GAYAL KURUPPU

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EDUCATION

University of Minnesota - Twin Cities, MN, USA   Sept 2023 - Present
PhD in Computer Science

The Cornell, Maryland, Max Planck Pre-doctoral Research School, Saarbrucken Germany   Aug 2020
Max Planck Institute for Software Systems, Germany

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-Authored 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

Malith Jayasinghe, Jayathma Chathurangani, **Gayal Kuruppu**, Pasindu Tennage, Srinath Perera
An Analysis of Throughput and Latency Behaviours Under Microservice Decomposition. In proceedings of the International Conference for Web Engineering 2020   ICWE, 2020

SELECTED AWARDS

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

SKILLS

Languages: Python(Proficient), Java(Proficient)   **Frameworks**: Tensorflow, PyTorch(Intermediate)

Tools: GitHub(Intermediate)

Experience & Interests: Computer Vision, Software Development, Performance Analysis

HACKATHON EXPERIENCE

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

VOLUNTEER EXPERIENCE / LEADERSHIP

Rotaractor - Rotaract Club - Rotaract District 3220   2017-2019
Co-chaired the event **YouTM** of **Are You Ready 2017** the official career fair of the University.
Volunteered to teach mathematics in rural areas - Monaragala, Sri Lanka.

AIESECer - Colombo South Local Committee   2017-2019
Vice President(Finance) - Project Aqua 6.0.
Member of Project Ripple Effect 12.0.

Secretary - Mathematics Society - Ananda College   2014/2015
Held mathematics workshops for students to uphold the interest in mathematics aiming the local mathematics Olympiad exams.

Co-ordinator - Science Union - Ananda College   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