

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.

2014-2017 B.Sc. of Engineering

University of Moratuwa, Sri Lanka

Cumulative GPA: 4.09/4.20

Majored in Computer Science and Engineering

Publications

- 2020 Principal Component Regression with Semirandom Observations via Matrix Completion
with Aditya Bhaskara and Pruthivi Maheskaya Wijewardena
Under Review
- 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
- 2017 Student/Researcher Research
Worked on simulating the visual cortex (V1) and the use of biologically plausible networks in ML and pattern recognition as part of the final year research project under Dr. Charith Chithraranjan at University of Moratuwa, Sri Lanka.
- 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.