the projects and products delivered to clients met the quality standards set-up within the organization.
- Conducted various technical workshops to train interns and new recruits on the tech-stack and tools used by the organization.

# Publications

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## Komposer - Automated Musical Note Generation based on Lyrics with Recurrent Neural Networks

*Ipoh, Malaysia*

1ST INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE AND DATA SCIENCES (AIDAS)

2018

- As the undergraduate research project, researched and developed a machine learning model that can generate musical melodies that can accompany a provided English Lyrics, using Long Short-Term Memory (LSTM) Recurrent Neural Networks.

## Identifying Racist Social Media Comments in Sinhala Language Using Text Analytics Models with Machine Learning

*Colombo, Sri Lanka*

18TH INTERNATIONAL CONFERENCE ON ADVANCES IN ICT FOR EMERGING REGIONS (ICTER)

2018

- During a racial uprising in the country which resulted in banning of social media, developed a trained machine learning model and exposed an Open API to the public, for identification of racist comments in Sinhala language on Social Media.

## Virtual Airplay Drum Kit based on Hand Gesture Recognition

*Kelaniya, Sri Lanka*

3RD INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING AND TECHNOLOGY (ICTACT-2018)

2018

- Developed a hand gesture recognition interface using low-cost ultra-sonic sensors, and applied it in building a virtual airplay drum kit.

## Forecasting Monthly Ad Revenue from Blogs using Machine Learning

*Kelaniya, Sri Lanka*

3RD INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING AND TECHNOLOGY (ICTACT-2018)

2018

- As a blogger myself, in order to fulfil the requirement of revenue estimation, developed a machine learning model to forecast monthly ad revenue generation from a blog.

## A Simple Machine Learning Approach for Identifying Promotional Short Message Service (SMS) Messages

*Kelaniya, Sri Lanka*

KELANIYA INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING AND TECHNOLOGY (KICTACT-2017)

2017

- With the objective of filtering out promotional SMS messages, proposed and implemented a simple machine learning model to automate the task with a greater accuracy.

# Honors & Awards

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## INTERNATIONAL

2018 **Gold Award**, Tertiary Student Project - 18th Asia-Pacific ICT Alliance (APICTA) Awards

*Guangzhou, China*

2018 **Best Paper Presented Award**, 3rd International Conference on Advances in Computing and Technology

*Colombo, Sri Lanka*

## DOMESTIC

2019 **Winner**, Computer Society of Sri Lanka (CSSL) ICT Student of the Year 2019

*Colombo, Sri Lanka*

2019 **Recognition of Excellence**, Innovate Sri Lanka 2019 - University of Sri Jayewardenepura

*Colombo, Sri Lanka*

2018 **Silver Award**, Tertiary Undergraduate Project - National ICT Awards (NBQSA)

*Colombo, Sri Lanka*

2018 **Silver Medal**, Best Employability Skills Achiever (Faculty of Applied Sciences) - J'pura Employability Skills Awards - University of Sri Jayewardenepura

*Colombo, Sri Lanka*

2017 **Silver Medal**, Best Employability Skills Achiever (Faculty of Applied Sciences) - J'pura Employability Skills Awards - University of Sri Jayewardenepura

*Colombo, Sri Lanka*

2017 **Champion**, HackX - Inter-University Hackathon

*Colombo, Sri Lanka*

# Extracurricular Activity

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## UNICEF South Asia Youth Skills and Solutions Forum

*Mumbai, India*

PRESENTER OF VOICE OF YOUTH

Oct. 2019

- Interacted with youth from various countries in the region to share knowledge and experiences to understand the different cultures and common problems faced by the Youth.
- Represented the South Asian Youth and presented the "Voice of Youth" report.

## Sustainable Education Foundation

*Sri Lanka*

CHIEF EXECUTIVE OFFICER

Mar. 2018 - Mar. 2019

- Worked with a global team of volunteers to create freely accessible educational content available through Facebook in the form of digital media.
- Organized workshops/ tech-talks on trending topics bringing down valuable and experienced resource persons.
- Idea-ted and guided the organizing of the first open education forum in Sri Lanka, SEF360.

## Program Committees

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2018	<b>Co-Chair</b> , IEEE Sri Lanka Section Student/ Young Professionals/ Women in Engineering Congress	<i>Sri Lanka</i>
2018	<b>Founder &amp; Interim Chair</b> , IEEE Student Branch - University of Sri Jayewardenepura	<i>Sri Lanka</i>
2017	<b>Head of Sponsorships</b> , Sisi Arundathee - Scientists on Stage Concert	<i>Sri Lanka</i>
2016	<b>Vice President</b> , Society of Computer Science - University of Sri Jayewardenepura	<i>Sri Lanka</i>
2015	<b>Founder &amp; Chief Organizer</b> , Aurora - Conference on Computer Science	<i>Sri Lanka</i>
2012	<b>President</b> , IT Society - Lyceum International School, Wattala	<i>Sri Lanka</i>
2006-08	<b>Co-founder &amp; Editor</b> , "Perfect" - Students' Magazine - Lyceum International School, Wattala	<i>Sri Lanka</i>

## Skills

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**Languages** Python, Java, C++, C, C#, Objective-C, Swift, VB.NET, JavaScript, TypeScript, Node.js, PHP, LaTeX

**Tools and Technologies** Keras, Tensorflow, Azure Machine Learning, OpenGL, Jupyter Notebook, OpenCV, Arduino, MySQL, MongoDB

## Referees

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Dr. T. G. I. Fernando  
Senior Lecturer/ Research Supervisor  
Department of Computer Science  
Faculty of Applied Sciences  
University of Sri Jayewardenepura  
gishantha@dscs.sjp.ac.lk

Mr. D. D. A. Gamini  
Senior Lecturer/ Head of the Department  
Department of Computer Science  
Faculty of Applied Sciences  
University of Sri Jayewardenepura  
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Prof. Sudantha Liyanage  
Senior Professor/ Former Dean of the Faculty  
Faculty of Applied Sciences  
University of Sri Jayewardenepura  
suda@sjp.ac.lk

## Declaration

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I hereby confirm that the information furnished above are true and correct to the best of my knowledge.

Date

Signature