



Adhitha Dias

 adhithadias.github.io

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Objective

I am a 3rd year PhD student at Purdue ECE with 2 years of work experience as a software engineer and more than 2 years of experience as a research assistant. I am looking for summer internship positions, preferably research-oriented, in software engineering, compilers, programming languages or high-performance computing.

Education

Purdue University , West Lafayette, IN	Jan 2021 - Dec 2025
PhD in Electrical and Computer Engineering	(expected)
Thesis: Sparse Tensor Algebra Compiler Optimizations Advised by: Prof. Milind Kulkarni	
M.S. in Electrical and Computer Engineering (expected in May 2023 GPA 4.00/4.00)	
University of Moratuwa , Sri Lanka	Sep 2014 - Dec 2018
B.Sc. Engineering (Hons) in Electronic and Telecommunication Engineering (GPA 4.05/4.20)	

Publications

- **Adhitha Dias**, Kirshanthan Sundararajah, Charitha Saumya and Milind Kulkarni “SparseLNR: Accelerating Sparse Tensor Computations Using Loop Nest Restructuring” in *International Conference on Supercomputing*, ICS 2022.
 **Best Paper Award** [ACM DL].
- **Adhitha Dias**, Hasitha Prashan, Yasod Rasanka, Menusha Munasinghe and Ranga Rodrigo and Peshala Jayasekara “Deep Learning of Augmented Reality Based Human Interactions for Automating a Robot Team” in *International Conference on Control, Automation, and Robotics*, ICCAR 2020. [IEEE Xplore].

Experience

Graduate Research Assistant , Purdue University, United States	Jan 2021 - Present
<ul style="list-style-type: none">• Introduced and optimized kernel fusion for sparse tensor algebra computations.• Performed individual research on sparse tensor kernel optimizations.• Designed and Implemented an auto-scheduler for sparse tensor kernel fusion.• Achieved speedups of 0.86-1997x compared to the Tensor Algebra Compiler (TACO) baseline.	
Software Engineer , Sysco LABS, Sri Lanka (Branch of Sysco Corporation, Houston, TX)	Feb 2019 - Dec 2020
<ul style="list-style-type: none">• Performed various tasks related to frontend/backend development, database, security, and distributed systems.• Implemented the most complex sections in a multi-location graph-based menu management system for chains of restaurants.• Designed and developed first cut versions for merchandising user management, authorization and authentication.• Engaged in a variety of tasks in design, development, deployment, quality assurance, and customer support.	
Research Intern , School of Information Systems, SMU, Singapore	June 2016 - Dec 2016
<ul style="list-style-type: none">• Carried out individual research in indoor localization using wifi packet-based angle of arrival techniques.• Developed algorithms to automate checkpoint acquisition for a video-based leader-follower indoor navigation system using augmented reality.	

Skills

- Programming Languages: Java, C/C++, Python, JavaScript, Scala, Coq, MATLAB, Bash, and CUDA.
- Operating Systems: Unix/Linux, and Windows.
- Other: OpenMP, MPI, PyTorch, TensorFlow, Docker, AWS, GEM5, SQL, CouchDB, Neo4J, Janus Graph, Spring Boot, React/Redux, AWS, SSO, CMake, Android, OpenCV, Graylog, Symfony, ROS and Redis.

Achievements

- *The Best Paper Award* At the International Conference on Supercomputing 2022.
- ACM Grants to Attend *Programming Language Design and Implementation (PLDI) Conferences 2021 and 2022*.
- *Dean's List Award* Included in the Dean's List in all 8 semesters for obtaining a high GPA during Undergrad.
- Ranked 1st (out of 32k students) in Sri Lanka in Math Stream at the University Entrance Examination 2013.
- Placed 4th in *Sri Lanka Mathematics Olympiad Competition 2013*.

Professional Qualifications/Activities

• Member of Artifact Evaluation Committee (AEC) , PPOPP 2023.	Nov 2022 - Nov 2022
• Seminar Coordinator , Purdue Programming Languages and Systems Research Group (PurPL).	Aug 2022 - Jul 2023
• President , Sri Lankan Student Association at Purdue (SLAP).	Aug 2022 - Jul 2023
• Attendee , Programming Languages Mentoring Workshop (PLMW) at PLDI and OOPSLA.	June 2021, Nov 2021, June 2022
• Diploma in Management Accounting , CIMA, UK.	Jan 2014 - Dec 2015
• Master Java Developer , Institute of Java and Software Engineering (IJSE), Sri Lanka.	Aug 2013 - May 2014