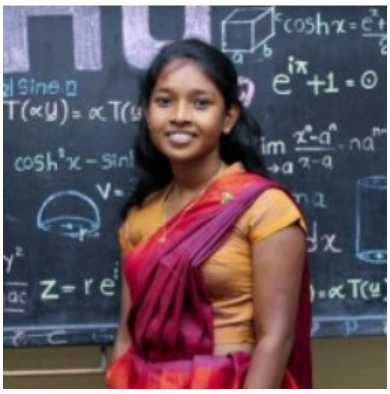
Srimali Gunasekara



Srimali Gunasekara

PhD Student

Theme 3

Srimali Gunasekara is a PhD Student in Mathematical Science at Curtin University, and she is interesting novel concepts of Mathematics and Optimisation to apply those methods in real-world problems.

Publications

Content by label

There is no content with the specified labels

Presentations

Content by label

There is no content with the specified labels

Awards and Prizes

Content by label

There is no content with the specified labels

Tools

Content by label

There is no content with the specified labels

Srimali completed her bachelor's honors degree in Mathematics in Sri Lanka. She chose to work on Numerical Analysis based research project for the final year of her graduate studies, completing a project titled "Numerical Prediction of Unstable Locations in Bridge Structures". Srimali developed an approach based on 'real-time series' data for early damage detection of bridge structures. She has worked on the "Evolution of COVID-19 Disease Using a One Prey Two Predator Model" and this research is published in the 'Advances in Technology' journal. Also, she worked on the research "Identifying Incidence Factors of COVID-19 in Sri Lanka using Mutual Information". Srimali is eager to apply her knowledge and skills to optimisation problems in the resource industry.

Srimali will complete her PhD with Doctor Elham Mardaneh and Doctor Mojtaba Heydar at Curtin University. She will be focusing on research associated with Theme 3 - Support the Manager.

PhD Research – Risk-based maintenance scheduling optimisation

Srimali is focusing her PhD research on maintenance scheduling in asset-intensive systems. In her research, she combines deterministic optimisation techniques with stochastic modelling to develop a set of mathematical formulations for maintenance scheduling problems. The objective is not only to minimise the cost but also to minimise the risk of failure of an asset by considering the age and condition of the critical components of the asset. Her research will assist the maintenance and asset planners with finding an optimal frequency of the maintenance interval, their optimal duration, and an optimal schedule of tasks within each maintenance interval subject to constraints such as resources.

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