

# GAYAL KURUPPU

gayalkuruppu.gk@gmail.com · [www.github.com/gayalkuruppu](https://www.github.com/gayalkuruppu) · [gayalkuruppu.github.io](https://gayalkuruppu.github.io)

## EDUCATION

**University of Minnesota - Twin Cities, MN, USA**  
*PhD in Computer Science*

Sept 2023 - Present

**The Cornell, Maryland, Max Planck Pre-doctoral Research School, Saarbrücken Germany**  
Max Planck Institute for Software Systems, Germany

Aug 2020

**University of Moratuwa, Sri Lanka**

2016 - 2021

*BSc in Engineering(Electronic & Telecommunication Eng.); First Class Honors*

Dean's List: Semester 1,2,6,7,8

Data Structures and Algorithms (A)

Neural Network & Fuzzy Logic (A+)

Machine Vision (A+)

Time Series & Stochastic Processes (A)

Final Year Proj. (Computer Vision) (A+)

Industrial Training (A+)

**Ananda College, Colombo, Sri Lanka**

Grad: Aug 2015

GCE Advanced Level (Mathematics, Physics, Chemistry, General English) 4As / 29th in the country / z-score of 2.74  
(country-wide university entrance examination taken by over 300,000 students annually)

## EXPERIENCE

**University of Minnesota - Twin Cities, MN, USA - Graduate Research Assistant**

Aug 2023 - Present

- Research on wearable healthcare data using machine learning under Dr. Yogatheesan Varatharajah

**MBZUAI, Abu Dhabi, UAE - Research Assistant(Computer Vision)**

Nov 2022 - Jul 2023

- Explore the usages of Vision Transformer specific architectures to improve Domain Generalization and Network Calibration under Dr. Muhammad Haris Khan. (Submitted two research papers, under review)

**WSO2 LLC, Sri Lanka - Software(Compiler) Engineer**

May 2020 - Nov 2022

- Developed backend Java APIs for the Compiler of the novel cloud native programming language - Ballerina
- Introduced and implemented refactor extract code actions
- Implemented performance testing framework for Ballerina Language Server
- Covered full SDLC for language support for novel language and tooling features
- Volunteered in the Ballerina Security team

**University of Moratuwa, Sri Lanka - Undergraduate Researcher**

Apr 2020 - Mar 2021

- Published a research paper and implemented an end-to-end pipeline for Computer Vision and Virtual Reality implementation for online fashion recommendation (Arxiv '22)
- Reconstruct the 3D human body model using an image and let customer wear the clothes which are recommended by our algorithm in a VR clothing store (UVITON)

**WSO2 LLC, Sri Lanka - Research Intern**

Jun 2019 - Dec 2019

- Developed an **analytical framework** to model the performance of micro-services using Python
- Evaluated the accuracy of the framework by comparing analytical and experimental performance results
- Co-Authoring the research paper: An Analysis of Throughput and Latency Behaviours under Microservice Decomposition (**International Conference for Web Engineering 2020**)
- Developed a framework to analyze the, availability limits of micro-services based systems using Python

**Olivescript, Sri Lanka - Research Development Intern**

Jun 2017 - Jun 2018

- Get the PPG signal from the foot, process it to health data and diagnosis of early symptoms of diseases
- Added the feature to Clardia to get the body fat percentage of a person from his foot
- Team member of the winning team of the 'Disrupt Asia 2017 - Startup Battle'

## PUBLICATIONS

Chamuditha Jayanga, **Gayal Kuruppu**, Muhammad Haris Khan

**Generalizing to Unseen Domains in Diabetic Retinopathy Classification**

WACV(Under Review), 2023

**Gayal Kuruppu**, Bumuthu Dilshan, Shehan Samarasinghe, Nipuna Madhushan, Ranga Rodrigo

**Realistic, Animatable Human Reconstructions for Virtual Fit-On**

Arxiv, 2022

#### SELECTED AWARDS

<b>Schol. Recipient</b> - "The Cornell, Maryland, Max Planck Pre-doctoral Research School", Saarbrucken Germany	2020
<b>Mahapola Merit Scholarship</b> - Ranked 29th in Sri Lanka at GCE Advanced Level Examination	2015
<b>Merit Medalist</b> - International Mathematics Competition, Bali, Indonesia	2011
<b>Represented Sri Lanka</b> - International Mathematics Competition, Taiwan	2012
<b>Silver Medalist</b> - Sri Lanka Mathematics Olympiad Junior Competition	2011
<b>Runners-Up</b> - Australian National Chemistry Quiz	2014
<b>M. Charles memorial scholarship</b> - Best performer in Mathematics in GCE A/L Exam by an Anandian	2015
<b>National &amp; School Colors</b> - Mountaineering, Sri Lanka	2015

#### SKILLS

<b>Languages:</b> Python(Proficient), Java(Proficient)	<b>Frameworks:</b> Tensorflow, PyTorch(Intermediate)
<b>Tools:</b> GitHub(Intermediate)	
<b>Experience &amp; Interests:</b> Computer Vision, Software Development, Performance Analysis	

#### HACKATHON EXPERIENCE

<b>National Rank 6, Global Rank 140</b> - IEEEExtreme 12.0	International, 2018
<b>National Rank 5, Global Rank 164</b> - IEEEExtreme 11.0	International, 2017
<b>Champions</b> - Thinkwave 2.0 Ideathon organized by AIESEC CS, Sri Lanka	National, 2021
<b>Runners-Up</b> - IEEE Innovation Nation Sri Lanka organized by IEEE Sri Lanka	Sri Lanka, 2021
<b>Runners-Up</b> - "HackStat", Data Science Hackathon organized by University of Colombo	Sri Lanka, 2018

#### VOLUNTEER EXPERIENCE / LEADERSHIP

<b>Rotaractor - Rotaract Club - Rotaract District 3220</b>	2017-2019
Co-chaired the event <b>YouTM of Are You Ready 2017</b> the official career fair of the University.	
Volunteered to teach mathematics in rural areas - Monaragala, Sri Lanka.	
<b>AIESECer - Colombo South Local Committee</b>	2017-2019
Vice President(Finance) - Project Aqua 6.0.	
Member of Project Ripple Effect 12.0.	
<b>Secretary - Mathematics Society - Ananda College</b>	2014/2015
Held mathematics workshops for students to uphold the interest in mathematics aiming the local mathematics Olympiad exams.	
<b>Co-ordinator - Science Union - Ananda College</b>	2014/2015
Led the high school Mathematics and Science Quiz team and won 4 out 5 major Science Quizes in the season 2014/2015	

#### NON-RELATED REFERENCES

Dr. Muhammad Haris Khan Assistant Professor(Computer Vision), Mohamed bin Zayed University for Artificial Intelligence, United Arab Emirates Tel: +97128113258 Email: muhammad.haris@mbzuai.ac.ae	Dr. Yogatheesan Varatharajah Assistant Professor(Computer Science & Engineering), University of Minnesota - Twin Cities, USA Visiting Scientist(Neurology), Mayo Clinic, USA Tel: +12179740493 Email: yvaratha@umn.edu
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