Sunera Chandrasiri

K. D. Sunera Avinash Chandrasiri · publishes as K.D.S.A. Chandrasiri · Sri Lanka

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RESEARCH INTERESTS

Energy-efficient scheduling for cloud and distributed systems; graph neural networks and deep RL for resource management; compilers and programming languages for analysable, less black-box scheduling.

EDUCATION

Sep 2024 – May 2026 **MSc by Research, University of Moratuwa**
Dept. of Computer Science & Engineering. Thesis: *Energy-efficient cloud task scheduling using deep learning*. Supervisor: Dulani Meedeniya

Sep 2017 – Jul 2022 **BSc Eng. (Hons), Computer Science & Engineering**
University of Moratuwa. First Class Honours, GPA 4.08 / 4.20; Dean's List in all eight semesters
A+ in Compiler Design, Programming Languages, Theory of Computing, Concurrent Programming, Advanced Algorithms

RESEARCH COLLABORATION

May – Sep 2022 **Eco-driving project, Wu Lab, MIT (remote)**
With Vindula Jayawardana. Built CARLA-based 3D visualisations from SUMO simulations; acknowledged in Jayawardana et al., *Transportation Research Part C*, 2025.

TEACHING

2022, 2024 – 2026 **Visiting Instructor, Dept. of CSE, University of Moratuwa**
Practical sessions: CS2023 Data Structures and Algorithms (2022); CS3203 Software Engineering Project (2024, 2025); CS3023 Software Engineering, CS4272 Quality Engineering (2025); CS4243 HCI, CS3940 Professional Portfolio (2026).

ENGINEERING EXPERIENCE

May 2022 – present **Co-founder, Director & CTO, iXD Labs (Pvt) Ltd**
Web and mobile software for clients in Sri Lanka, Australia and the US (ERPs, management systems, automation).

- Design system architecture and plan development of client solutions.
- Oversee technical work and supervise a team of software engineers.
- Hands-on backend and mobile development: Python, C#, TypeScript, Dart.

Co-founder & part-time Software Engineer, Apr 2021 – May 2022

Oct 2020 – Apr 2021 **Software Engineer Intern, WSO2**
Designed and built Ballerina Shell, the REPL now shipped with the official Ballerina compiler; fixed bugs for the compiler frontend team. Supervisor: Sameera Jayasoma.

PUBLICATIONS

1. **K.D.S.A. Chandrasiri**, D. Meedeniya. "Energy-Efficient Multi-Objective Cloud Workflow Scheduling: Taxonomy and Techniques." *Computer Science Review* 63, 101027, 2027.
2. **K.D.S.A. Chandrasiri**, D. Meedeniya. "Multi-Objective Cloud Workflow Scheduling with Two-Stage Deep Reinforcement Learning and Graph Neural Networks." *IEEE Access* 14, 34802–34829, 2026.
3. **K.D.S.A. Chandrasiri**, D. Meedeniya. "Energy-Efficient Dynamic Workflow Scheduling in Cloud Environments Using Deep Learning." *Sensors* 25(5), 1428, 2025.
4. **S. Chandrasiri**, T. Perera, A. Dilhara, I. Perera, V. Mallawaarachchi. "CH-Bin: A Convex Hull Based Approach for Binning Metagenomic Contigs." *Computational Biology and Chemistry* 100, 107734, 2022. Presented at APBC 2022.
5. **K.D.S.A. Chandrasiri**. "Energy-Efficient Cloud Task Scheduling Using Deep Learning." MSc by Research thesis, University of Moratuwa, 2026.

SELECTED SOFTWARE

Ballerina Shell · REPL for the Ballerina language, merged into ballerina-lang and shipped with the compiler (Java).

Language tools · WinZig compiler targeting an abstract machine; AST-based RPAL interpreter (Java).

Research code · 2SD-GAT scheduler (IEEE Access 2026) and DRL + GNN workflow simulator (Sensors 2025), Python.

Distributed systems · Raft-replicated distributed chat server (Java).

theme_provider · Flutter theming package on pub.dev, about 150 GitHub stars (Dart).

All at github.com/kdsuneraavinash

HONOURS, AWARDS AND MEMBERSHIP

- IEEEXtreme 12.0 and 13.0: top 100 worldwide among 4,000+ teams; 3rd in Sri Lanka (2018, 2019)
- Google Hash Code 2019: 1st among Sri Lankan teams, 260th worldwide
- Winners, UOJ Coders v1.0 (2019) and ACES Coders v8.0 (2020), national programming contests
- Huawei Seeds for the Future (2020): one of 16 students selected from all Sri Lankan universities
- Mahapola Higher Education Merit Scholarship (2018)
- Associate Member, Institution of Engineers Sri Lanka (AMIESL)

TECHNICAL SKILLS

Languages	Python, Java, C#, TypeScript, Dart
Frameworks	Django, Spring Boot, .NET Core, React, Flutter
Systems	Kubernetes, Apache Airflow, AWS

REFEREE

Prof. Dulani Meedeniya · Professor, Dept. of Computer Science & Engineering, University of Moratuwa · MSc supervisor