Tharindu Hewage

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tharindu-b-hewage
Tharindu B. Hewage

Education

2021–present **Ph.D. Candidate in Computer Science**, *University of Melbourne*, Australia.
- Advisors: Rajkumar Buyya, Maria Rodriguez, and Shashikant Ilager (TU Wien)
- Research Overview: Energy and Carbon-aware Resource Management in Cloud Datacenters

2014–2018 : **B.Sc (Hons) in Electronic and Telecommunication Engineering**, *University of Moratuwa*, Sri Lanka.
First Class Honors, GPA (Final two years): 3.80/4.00

Publications

Conference Papers

2023 Tharindu B. Hewage, Shashikant Ilager, Maria A. Rodriguez, Patricia Arroba, and Rajkumar Buyya. **DEMOTS: A Decentralized Task Scheduling Algorithm for Micro-Clouds with Dynamic Power-Budgets**. In *Proceedings of 2023 IEEE 16th International Conference on Cloud Computing (IEEE CLOUD)*, 2023.

Journal Articles

2024 Tharindu B. Hewage, Shashikant Ilager, Maria A. Rodriguez, and Rajkumar Buyya. **CloudSim express: A novel framework for rapid low code simulation of cloud computing environments**. *Software: Practice and Experience (SPE)*, 2024.

Awards

2021 Graduate Research Scholarship, University of Melbourne, Australia

2019, 2020 Outstanding Contribution Award, WSO2 Pvt Ltd, California, USA

2014 Mahapola Scholarship for Higher Education, Government of Sri Lanka

Teaching

Sem. 2, 2023 - Present: **COMP 90015 - Distributed systems**, *Teaching Associate*, University of Melbourne.

Industry Experience

2019-2021 **WSO2**, *R&D Senior Software Engineer*, Identity and Access Management (IAM) Team.

2018-2019 **WSO2**, *R&D Software Engineer*, Identity and Access Management (IAM) Team.
- Member of the open-source product engineering team for WSO2 Identity Server.
- Product Engineering - High availability deployments, Asynchronous database access, API integrations
- Production Deployments: CIAM R&D engineer role in an integration project for a signature brand in USA hospitality industry, Enterprise customer support, On-site deployments, Customer trainings.
- Designing and implementing authentication and authorization features of various specs such as OAuth 2.0, and SAML for enterprise customers.
- Tech stack: Java, Maven, Springboot, OpenAPI, Github, Jenkins.

2016-2017 **Visual Concept Labs, Sri Lanka**, *Intern*, Research and Development Team.

- Implemented a real-time object detection system in a satellite video stream for a major television provider in Sri Lanka.
- Training a Deep Neural Net. (AlexNet) for classification - *Caffe*, Real-time inferring binary - *OpenCV* and *C++*

Projects

openstack-gc: **Carbon-aware computing for Real-time VMs with Openstack**.

- A framework to harness intermittent Renewable energy for real-time VMs in cloud datacenters, designed to be used with commodity hardware.
- Code: *openstack-gc*

core-power-mgt: **A CPU Core Power Management Service**.

- This service wraps the Intel Power Optimization Library to manage per-core power features of intel processors. APIs support sleep/wake subsets of cores to manage server power below a certain threshold.
- Code: *core-power-mgt*

Programming Language Expertise

Java **3.5+ years of open-source enterprise-grade software engineering**.

- Highlighted Projects: Contributions to the WSO2 Identity Server

Go **Proficient**.

- Highlighted Projects: core-power-mgt: Manage per-core power optimization features of Intel CPUs

Python **Proficient**.

- Highlighted Projects: openstack-gc: An extension of Openstack for nodes that can vertically scale their CPU cores

C++ **Proficient**.

- Highlighted Projects: video-activity-recognition: Real-time content detection in a satellite video stream via inferring a DNN classification model - OpenCV + Caffe

Service & Volunteering

2018 - Present: **Medium**, *Technical Blogger*.

2023: **USENIX ATC Artifact Evaluation**, *Committee Member*.

2022: **Melbourne University Toastmasters Club**, *Vice President of Education*.

2020: **WSO2 Identity Server Community Call**, *Organizer*.