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   Sep 2021 - Present
Peradeniya, Sri Lanka
- 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
- Mixed Reality
- Augmented Reality
- Extended Reality
- Cloud Computing
- 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) – 1   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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