Tarindu Jayatilaka

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Education

2022 - *2025* West Lafayette, IN	**Purdue University** PhD in Computer Science GPA: 4.0/ 4.0 Relevant Coursework: Algorithm Design, Analysis, and Implementation (A+), Compiling and Programming Systems (A+), Operating Systems (A+)
2016 - 2021 Moratuwa, LK	**University of Moratuwa** BSc (Eng) in Computer Science and Engineering with Honors GPA: 4.1/ 4.2 (Rank 1 out of 128)
2007 - 2016 Colombo, LK	**Royal College** G.C.E. Advanced Level in Physical Science Distinction passes for all subjects (Rank 19 out of 28,000+)

Experience

2022 - *Present* West Lafayette, IN	**Purdue University** Working broadly on research at the intersection of compilers, programming languages, and machine learning Advisor: Tiark Rompf
2022 Lausanne, CH	**EPFL (Swiss Federal Institute of Technology in Lausanne)** Worked on designing and optimizing a data analytics engine Advisor: Christoph Koch
2020 - 2021 Remote	**Google Summer of Code/ LLVM Compiler Infrastructure** Worked on applying machine learning to solve the phase-ordering problem Mentors: Mircea Trofin (Google), Johannes Doerfert (ANL), Giorgis Georgakoudis (LLNL), EJ Park (LANL)
2019 - 2021 Moratuwa, LK	**University of Moratuwa** Worked on simulating ride-hailing platforms using reinforcement and imitation learning Advisor: Uthayasanker Thayasivam
2019 Cambridge, MA	**Massachusetts Institute of Technology** Worked on learning a cost model for LLVM intermediate representation Advisor: Saman Amarasinghe | Mentor: Charith Mendis

Publications

MLArchSys ISCA 2021	**Towards Compile-Time-Reducing Compiler Optimization Selection via Machine Learning** Tarindu Jayatilaka, Hideto Ueno, Giorgis Georgakoudis, EunJung Park, Johannes Doerfert Workshop on Machine Learning for Computer Architecture and Systems at International Symposium on Computer Architecture 2021
IEAAIE 2021	**Data-Driven Simulation of Ride-Hailing Services Using Imitation and Reinforcement Learning** Haritha Jayasinghe*, **Tarindu Jayatilaka***, Ravin Gunawardena*, Uthayasanker Thayasivam Advances and Trends in Artificial Intelligence. Artificial Intelligence Practices. IEA/AIE 2021
	* equal contribution

Talks

November 2021	**Machine Learning Guided Optimizations in LLVM** LLVM Developers' Meeting 2021
October 2020	**Code Feature Analysis, Tracking, and Future Usage** LLVM Developers' Meeting 2020

Teaching and Mentoring

2022-Present	**Purdue University** Teaching Assistant CS18000 - Problem Solving and Object-Oriented Programming (Fall 2022), CS35200 - Compilers: Principles and Practice (Spring 2023), CS24000 - Programming In C (Summer 2023), CS35400 - Operating Systems (Fall 2023)
2023	**Google Summer of Code/ LLVM Compiler Infrastructure** Mentor Machine Learning Guided Ordering of Compiler Optimization Passes
2021 Moratuwa, LK	**University of Moratuwa** Junior Lecturer CS2022 - Data Structures and Algorithms (Fall 2021)
2020 - 2021 Moratuwa, LK	**University of Moratuwa** Teaching Assistant CS3042 - Database Systems (Summer 2021), CS2952 - Communication Skills (Summer 2021), , CS1032 - Programming Fundamentals (Spring 2021)

Awards and Honors

2021	**IBM Sri Lanka Gold Medal** For the best academic performance in Computer Science & Engineering, University of Moratuwa
2021	**Best Paper Nomination (Top 3 Papers)** MLArchSys Workshop at ISCA 2021
2017 - 2021	**Dean's List** For maintaining a semester GPA of 3.8 or higher in all semesters, University of Moratuwa
2017	**Dr. G.C.L. De Silva Memorial Prize** For distinctions in all subjects at both in G.C.E.(A/L) & (O/L) exams, Royal College
2016	**Mahapola Merit Higher Education Scholarship** For exceptional achievements at the G.C.E.(A/L) exam, Government of Sri Lanka

Extracurriculars

2021 SG	**Nanyang Technological University** STEP Youth Regional Affairs Dialogue Scholar Represented Sri Lanka in the dialogue to discuss socio-cultural and economic issues in Asia
2018 - 2019 Colombo, LK	**AIESEC International Congress** Creative Head Overlooked all the design requirements for the biggest AIESEC event globally
2018 - 2019 Moratuwa, LK	**AIESEC in University of Moratuwa** Vice President for Marketing Overlooked after marketing for all events and led the marketing team

2017
Beijing, CN

Tsinghua University
Global Volunteer
Worked on promoting and conserving traditional Chinese architecture