

Dilshani Karunarathna

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Education

Bachelor of the Science of Engineering (Specialized in Computer Engineering)

Nov. 2016 - Sep. 2021

Faculty of Engineering, University of Peradeniya, Sri Lanka

First Class Honours

GPA : 3.7/4.0

Final Year GPA : 4.0/4.0

G.C.E. Advanced Level Examination (Physical Science Stream)

Aug 2015

Ferguson High School Ratnapura, Sri Lanka

Z Score : 1.9553

Results : Combined Mathematics - A , Physics - B, Chemistry - A

Work Experience

Temporary Instructor - Department of Computer Engineering, Faculty of Engineering, University of Peradeniya, Sri Lanka

Sep 2021 - Present

- Contribute to the research works carried out in the faculty.
- Work as the Instructor In Charge of Computer Architecture and Compilers courses
- Work as an Instructor in several courses.
- Conduct laboratory classes, and tutorial classes for the undergraduate students.
- Contribute to the projects carried out in the faculty as the Project Manager, Scrum master and Financial Assistant

Software Engineer Intern - Geveo Australasia Pvt (Ltd), Sri Lanka

Apr 2021 - Aug 2021

- Actively contributed to two ongoing projects with the primary focus on full-stack web development in an Agile environment.
- Developed new functionalities and features in line with the business requirements and functional specifications.
- Developed RESTful Web APIs
- Designed and implemented data models, stored procedures, and performed database manipulations.
- Involved in bug fixing on functionality and performance.
- Designed unit tests to ensure functionality.

Research Interests

- Virtual Reality
- Augmented Reality
- Cloud Computing
- Mixed Reality
- Extended Reality
- Artificial Intelligence

Publications

Mixed Reality based Multi-Agent Robotics Framework for Artificial Swarm Intelligence Experiments

2022

Dilshani Karunarathna, Nuwan Jaliyagoda, Ganindu Jayalath, Isuru Nawinne, Roshan Ragel

Robotics and Autonomous Systems Journal - Under Review

Automatic Segmentation of Lumbar Intervertebral Discs from the Axial View

2022

Yuwin Siriwardhane, **Dilshani Karunarathna**, Imesh Ekanayake

Moratuwa Engineering Research Conference (8th International Multidisciplinary Engineering Research Conference) - Under Review

Presentations

Mixed Reality based Multi-Agent Robotics Framework for Artificial Swarm Intelligence Experiments.

March 2022

Poster presented at: Peradeniya University Research Excellence Showcase 2022

Dilshani Karunarathna, Nuwan Jaliyagoda, Isuru Nawinne, Roshan Ragel.

Mixed Reality Environment for Swarm Robotics Simulations

July 2021

ESCaPe 2021 Online Project Symposium

Dilshani Karunarathna, Nuwan Jaliyagoda, Ganindu Jayalath

Best Research Presentation Award

Researches

Dynamic Environment Setup using Swarm of Mobile Robots

March 2022– Present

Introducing obstacle bots for a swarm robotic arena which is a part of a swarm robots platform project

Self-Directed Learning Readiness and degree of stress among school and university students

Oct 2021 - Present

Identify aspects of learning patterns of students and to introduce an age appropriate education program to inculcate SDL (Self Directed Learning) amongst them.

Projects

Zero Trash

2020

A communication platform between users and garbage collectors to reduce waste collection costs and assist in the recycling process.

A GUI for Controlling and Supervising Multiple Robots Remotely

2019

A GUI platform where a user can give commands which are to be followed by ground units in a remote location.

Pera Knowledge Hub

2019

A web portal to upload and retrieve research papers, project reports, thesis done in the University of Peradeniya.

Real-Time Vehicle Identification System

2018

Detect the registration number of vehicles using camera images and automate the ticketing method at Highway toll booths.

The Simple As Possible (SAP) – I

2018

A computer with basic necessities using discrete logic ICs.

Certifications

- Introduction to Augmented Reality and AR Core, Google AR & VR - Credentials: [FYQ4SDG2596Z](#) 2022
- Introduction to Big Data and Hadoop Course, Bangladesh Research and Education Network (BdREN) - Credentials: [fDLuDCf-DLE4-2132](#) 2020
- Data Center Virtualization and Cloud Computing Infrastructure - Bangladesh Research and Education Network (BdREN) - Credentials: [fDLuDCf-DLE5-2344](#) 2020
- AWS Fundamentals: Going Cloud-Native, Amazon Web Services - Credentials: [BT7ULEWL3M67](#) 2020
- Google Cloud Platform Fundamentals: Core Infrastructure, Google Cloud - Credentials: [2K6MB4MJ4KX4](#) 2020
- Server-side Development with NodeJS, Express and MongoDB, The Hong Kong University of Science and Technology - Credentials: [9AQJALJL45FB](#) 2020
- Front-End Web Development with React, The Hong Kong University of Science and Technology - Credentials: [6D4K4CP9QKY8](#) 2020
- Neural Networks and Deep Learning, DeepLearning.AI - Credentials: [R5RM43YJPFT2](#) 2020

Professional Affiliations

Student member of IEEE

2018-2021

Extracurricular Activities

- Volunteer of Nenathambara Project 2021 - Present
- Writer of [Association of Computer Engineering Students \(ACES\)](#) Outline 2019, the Newsletter 2019
- Member of the [Association of Computer Engineering Students \(ACES\)](#), University of Peradeniya 2018-2021
- Member of the [Ceylon Dramatic Society](#) and Music Society, University of Peradeniya 2016-2021
- Member of the School Western Band, Ferguson High School 2007-2015
- Member of the School Choir, Ferguson High School 2014-2015

Referees

Dr. Isuru Nawinne (Ph.D. UNSW)

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Department of Computer Engineering,
University of Peradeniya.
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Prof. Roshan Ragel (Ph.D. UNSW)

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