OSHAN MUDANNAYAKE

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EDUCATION

University of Colombo School of Computing　　　　　　　　　　　Feb. 2016 - Jan. 2019

B.Sc (Hons) in Computer Science

First Class Honors with a GPA of 3.61/4.0

Ranked 6th over 156 CS students in my class

Obtained an A grade for the Final Year Research on *Summarization of Large Scale Streaming Graphs*

- Research Intern at Distributed Computing Group
- Chair, Secretary and Coordinator of IEEE Student Branch
- Core team member of Mozilla Club
- Member of CompSoc
- Instructor of Exploration Club
- Batch representative at IUD

Maliyadeva College　　　　　　　　　　　　　　　　　　　　Jan. 2001 - Dec. 2014

G.C.E. Advance Level Examination - Physical Science Stream

- President of Robotics Club
- Team Lead of Hardware and Networking Group

PUBLICATIONS

Oshan Mudannayake, Nalin Ranasinghe. "kMatrix: A Space Efficient Streaming Graph Summarization Technique", in *10th IEEE International Conference on Information and Automation for Sustainability (ICIAfS) 2021*, Colombo, Sri Lanka, August 2021, (Accepted). [Link].

RESEARCH EXPERIENCE

University of Colombo School of Computing　　　　　　　　　May. 2021 - Present

Research Assistant (Part-time)　　　　　　　　　　　　　　　　　　Sri Lanka

- Advisor: Dr. Noel Fernando
- Working on *Modeling and Prediction of Solid Waste Generation in Sri Lanka using Machine Learning Approaches.*

Sustainable Computing Research (SCoRe) Lab　　　　　　　　　Aug. 2020 - Present

Researcher (Part-time)　　　　　　　　　　　　　　　　　　　　Sri Lanka

- Advisor: Dr. Mohamed Nabeel
- Working on *Machine Learning based Internet Domain Entity Matching and its Applications.*

University of Colombo School of Computing - Distributed Computing Group　Jul. 2018 - Jan. 2019

Research Intern (Full-time)　　　　　　　　　　　　　　　　　　Sri Lanka

- Advisor: Dr. Nalin Ranasinghe
- Carried out a research study on the topic, *Machine Learning Over Encrypted Data.*

R&D EXPERIENCE

Language Matters　　　　　　　　　　　　　　　　　　　Jan. 2018 - Mar. 2020

Software Developer (Contract)　　　　　　　　　　　　　　　　　Sri Lanka

- Supervisor: Dr. Leonie Solomons

- Working part time on developing an OCR solution for Sinhala language using Tesseract OCR Engine.

Dreamteam IT Solutions   Mar. 2016 - Jan. 2017
Software Developer (Contract)   Sri Lanka
  - Supervisor: Dr. Gihan Kuruppu
  - Provided R&D solutions to industrial problems such as *Bra Elasticity Analyzing System*, *Yarn Detection System* and *Glove Defect Identification System*.

TEACHING EXPERIENCE

Dreamteam IT Solutions   Jan. 2016 - Jun. 2016
Course Instructor (Contract)   Sri Lanka
  - Conducted sessions for introductory robotics and Java 6.

PROFESSIONAL EXPERIENCE

WSO2   Apr. 2021 - Present
Data Science Engineer (Full-time)   Sri Lanka
  - Improved the HR aspects of the company by introducing a model to predict the workforce requirement in the coming years.

WSO2   Mar. 2020 - Mar. 2021
Software Engineer - IAM Team (Full-time)   Sri Lanka
  - Designed and implemented the new CORS architecture for the Identity Server 5.11.
  - Worked extensively on customer support in order to give solutions for the product issues.

CERN-HSF - Google Summer of Code   May. 2018 - Aug. 2018
Student Developer   Remote
  - Worked as a Google Summer of Code Participant in collaboration with *CERN-HSF*, *ownCloud* and *AARNet* to provide a prototype of a new web UI for CERNBox that will provide an immersive user experience.

RESEARCH PROJECTS

Realtime Property Evaluation of Large Streaming Graphs   Jan. 2019 - Jan. 2020
Graphs, Graph Summarization, Python
Final year research project carried on the area of massive streaming graph summarization.

TessTA   Jan. 2018 - Mar. 2020
React, Java, Spring Boot, Hibernate, Tesseract, AWS
OCR Solution for Sinhala language using Tesseract OCR Engine.

Machine Learning over Encrypted Data   Jul. 2018 - Jan. 2019
ML, Encryption, Tensorflow, Python, Google Cloud Platform
I worked on adding a layer over Tensorflow to facilitate machine learning on encrypted data over a distributed network of machines.

R&D PROJECTS

Smart Traffic Light System   Feb. 2017 - Nov. 2017
Angular, NodeJS, Firebase, GCP, Raspberry Pi, Arduino, MQTT, Ionic Framework
Traditional time interval based traffic light system was automated to remove the involvement of traffic officers.

Bra Elasticity Analyzing System   Mar. 2016 - Jan. 2017
Java, Swing, Image Processing, OpenCV
Implemented a way to compare the elasticity of sports bras using image processing.

Yarn Detection System
Mar. 2016 - Jan. 2017

Image Processing, Python, OpenCV, Raspberry Pi

Solution to detect the knots of yarn threads in glove weaving machines.

Glove Defect Identification System
Jan. 2016 - Jun. 2016

Image Processing, Python, OpenCV

Identified the common defect of gloves using image processing as they are being passed through a conveyor belt.

Smart Glove
Jan. 2016 - Jun. 2016

Java, JavaFX, FSR 400, Arduino

A glove prototype that can measure the pressure distribution and the acceleration of hand in order to derive the best patterns of movements for Cricket players in relation with the hand pressure.

PROFESSIONAL CERTIFICATIONS

Oracle Certified Professional Java SE 6 Programmer
2015

Oracle

Robotics & Automation
2015

Dreamteam IT Solutions

Professional Certified Java Developer
2015

Dreamteam IT Solutions

Diploma in Software Engineering
2013

Esoft

Diploma in PC Hardware and Network Administration
2010

Esoft

MOOC CERTIFICATIONS

Advanced Machine Learning on Google Cloud Specialization
2021

by Google Cloud
Coursera

Data Engineering, Big Data, and Machine Learning on GCP Specialization
2021

by Google Cloud
Coursera

Machine Learning with TensorFlow on Google Cloud Platform Specialization
2021

by Google Cloud
Coursera

Deep Learning Specialization
2020

by DeepLearning.AI
Coursera

Natural Language Processing Specialization
2020

by DeepLearning.AI
Coursera

DeepLearning.AI TensorFlow Developer Specialization
2020

by DeepLearning.AI
Coursera

Generative Adversarial Networks (GANs) Specialization
2020

by DeepLearning.AI
Coursera

AI for Everyone
2020

by DeepLearning.AI
Coursera

Qwicklabs quests on ML and Data Science
2020

by Qwicklabs
Qwicklabs

ACHIEVEMENTS

Merit Award - Datathon - SLIIT Codefest Sri Lanka Institute of Information Technology	2019
1st place - Codezilla Mozilla Campus Club of Uva Wellassa University	2018
1st place - LetMeHack Sabaragamuwa University	2018
Participant - HackZurich Digital Festival	2019
Participant - Hack The North University of Waterloo Got selected for the hackathon from over 5000 applicants worldwide.	2018
2nd place - Presistent Hackathon Persistent Systems Lanka	2017
2nd place - HACKiNTRA University of Jaffna	2017
Finalist - CodeFest Designathon Sri Lanka Institute of Information Technology	2017
Finalist - SS12 Asia IEEE	2017
3rd place - Dialog Game Dev Hackathon Dialog Axiata	2017
1st place - Mozilla Web Maker Party Mozilla Club of University of Colombo School of Computing	2016
2nd place - CodeFest Tertiary Hackatho Sri Lanka Institute of Information Technology	2016
1st place - IEEE preXtreme 1.0 IEEE Student Branch of University of Colombo School of Computing	2016
6th place - ACES Coders University of Peradeniya	2016
5th place - Code Expertz University of Moratuwa	2016

SCHOLARSHIPS & GRANTS

AutoML Fall School Scholarship AutoML Fall School	2021
Dataquest & AI Inclusive Scholarship Dataquest	2021
Tokyo Data Science Full Scholarship Tokyo Data Science	2020
HackZurich Travel grant Digital Festival	2019

AI Summer School Singapore Scholarship[1]   2019
AI Singapore

ownCloud Conference Travel grant by CERN   2018
CERN — ownCloud

Hack the North Travel grant   2018

HONOURS & AWARDS

Award of Appreciation   2017
University of Colombo School of Computing
Special award on recognizing the outstanding achievements in hackathons and coding competitions.

TECHNICAL PROGRAMS

Online Asian Machine Learning School (OAMLS)   Nov. 2021
The 13th Asian Conference on Machine Learning   *Remote*

AutoML Fall School   Nov. 2021
                                                                            Remote

ACM Europe Summer School on HPC Computer Architectures for AI and Dedicated Applications   Aug. 2021
Barcelona Supercomputing Center and Universitat Politècnica de Catalunya   *Remote*

AI Summer School Singapore 2021   Aug. 2021
AI Singapore   *Remote*

Qiskit Global Summer School 2021: Quantum Machine Learning   Jul. 2021
Qiskit   *Remote*

AI Summer School Singapore 2020   Aug. 2020
AI Singapore   *Remote*

PRESENTATIONS

kMatrix: A Space Efficient Streaming Graph Summarization Technique   *Jul. 2021*
IEEE International Conference on Information and Automation for Sustainability 2021   *Remote*

INVITED TALKS

Rust 101   *Oct. 2019*
Hacktoberfest 2019 by Mozilla Club of UCSC   *Colombo, Sri Lanka*

Lightning talk on Phoenix   *Sep. 2018*
ownCloud Conference 2018   *Nuremberg, Germany*

SESSIONS / SEMINARS

Career guidance for undergraduates   *May. 2021*
UCSC ACM Student Chapter   *Colombo, Sri Lanka*

A new CORS Valve for the WSO2 Identity Server   *Dec. 2020*
IAM Community Call by WSO2   *Colombo, Sri Lanka*

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[1]I did not accept this scholarship as I could not attend the event due to the university examinations.

COMMITTEE POSITIONS

Core Team Member 2019 - Present
Google Developer Group (GDG) Sri Lanka

President 2019
IEEE Student Branch of UCSC
 - IEEE Regional Exemplary Student Branch 2020 under Region 10 and Sri Lanka Section
 - Bronze category winner of IEEE Darrel Chong Student Activity Award 2020
 - Best Student Branch Activity Award for GameRush at IEEE SLSYWC 2019

Team Lead 2019
Mozilla activate Sri Lanka - Rust Team

Web Master 2018
IEEE Sri Lanka Section - Student activity Committee (SAC)

Secretary 2018
IEEE Student branch of UCSC

Operational Committee Member 2018
Mozilla Activate Sri Lanka

Android Developer 2018
Global Geek Sustainable Learning Kingdom (GGSLK) Sri Lanka

Operational Committee Member - Program Team 2017
IEEE Student/YP/WIE Congress

Operational Committee Member - Finance Team 2017
Technological Awareness Project by IEEE Sri Lanka Section
 - Best Industry Collaborative Award at IEEE SLSYWC 2017

Operational Committee Member - Program Team & Finance Team 2017
CloudHack 17 by IEEE Student Branch of UCSC
 - Best Student Branch Activity Award at IEEE SLSYWC 2017

Core Team Member 2017
Mozilla Club UCSC

Coordinator 2017
IEEE Student Branch of UCSC

Operational Committee Member - Finance Team 2016
Innover - IEEE IAS IOT Workshop

Operational Committee Member - Program Team 2016
IEEE Day UCSC

Instructor 2016
UCSC Exploration Club

President 2013
Robotics Club - Maliyadeva College

Team Lead 2012 - 2013
Hardware and Networking Team - Maliyadeva College

VOLUNTEERING

Judge panel member   Jul. 2021
IEEE YESIST12 2021 - Junior Einstein Track by IEEE

Judge panel member   Jul. 2021
MadHack by IEEE Student Branch of UCSC

Mentor   Jul. 2021
ReidCon by UCSC

Mentor at SCoRe Lab   2021
Google Summer of Code 2021

Mentor at SCoRe Lab   2020
Google Summer of Code 2020

Mentor at SCoRe Lab   2019
Google Summer of Code 2019

Mentor at SCoRe Lab   2018
Google Code-In 2018

Mentor   2018
2nd Year Group Project Mentoring by IEEE Student Branch of UCSC

Mentor at SCoRe Lab   2017
Google Code-In 2017

Volunteer Crew Member   2017
Google IO Extended - Dialog Axiata

Question Panel Member   2017
preXtreme 2.0 - IEEE Student Branch of UCSC

Mentor   2017
International School Software Competition (ISSC) - Computer Society of Sri Lanka (CSSL)

Mentor   2017
Help to Code - Information and Communication Technology Agency of Sri Lanka (ICTA)

Mentor at SCoRe Lab   2016
Google Code-In 2016

Delegate   2016
IEEE Student YP/WIE Congress - IEEE Sri Lanka Section

Mentor   2016
National School Software Competition (NSSC) - Computer Society of Sri Lanka (CSSL)