Kanchana Ruwanpathirana

Graduate Student (PhD)

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About me

I am a 3rd year grad student at the University of Utah currently enrolled in the PhD program at the School of Computing. I am aiming to leverage my knowledge of analytical methods, experimental design, research skills in the industry and expand my horizons. My research interests involve approximation algorithms for problems including online learning problems (such as online clustering) as well as problems such as matrix completion, principal component regression, weighted low-rank approximation and etc. Outside of the work, I'm also in to hiking and outdoor activities.

Skills

Java,Python,C,C++

Communication skills

Problem solving

Modules

University of Utah

Advanced Algorithms (A)
Data Mining (A)
Machine Learning (A)
Intro to Optimization (A)

University of Moratuwa, LKA

Distributed Systems (A)
Operational Research (A)

Coursera

Machine Learning
(Credential ID: 2YFH5MTU2EK9)
Computational Neuroscience
(Credential ID: Q6GSNPCJYPBT)

Education

since 2018 — Graduate Student (Ph.D.) — School of Computing, University of Utah
Current GPA: 4.0
Working with Prof. Aditya Bhaskara. Worked on projects in online learning and in principal component regression and matrix completion literature. Published a paper on online k-means clustering, at ALT 2020. A publication in submission for the matrix completion work at AISTATS.

2014-2018 — B.Sc. of Engineering — University of Moratuwa, Sri Lanka
Cumulative GPA: 4.09/4.20
Majored in Computer Science and Engineering

Publications

2021 — Additive Error Guarantees for Weighted Low Rank Approximation
with Aditya Bhaskara and Pruthivi Maheskaya Wijewardena
In Submission

2020 — Principal Component Regression with Semirandom Observations via Matrix Completion
with Aditya Bhaskara and Pruthivi Maheskaya Wijewardena
Accepted to AISTATS 2021

2020 — Robust Algorithms for Online k-means Clustering
with Aditya Bhaskara
Proceedings of the 31st International Conference on Algorithmic Learning Theory

Experience

2018 — Junior Consultant - University of Moratuwa, Sri lanka — TA/Management
Primary job tasks involved TA work for undergraduate classes, assisting in management tasks and assisting in creating and managing continuous assessments for incoming students

2016 — Visiting Research Fellow - SUTD, Singapore — ML in Music Research
Worked with Dr. Simon Lui from Singapore University of Technology and Design. Research project on recognizing emotions in music. Analysis of the mathematical model used in mapping acoustic feature space to emotional vector space and using ml techniques (i.e. SVM, NN etc.) to model it in to a continuous domain

Awards

2017 — NASA Space Apps 2017 — Global Finalist
Member of Team Codon [global finalist in Galactic Impact Category]

2016 — International Mathematics Competition for University Students (23rd IMC) — Bronze Medal

2012 — International Mathematical Olympiad (53rd IMO) — Certificate

Activities

2012-2020 — Sri Lanka Olympiad Mathematics Foundation — Volunteer Member
Was involved in managing the web applications, exam management and proctoring. Currently assisting in creating a exam management system for the organization.

2016 — Mathematics Society - Univeristy of Moratuwa, Sri Lanka — Secretary
Involved in re-establishing the mathematics society and initiating a series of weekly talks by members and invited lecturers.